

Herdiani, Aulia (Ed.); Hermawan, Agus (Ed.); Rahmawati, Setya Ayu (Ed.); Palil, Mohd. Rizal (Ed.); Havies, Reza (Ed.)

## Book

Urbanizing the Regional Sector to Strengthen Economy and Business to Recover from Recession: Proceedings of the 5th International Research Conference on Economics and Business (IRCEB 2021), Malang, Indonesia, 10–11 November 2021

## Provided in Cooperation with:

Taylor & Francis Group

*Suggested Citation:* Herdiani, Aulia (Ed.); Hermawan, Agus (Ed.); Rahmawati, Setya Ayu (Ed.); Palil, Mohd. Rizal (Ed.); Havies, Reza (Ed.) (2023) : Urbanizing the Regional Sector to Strengthen Economy and Business to Recover from Recession: Proceedings of the 5th International Research Conference on Economics and Business (IRCEB 2021), Malang, Indonesia, 10–11 November 2021, ISBN 978-1-000-83054-5, CRC Press, Boca Raton, FL, <https://doi.org/10.1201/9781003303336>

This Version is available at:

<https://hdl.handle.net/10419/290600>

### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

### Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by-nc-nd/4.0/>



# **URBANIZING THE REGIONAL SECTOR TO STRENGTHEN ECONOMY AND BUSINESS TO RECOVER FROM RECESSION**

Edited by

Aulia Herdiani, Agus Hermawan, Setya Ayu Rahmawati,  
Mohd. Rizal Palil and Reza Havies



## URBANIZING THE REGIONAL SECTOR TO STRENGTHEN ECONOMY AND BUSINESS TO RECOVER FROM RECESSION

This pandemic does not only affect health aspects but also economic aspects. The world today faces a recession resulting from the covid-19 pandemic. Indonesia's economy continues to lead to a recovery, although not very significant. The current government continues to make various recovery efforts. One of the flagship programs includes encouraging and strengthening support for social protection and increasing the purchasing power of households as well as various business sectors, including small and medium-sized micro enterprises (MSMEs). This condition urges the world to create new breakthroughs to rise from this adversity. Academicians and practitioners need to work together to find the necessary solutions and developments. Surely, it will contribute to solve the problems in society by interdisciplinary cooperation. This collaboration will create innovations in science and technology especially business and economic field.

This book includes in-depth discussions between academicians and practitioners, especially on how to strengthen the regional sectors to be the strong pillars of the country's economy. Interestingly, various methods are used to observe the problems, to explore the solutions, and to develop the innovation.

This book will be of interest to students, scholars, and practitioners of social empowerment, governance, and other related stakeholders.



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

PROCEEDINGS OF THE 5TH INTERNATIONAL RESEARCH CONFERENCE ON  
ECONOMICS AND BUSINESS (IRCEB 2021), MALANG, INDONESIA,  
10–11 NOVEMBER 2021

# Urbanizing the Regional Sector to Strengthen Economy and Business to Recover from Recession

*Edited by*

Aulia Herdiani

*Universitas Negeri Malang, Indonesia*

Agus Hermawan

*Universitas Negeri Malang, Indonesia*

Setya Ayu Rahmawati

*Universitas Negeri Malang, Indonesia*

Mohd. Rizal Palil

*Universitas Negeri Malang, Indonesia*

Reza Havies

*Universitas Negeri Malang, Indonesia*



ROUTLEDGE



Routledge

Taylor & Francis Group

First published 2023  
by CRC Press/Balkema  
4 Park Square, Milton Park/Abingdon, Oxon, OX14 4RN/UK  
e-mail: [enquiries@taylorandfrancis.com](mailto:enquiries@taylorandfrancis.com)  
[www.routledge.com](http://www.routledge.com) – [www.taylorandfrancis.com](http://www.taylorandfrancis.com)

*CRC Press/Balkema is an imprint of the Taylor & Francis Group, an informa business*

© 2023 selection and editorial matter, Aulia Herdiani, Agus Hermawan,  
Setya Ayu Rahmawati, Mohd. Rizal Palil & Reza Havies; individual chapters,  
the contributors

The right of Aulia Herdiani, Agus Hermawan, Setya Ayu Rahmawati,  
Mohd. Rizal Palil & Reza Havies to be identified as the authors of the editorial material,  
and of the authors for their individual chapters, has been asserted in accordance with  
sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

The Open Access version of this book, available at [www.taylorfrancis.com](http://www.taylorfrancis.com),  
has been made available under a Creative Commons Attribution-Non Commercial-No  
Derivatives 4.0 license.

Although all care is taken to ensure integrity and the quality of this publication and the  
information herein, no responsibility is assumed by the publishers nor the author for  
any damage to the property or persons as a result of operation or use of this publication  
and/or the information contained herein.

ISBN: 978-1-032-30070-2 (hbk)  
ISBN: 978-1-032-30071-9 (pbk)  
ISBN: 978-1-003-30333-6 (ebk)

DOI: 10.1201/9781003303336

Typeset in Times New Roman  
by MPS Limited, Chennai, India

## Table of contents

<i>Preface</i>	ix
<i>Acknowledgment</i>	xi
<i>Scientific Committee IRCEB 2021</i>	xiii
<i>Organizing Committee IRCEB 2021</i>	xv
 How the pandemic COVID-19 influenced the consumer behavior: A case in Indonesia <i>D.R. Sari, A.T. Feryani &amp; N. Amelia</i>	 1
 Penta Helix participation in developing rural tourism: A case study in Bringin, Malang <i>M.H.I. Abbas, A. Sumanto, M.P. Priambodo &amp; J. Kustiandi</i>	 10
 Financial development and economic growth of ASEAN countries during the COVID-19 pandemic <i>S. Hodijah &amp; D. Hastuti</i>	 21
 E-commerce tax: Is it an opportunity or a defiance for Indonesian government during the Covid-19 pandemic? <i>A. Herdiani, K. Ayuningtyas, Y.T. Setiaji, S. Mariyah &amp; A.T. Hsi</i>	 35
 Lexicon Syariah: Lexicon mobile learning application development based on individual learning in Islamic economics <i>V.A. Qurrata, L. Seprillina, E. Yusida, S. Merlinda &amp; M.R. Palil</i>	 43
 Spending on tourism in East Java with a demand system approach: Household micro data analysis <i>M. Rasyid &amp; A.D. Prasetyoningtyas</i>	 57
 Digital marketing: The implementation in MSMEs <i>F.M. Edwy, Sulastri, D.M. Putri, S.N. Maharani &amp; M.B. Kamaludin</i>	 62
 State universities' legal entities toward good governance and public trust <i>G. Irianto, K. Shaleh &amp; L.R. Rajafi</i>	 71
 Public sector innovation and Indonesian civil servants: An insider's view <i>S.E.M. Sibarani &amp; K. Pertiwi</i>	 78
 The role of affective commitment, competence, and organizational culture on employee performance windows <i>V.A. Sopiansah, D. Riani, L. Maryani &amp; S. Almujaab</i>	 95
 Accounting students: Our learning style for disruption era <i>P.M. Nagari, U. Nuraini, D.M. Nuris &amp; C.G.K. Han</i>	 100
 Entrepreneurship of Bugis ethnic group: A case study of Bugis nomads in Malang, Indonesia <i>Y. Agustina, A. Winarno, B.S. Narmaditya, A. Hermawan &amp; N. Omar</i>	 108
 Developing Android media for evaluating learning process of accounting in trading company and manufacture <i>Z. Bismihayati &amp; D.M. Nuris</i>	 116

Are masks against COVID-19 only for lecturer workers? <i>H.E. Bagijo, H.D. Santoso, S. Suseno, I.S. Wahyuni, L. Tianto, B.C. Putro &amp; L.U. Sadieda</i>	123
Job satisfaction as the mediating variable in the correlation between quality of work life and work engagement <i>E.K. Novianti, Sopiah &amp; O. Bernardes</i>	130
Factors influencing intention to use in implementing accounting standards for Islamic boarding school in East Java: Application of the UTAUT model <i>M. Ghofirin &amp; N.S. Primasari</i>	140
A study on business sustainability of SMEs during pandemic COVID-19 <i>M.K. Siwi, T. Kurniawati &amp; Z. Afdal</i>	150
Compensation, workload, work satisfaction analysis toward performance through employee work stress at Royal Orchids Garden Hotel and Condominiums Batu, East Java <i>D. Orbaningsih, R.M. Putri &amp; Ahmad</i>	157
Collecting toys for happiness: Examining adults' satisfaction in playing with their toys <i>D. Tio &amp; S.H. Situmorang</i>	165
The phenomenon of accumulation budget realization in the end of the year: A case study in Malang city of East Java Indonesia <i>N.B. Priadmadhi, S.A. Rahmawati &amp; A. Nazzal</i>	169
The creativity of creative industry players based on Malay culture facing the industrial revolution 4.0 in Riau Province <i>Nurdin, M. Badri, D. Sukartik &amp; H. Kurniadi</i>	178
COVID-19 versus the Health, Safety, and Environment (HSE) norm law in Indonesia <i>H.E. Bagijo, H.D. Santoso, N.T. Yuliati, S. Priyanto, H. Mangalle, V.A. Purwanto, P. Marsiti, M.D. Susanti &amp; L. Kurniawati</i>	185
Relationship between nutrition intake, education facilities, and unemployment and Indonesia's development <i>D.P.P. Tyas, F. Rahmawati &amp; N.Y.B.M. Bani</i>	197
Investigation of investor behavior bias in extreme stock market situation <i>S.N. Maharani, S.A. Rahmawati, S.W. Purnamasari &amp; M.M. Ali</i>	208
The role of financial literacy for housewives: How important is it during the COVID-19 pandemic? <i>R. Firmansyah, M.G.S. Wicaksono, A.P. Amalia, D.T. Kurniawan, A.A. Widiyanto &amp; M.R. Palil</i>	219
An investigation on the financial literacy of accounting students in Indonesia <i>N. Laily, A. Herdiani, Sulikah &amp; G. Dellar</i>	225
Analysis of thin capitalization on listed companies in Indonesia and Australia <i>R.D. Sismi &amp; D. Martani</i>	232
Tax rates reduction, tax understanding, and online tax services to MSME taxpayer compliance during Covid-19 <i>K. Ardillah &amp; M. Farhanah</i>	247
Risk management strategies in optimizing the potential of Selorejo village: Threats or opportunities? <i>M.G.S. Wicaksono, N.D. Syara, L. Mukaromah, R. Firmansyah, D. Narullia &amp; M.R. Palil</i>	259



Design and build repayment capacity-based loan mitigation model for women's cooperatives in East Java	266
<i>A. Murdiono, F. Zen, L.N. Istanti, Subagyo &amp; N. Utaberta</i>	
The development of "SIDEDI" application: Early detection instrument to capture radicalism thought symptom for senior high school students	275
<i>J.H.G. Purwasih, A.A. Widiyanto &amp; S.A. Idrus</i>	
A perspective of characteristic government budget work plan based on Habermas theory	283
<i>M. Puspaningtyas, F.M. Edwy &amp; N. Mohamed</i>	
Author index	291



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

## Preface

The 5th International Research Conference on Economics and Business 2021 was held virtually at the Universitas Negeri Malang on November 10–11, 2021. This conference was organized by the Economic Faculty of Universitas Negeri Malang. There were four main speakers in this conference including Prof Kelum Jayasinghe from the University of Essex, UK; Dmitry Evgen'evich Tolmachev from Ural Federal University Russia; Sebastian Sterzer from National University of Lujan, Argentina; and Ani Wilujeng Suryani from Universitas Negeri Malang.

The Committee received 95 papers and 54 papers were accepted to be presented. Participants from various universities in Indonesia and some other countries made the conference truly international in scope. Of the total number of presented papers, 32 papers were accepted to be included in the proceedings volume published by CRC Press/Balkema, Taylor & Francis Group.

Generous support for the conference was provided by the Faculty of Economics, Universitas Negeri Malang, and the Rector of Universitas Negeri Malang also provided financial support to the event. The 5th International Research Conference on Economics and Business 2021 was successfully held, and we invite the presenters around the world to participate in the next IRCEB that will be held in 2022. Finally, we hope that the next IRCEB will be stimulating for the economic and business development as indicated in this proceedings volume.



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

## Acknowledgment

All papers in this book are the final version of manuscripts that were presented at the 5th International Research Conference on Economic and Business (IRCEB), held on November 10–11, 2021 at Malang, Indonesia. We would like to thank the rector of Universitas Negeri Malang, the dean of the Economy Faculty, and all of the committee members for their support. On behalf of the organizers, authors, and readers, we also wish to acknowledge all keynote speakers and reviewers for their hard work and dedication for this conference. We also thank the participants and presenters of the conference for their contributions.

The organizers wish to apologize for any possible inconvenience due to services during our conference. See you in the next 6th IRCEB at Universitas Negeri Malang.

Malang, February 14, 2021  
Organizer of IRCEB  
Universitas Negeri Malang



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

## Scientific Committee IRCEB 2021

**Prof. Dr. Wahjoedi**

*Universitas Negeri Malang, Indonesia*

**Prof. Dr. Budi Eko Soetjipto**

*Universitas Negeri Malang, Indonesia*

**Dr. Wasiaturrahma**

*Universitas Airlangga, Indonesia*

**Dr. Nasikh**

*Universitas Negeri Malang, Indonesia*

**Prof. Christine Helliar**

*University of South Australia, Australia*

**Assoc. Prof. Dr. Mohd. Rizal Palil**

*Universiti Kebangsaan Malaysia, Malaysia*

**Dr. rer. Pol. Moises Neil V. Serino**

*Visayas State University, Philippines*

**Mahirah Kamaludin, Ph.D.**

*Universiti Malaysia Trengganu, Malaysia*



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>



## Organizing Committee IRCEB 2021

### **Advisory Board**

Prof. Dr. Ah. Rofi'uddin  
Universitas Negeri Malang, Indonesia

### **Chairman:**

Setya Ayu Rahmawati, S.E., M.SA.  
Universitas Negeri Malang, Indonesia

### **Secretary**

Achmad Murdiono, S.Pd., S.E., M.M.  
Vika Annisa Qurrata, S.E., M.E.  
Miranti Puspaningtyas, S.Pd., M.Pd  
Universitas Negeri Malang, Indonesia

### **Treasurer**

Dian Syariati, S.E., M.SA.  
Dhika Maha Putri, S.Pd., M.Acc  
Universitas Negeri Malang, Indonesia

### **Technical Chair**

Rizky Firmansyah, S.E., M.SA.  
Yana Respati Dewi, S.E., M.M.  
Dwi Narullia, S.E., M.SA., CSRS.  
Primasa Minerva Nagari, S.Pd., M.Pd.  
Muhammad Hasyim Ibnu Abbas, S.E., M.Sc.  
Febri Yohanes Aldi Wicaksono, S.Kom.  
Universitas Negeri Malang, Indonesia

### **Publication**

Aulia Herdiani, M.Pd., M.S.  
Idris, S.S., M.M.  
Rizza Megasari, S.Pd., M.Pd.  
Universitas Negeri Malang, Indonesia



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

## How the pandemic COVID-19 influenced the consumer behavior: A case in Indonesia

D.R. Sari\*, A.T. Feryani & N. Amelia

*Graduate Program Yogyakarta State University, Yogyakarta, Indonesia*

**ABSTRACT:** COVID-19 was first confirmed in December 2019 in Wuhan, which continued to spread in many countries and gradually became a global pandemic in March 2020. This paper aims to describe how this pandemic can affect customer behavior. The method used is a descriptive quantitative method using a secondary data analysis approach. Pandemics that occur cause violent clashes in various sectors are no exception in trade. Limited human mobility has a direct effect on the intensity of business and the economy. This study proves that pandemics that occur have an impact on consumer behavior. This is evidenced by an increase in shopping activity during the pandemic and the consumption patterns of people who began to switch toward digital models. The shift in customer behavior in shopping made government recommendations to stay at home during pandemics led people to change their shopping patterns to meet their daily life demands.

### 1 INTRODUCTION

Currently, the world faces a global disaster marked by the emergence of a new virus phenomenon. The World Health Organization (WHO) states that Coronaviruses (Cov) attack human health. The virus has the scientific name COVID-19. The Coronavirus (COVID-19) is known to have been first detected in Wuhan City at the end of December 2019, which then in its development continued to spread in many countries and gradually became a global pandemic in March 2020. The faster spread of this virus caused many problems in many countries and Indonesia remains no exception. Since the first positive case was announced in Indonesia on March 2, 2020, the recommendation to limit mobility and narrow the spread of this virus has been implemented, however, as time goes by, the increase in positive cases continues to occur along with all the existing dynamics.

Quoting on the [kawalcovid.id](https://kawalcovid.id) page on September 28, 2021, it was reported that there had been 4.21 million COVID-19 cases in Indonesia, with a total death of 142,000 cases. Although the rate of spread of this virus seems to have not been able to reach the point of “finishing”, it certainly creates a systemic impact on various aspects of human life, one of which is in the economic and social aspects of society. Not only in Indonesia but also in other parts of the world, the pandemic affected economic growth. The IMF conveys a prediction that the pandemic will cause the global economy to continue to slow down in line with Kramer & Kramer (2020). The COVID-19 pandemic caused changes in social and economic aspects and resulted in changes both micro and macro regarding the world of work and the sector existing economy.

China is one of Indonesia's largest trading partners and the emergence of a pandemic was first detected in China, which brought a significant impact on China's trade activities thus impacting the world trade system which also affected countries that have strong ties with Indonesia. The pandemic caused by a newly detected virus surprised many and infection control measures such as social distancing restrictions, work and businesses are carried out from home, and schools and educational institutions are run online, these steps were taken to slow the spread of COVID-19 which also put tremendous pressure on economic conditions in almost all countries, business circles considered that COVID-19 had brought a major negative impact on the world economy, including Indonesia.

---

\*Corresponding Author: [desi0056pasca.2019@student.uny.ac.id](mailto:desi0056pasca.2019@student.uny.ac.id)

The reason is, that COVID-19 has disrupted the company's production chain such that the business flow is not smooth, and the currency value continues to weaken sharply, which further strengthens that the Indonesian economy continued to slow down, which is further supported by the results of a BPS survey in the first quarter of the Indonesian economy that grew by  $-0.74\%$  even so. At least this result is still slightly better than in the previous quarter, which was corrected to  $-2.19\%$ .

The short-term impact of the COVID-19 pandemic that occurred is very easy to feel because of the social restriction policies that were carried out and widely adopted in many countries, and the long-lasting effects had an economic, social, political, and cultural impact (He & Harris 2020). Several efforts continue to be made by the government to deal with the spread of the COVID-19 virus, including the implementation of Large-Scale Social Restrictions (PSBB) in stages in areas where there is an indication of an acceleration of the reach of the COVID-19 virus. However, as social restrictions continue, the necessities of life during social rules must be met.

The limited level of community mobility as a result of the conditions that occurred brought its shocks, especially for SMEs actors and customer behavior, MSMEs as one of the strong foundations in supporting the economy in Indonesia had to accept hard pressure as a result of what happened, even prominent actors in economic activities acknowledged pandemic is a surprising and unexpected event that slowly changes many aspects of life such as the political, economic, social environment, and people's behavior towards new habits but this also encourages the creation of a unique pattern of behavior. Thus, the pandemic represents one of the most significant environmental changes in the long journey of marketing that has the potential to have a substantial impact on economic and social aspects. Based on the extent of the effects social distancing is practiced globally. This paper discusses some initial ideas about how this pandemic can affect customer behavior during existing conditions. Finally, this paper will discuss its impact on E-Marketing opportunities and consumer behavior.

In terms of marketing, we will focus on the potential implications of marketing concepts and marketing strategies.

## 2 LITERATURE REVIEW

### 2.1 *The background and underlying thing*

The Coronavirus (COVID-19) was first reported in Wuhan in December 2019, it was first detected in the Wuhan market. This virus then spread and was gradually designated by WHO as a global pandemic on March 12, 2020. The COVID-19 pandemic was the fifth viral outbreak that occurred in the world since 1918, the first flu outbreak that occurred in the world (Liu et al. 2020).

This virus is spreading in all countries in the world, including Indonesia, citing to the official length of the government, kawalcovid.id, on September 28, 2021, it was reported that there were 4.21 million cases of COVID-19 in Indonesia, with a total death of 142,000 cases.

The Indonesian government faces different challenges. On the other hand, the spread of COVID-19 infection is very fast and it is a difficult task to make people aware of the critical situation, avoid panic, and convince people to continue to carry out their activities from inside their homes as recommended by social restrictions despite the economic consequences (Addi et al. 2020).

Since the first time this virus was detected, it has been spreading very quickly in many countries and has caused severe shocks to public welfare, health, and trade. In line with that Salles et al. (2020) state that the pandemic has affected almost all countries in the world and triggered the worst economic recession ever in nearly a century.

Similar research was conducted by Sheth (2020) This study aims to examine the impact of the COVID-19 pandemic on consumer behavior. Research findings show that the Pandemic that has occurred has disrupted consumer habits, consumers are getting used to new habits and digital technology tends to influence existing behavior. In line with that, Vithayathil et al. (2020) conducted a study to find out how the use of social media on consumer shopping preferences, the findings in this study suggest that the use of several social media platforms has a significant positive effect on consumers' shopping preferences from home. Kirk & Rifkin (2020) conducted research with

intending to measure how consumers react to, cope with, and adjust to consumer behavior during the COVID-19 pandemic, research findings reveal that the critical times that occurred resulted in major changes in various aspects of life in society. Some of the characteristics of consumer behavior patterns during the pandemic so may indicate changes that ultimately change habits as previously recognized.

## 2.2 *Consumer behavior during the pandemic*

As a social being who always interact with other humans, the transmission of this virus becomes vulnerable, that's why the government urges us to maintain personal hygiene and stay at home for a while. Isolation may be dangerous for us, isolation limits us from many activities that we normally do. This is done directly and forces people to do everything from inside the house, this also has an influence on customer behavior patterns in the new era.

Rangaswamy et al. (2020) The support of advances in technology and information that is increasingly sophisticated at this time also influences a new ecosystem, technology makes it easier for people to access their various needs even in different conditions like today. It also brings people into a new era with limited human mobility amid the pandemic but needs must still be met through implementing compulsion on the people to start switching from the previous pattern to the new pattern.

As per Nabity-Grover et al. (2020), when recommendations for limited mobility and social distancing are given during the current pandemic, people are increasingly turning to social media for entertainment, connection with social life, and necessities of life. Business managers must anticipate customer needs and adjust a product as well as product characteristics and features so that it can meet customer desires. As per Berthon et al. (2012) Social media encourages a shift in the distribution of goods from companies to consumers and from individuals to more heterogeneous communities. Along with the rapid development of digital-based technology and information, the existence of social media is also growing, in addition to functioning as a communication and information sharing tool, the role of social media has also undergone a shift and has become an inseparable part of the daily lives of consumers in this era (Wang & Lee 2020).

This is supported by Roggeveen & Sethuraman (2020), limited mobility causes consumer behavior to shift, consumers also tend to get used to new ways of shopping, for example, to fulfill basic needs, online shopping is a solution. Chaffey (2011) e-marketing is a process in achieving goals in marketing a product by relying on electronic communication technology.

According to the results of a survey released by BPS, the pandemic caused 51% of respondents to make food ingredients the most dominant change in spending, this is inseparable from the government's recommendation to stay at home and increase body immunity by cooking their food, as well as differences in spending from the usual conditions, 56% of respondents experienced an increase in spending, 17% experienced a decrease and the rest remained and there was an increase of 42% in online shopping activity in respondents who had increased shopping activity during the pandemic. It is necessary to implement a business strategy that is oriented toward the use of various platforms and methods so that media apart from being a platform for communicating with consumers also provides opportunities to build social and professional relationships with friends, family, and even businesses (Jacobson et al. 2020).

In recent years, online shopping activities have continued to increase in Indonesia, this phenomenon is becoming interesting because of the high interest of consumers to shop online for practical reasons. Many predictions show that the pandemic will result in large-scale social changes, in the end, to improve the long-term consumer experience as consumers have begun to adapt to habits in the new normal era. Even some of the worst effects of the pandemic can lead to positive results with long-term effects, for example, new habits for maintaining health (Kirk & Rifkin 2020).

## 2.3 *Trends of marketing*

The pandemic gave rise to several problems for SMEs actors but on the other hand, some opportunities also emerged, one of which was the use of technology and information for trade considering that electronic commerce in Indonesia in 2020 reached US\$ 130 billion.

Along with the increasing number of social media users and the internet which has changed many aspects of life, one of which is how companies run their businesses and consumer behavior in the era of social media, digital marketing provides promising opportunities for companies through many efficiencies produced, as is the case in terms of increasing sales volume, more people are aware of the product of a product and lowering costs such as promotional costs, etc. (Dwivedi et al. 2020).

In line with that, Stephen (2016) digital media platforms and social media have changed consumer behavior and become an important part of a company's marketing plan and business pattern. Accordingly, Ashish & Bezawada (2018) state that the reach that social media can reach more people in an unprecedented way this is why many companies are starting to adopt and rely on social media as a channel for marketing communications. As per Boso et al. (2019) SMEs can take an advantage of innovations and distribution patterns to reduce limitations and focus on meeting market demand.

The shocks that occurred during the pandemic brought a very pronounced shift in the world of marketing. In this era, the marketing mode that consumers are interested in is marketing that directly targets companies to consumers, along with the rapid development of technology accompanied by the increasingly global distribution of information and communication. This is marked by the increasing variety of social media platforms that exist today, social media in addition to functioning as a medium of interaction between individuals and as a means to support the digitalization process, this process has slightly shifted the function of social media other than only as a means of communication to a place that brings together buyers and sellers. In line with this Verhoef et al. (2010) state that digital technology is increasingly facilitating interactions between companies and customers as well as between customers shift illustrates the increasing importance of digital technology in influencing customer behavior. As per Wang & Lee (2020), in this era of corporate and customer relations, the role of digital technology is also influenced by the role of digital technology, consumers have transformed into value creators for companies, not only as users of products and services by the company. Changes in the marketing environment must be able to develop strategically from before the pandemic occurred to the current pandemic so that companies can continue to rise amid the uncertain conditions that occur.

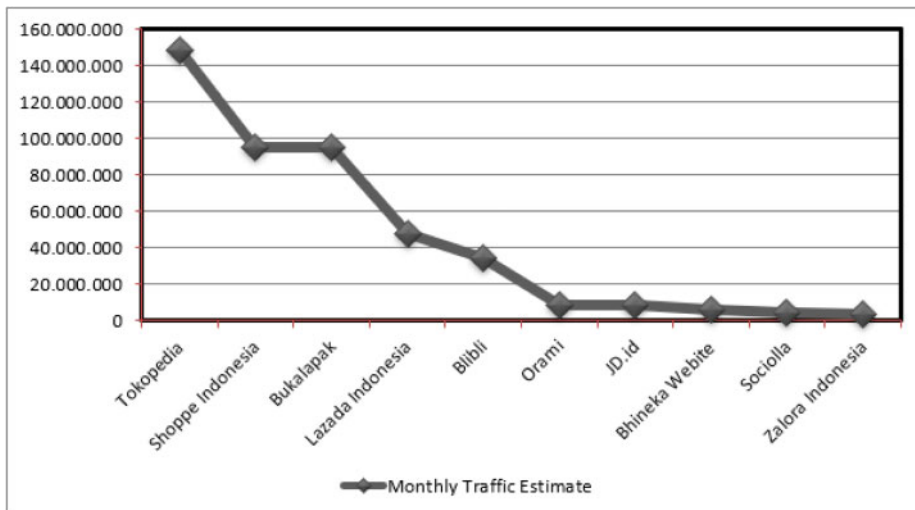


Figure 1. Top 10 E-commerce in Indonesia in 2019.  
Source: [www.aseanup.com](http://www.aseanup.com).

Based on the graph above, the top position is occupied by Tokopedia. Tokopedia is the largest online marketplace in Indonesia, enabling individuals and businesses to easily open and manage

their online stores. Recently, Tokopedia received over 100 million USD in funding from Japan's Softbank and well-known American technology venture capital firm Sequoia Capital. Tokopedia's estimated monthly traffic is 148,500,000. On 2nd place is Shoppe Indonesia, Shopee is a diversified and mobile online store that also provides a regular web shopping experience as the main platform throughout Southeast Asia, besides Indonesia, Shopee is also present in Singapore, Philippines, Malaysia, Thailand, Vietnam, as well as in Taiwan. One of the advantages of the Shopee service is that it provides PayLater services that can be utilized by its users, Shopee's estimated monthly traffic is 95.300.000.

On 4th place is Lazada founded in 2011 by Rocket Internet, in 2016, Chinese e-commerce giant Alibaba acquired a controlling stake in Lazada and its operations in Asia. Lazada's estimated monthly traffic is 47,800,000. On 5th position is Blibli, which is an online shopping center with a variety of product offerings ranging from computers and gadgets, fashion, health and beauty, mothers and children, home and decoration, automotive. Blibli's estimated monthly traffic is 34,200,000. On the 6th position, there is Orami, which is a specialized e-commerce platform that provides baby, family, and home care products. Orami's estimated monthly traffic is 9,050,000. On 7th place is JD.id, which is an online department store launched in November 2015, JD.id is a subsidiary of Chinese e-commerce company JD.com, also known as Jingdong. JD.id provides various product categories such as fashion, electronics, and gadgets, family, and health, estimated monthly traffic is 8,600,000.

The 8th position is the Bhinneka website which is known as a pioneer of e-commerce in Indonesia, Bhinneka has developed its web platform to sell its products online, the Bhinneka website is a specialized store that provides computers and gadgets, electronics, household appliances, and electrical accessories and equipment, estimated monthly traffic is 5,950,000.

At the 9th position is Sociolla. Sociolla provides beauty and cosmetic products through their online shopping site for Indonesian women offering a complete online shopping destination for authentic and quality products including makeup, skincare, hair care, fragrances, and cosmetics. Sociolla's estimated monthly traffic 4,400,000. In the last position is Zalora, which is one of the largest e-commerce sites in Southeast Asia that specializes in fashion, Zalora was founded in 2012 by Rocket Internet, Zalora is present in Singapore, Malaysia and Brunei, the Philippines, Thailand, Vietnam, Hong Kong and recently launched in Taiwan. Zalora's estimated monthly traffic is 3,750,000.

Based on Graph 1, the drastic growth in the number of internet users creates opportunities for SMEs to publish their products because of the high interest of consumers in online shopping. SMEs can have a major influence on economic growth in various countries, especially in creating a world of work and supporting household income. The development of SMEs is expected to spur the pace of the economy during current sluggish business world in amid the pandemic, the use of marketing concepts through the use of digital technology is expected to be able to develop SMEs and become a supporter of economic strength amid pandemic.

Barnes (2020) during a socially distancing world pandemic, technology is providing an increasing role in the way we consume. The current era of technology is indeed unavoidable according to marketing experts if you want to survive, SMEs actors must be able to maximize, open up and take advantage of digital developments through the development of digital technology, enabling SMEs actors to market their products online, reach more people and do business transactions through the online banking system as well.

### 3 METHODS

#### 3.1 *Data collection*

This paper uses a qualitative method using a literature analysis approach and secondary data, an approach that is generally used to highlight the socio-economic impacts that occurred in Indonesia during the pandemic that occurred, especially in its influence on people's behavior. This paper begins

with a brief history of the pandemic, various implications that occur in demographic conditions in Indonesia, E-marketing in today's shopping trends, and consumer behavior during the ongoing pandemic.

This paper uses data from the social survey results from the impact of COVID-19 in 2020 by the Indonesian Central Statistics Agency to determine the results of a survey on social demographic conditions in Indonesia as an impact of the pandemic, this survey uses a Non-Probability Sampling design, which is a combination of Convenience, Voluntary, and Snowball Sampling. Data were collected online to reach more respondents within 1 week of surveying with 87,379 respondents. The survey results show that as many as 31% of respondents experienced an increase in online shopping activity during COVID-19. This is part of a move to comply with the government's recommendation to stay at home during the COVID-19 pandemic, causing people to change their spending patterns to meet their daily needs.

4 RESULTS AND DISCUSSION

The onset of a pandemic caused by a newly detected virus took many by surprise, infection control measures such as social distancing being taken to slow the spread of COVID-19 put tremendous pressure on large economies of all countries. The limited level of community mobility because of the conditions that occurred brought its own shocks, especially for business actors and customer behavior patterns. Most of the central actors in economic activities recognized the current pandemic as a shocking and unexpected event that slowly changed many aspects of life, such as the political, economic, social environment, and people's behavior toward new habits. According to the results of research conducted by the Indonesian Central Statistics Agency in 2020 regarding the social and demographic conditions of the community, it was explained pandemic has caused an increase in the tendency of people to switch to online trading or e-marketing modes, as shown in the graph below:



Figure 2. Shopping activities during the Covid-19.  
Source: [www.bps.go.id](http://www.bps.go.id).

Graph 2. Explains that the online shopping activity survey conducted by BPS Indonesia, describes that survey results show that as many as 31% of respondents experienced an increase in online shopping activity during COVID-19. This is part of a step to comply with the government's recommendation to stay at home during the COVID-19 pandemic, causing people to change their



spending patterns to meet their daily needs. There is a trend in female respondents who experience the most shopping activities than men.

The high awareness of staying at home to maintain the health of themselves and their families as well as the ease with which technology is controlled makes women prefer online shopping activities compared to men, 54 out of 100 millennial generation respondents who shopped online during the COVID-19 pandemic are women. From the survey results, 45% of female millennial generation respondents choose to stay at home for reasons of maintaining the health of themselves and their families.

This makes women prefer online shopping activities compared to men. People's consumption patterns during the Pandemic are shown through the global trend of cooking and eating at home. With the gathering of families at home, the level of food expenditure for both raw materials and ready-to-eat food is higher.

The online marketing strategy is one of the most effective marketing strategies for considering the development of technology. The growth of various types of online platforms is also growing and the conditions created during the current pandemic make technology one of the answers to the problems. Some of the advantages of this online marketing system are easy access and communication between sellers and customers related to products, the payment system is getting easier because it utilizes technology and efficiency so that maximizing existing opportunities will make it easier for people to access the products they need.

## 5 CONCLUSION

With the rapid spread of COVID-19, the impact of the global economic slowdown is starting to be felt domestically. Many MSME actors are forced to "lay off" their employees and even temporarily close their businesses due to a decrease in income due to social restrictions. Physical interactions between human beings are reduced thereby reducing economic activities drastically, which in the end affects business activity.

The crisis caused by the COVID-19 pandemic in the past few months requires businesses to start shifting their trading patterns towards digital substitutes or identify ways to deliver their products and services by limiting physical contact with buyers. The easy and convenient concept offered by digital marketing in meeting the needs of forming consumer motivation to shop and marketing is to change marketing strategies and the output produced in this new business model can cut costs and increase company profits. These choices have provided opportunities for companies to be innovative in redesigning their existing products, designing alternative digital products and services, or rethinking the channels and mechanisms of delivery of their products and services, and seeking strategic positions and partners in new patterns of customization that can help them achieve it. To survive in a new business pattern, companies, or business actors must be able to adapt to the demands of existing conditions, the innovations carried out have dynamic capabilities that can help them in their ability to adapt to changes in existing consumer behavior patterns. In the future, it is hoped that more business actors will switch to using online content by adding convenience in payment and delivery, providing discounted prices can also be an attraction for consumers, adding important information related to product advantages, intense interaction with consumers is one of the most important things. One of the top tips that can be implemented by the SMEs engaged in the food and beverage sector is showing the safety of the products as a "selling" aspect for product promotion. It is also important to foster and establish good relationships with business partners, such as maintaining the quality of marketed goods and providing good and satisfactory services, as a step forward with the limitation of mobility as one of the efforts to prevent a pandemic that has not yet been found. A new market concept has been established with a new dominant consumer psychological intervention, where there are sufficient product factors and adequate supplies of goods for a long period of time to prevent scarcity, which will have an impact on prices and

result in increased individual incomes, which in turn will also increase state income and boost the country's GDP to be able to sustain in the given conditions.

## 6 LIMITATIONS AND FUTURE RESEARCH

In this study, the database used is secondary data obtained from the results of a survey conducted by BPS. The survey conducted has the first limitation, the use of the online method results in bias compared to the direct interview method. Second, the resulting analysis is a description of individuals who voluntarily participate in the survey and does not represent the condition of the entire Indonesian society. In the future, it is hoped that further research can cover the shortcomings, especially in the analysis carried out later, it is hoped that in the future the research conducted can be carried out using primary databases and a more comprehensive discussion.

## REFERENCES

- Addi, R. A., Benksim, A., Amine, M., & Cherkaoui, M. 2020. Covid-19 outbreak and perspective i morocco. *Electronic Journal of General Medicine*, 17(4), 19–20. <https://doi.org/10.29333/ejgm/7857>
- Ashish, K. R., & Bezawada. 2018. The effects of firm generated content (FGC) in social media on customer behavior. *Journal of Marketing*, 53(9), 1689–1699. <https://doi.org/10.1017/CBO9781107415324.004>
- Barnes, S. J. 2020. Information management research and practice in the post-COVID-19 world. *International Journal of Information Management*, June, 102175. <https://doi.org/10.1016/j.ijinfomgt.2020.102175>
- Berthon, P. R., Pitt, L. F., Plangger, K., & Shapiro, D. 2012. Marketing meets web 2.0, social media, and creative consumers; implications for international marketing strategy. *Business Horizons*, 55(3), 261–271. <https://doi.org/10.1016/j.bushor.2012.01.007>
- Boso, N., Adeola, O., Danso, A., & Assadinia, S. 2019. The effect of export marketing capabilities on export performance: Moderating role of dysfunctional competition. *Industrial Marketing Management*, 78, 137–145. <https://doi.org/10.1016/j.indmarman.2017.09.006>
- Chaffey, D. 2011. E-busines & e-commerce management. *D-Lib Magazine*, 722.
- Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A. S., Kumar, V., Rahman, M. M., Raman, R., Rauschnabel, P. A., Rowley, J., Salo, J., Tran, G. A., & Wang, Y. 2020. Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*, June, 102168. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>
- He, H., & Harris, L. 2020. The impact of covid-19 pandemic on corporate social responsibility and marketing philosophy. *Journal of Business Research*, 116(May), 176–182. <https://doi.org/10.1016/j.jbusres.2020.05.030>
- Jacobson, J., Gruz, A., & Hernández-García, Á. 2020. Social media marketing: who is watching the watchers? *Journal of Retailing and Consumer Services*, 53(September 2018). <https://doi.org/10.1016/j.jretconser.2019.03.001>
- Kirk, C. P., & Rifkin, L. S. 2020. I'll trade you diamonds for toilet paper: Consumer reacting, coping and adapting behaviors in the COVID-19 pandemic. *Journal of Business Research*, 117(May), 124–131. <https://doi.org/10.1016/j.jbusres.2020.05.028>
- Kramer, A., & Kramer, K. Z. 2020. The potential impact of the Covid-19 pandemic on occupational status, work from home, and occupational mobility. *Journal of Vocational Behavior*, 119(May), 1–4. <https://doi.org/10.1016/j.jvb.2020.103442>
- Liu, Y. C., Kuo, R. L., & Shih, S. R. 2020. Covid-19: The first documented coronavirus pandemic in history. *Biomedical Journal*, xxxx, 1–6. <https://doi.org/10.1016/j.bj.2020.04.007>
- Nabity-Grover, T., Cheung, C. M. K., & Thatcher, J. B. 2020. Inside out and outside in: How the covid-19 pandemic affects self-disclosure on social media. *International Journal of Information Management*, June, 102188. <https://doi.org/10.1016/j.ijinfomgt.2020.102188>
- Rangaswamy, A., Moch, N., Felten, C., Bruggen, G. Van, & Wieringa, J. E. 2020. The role of marketing in digital business platforms. *Journal of Interactive Marketing*, July, 0–60. <https://doi.org/10.1016/j.intmar.2020.04.006>
- Roggeveen, A. L., & Sethuraman, R. 2020. How the covid-19 pandemic may change the world of retailing. *Journal of Retailing*, 96, 169–171. <https://doi.org/10.1016/j.jretai.2020.04.002>

- Salles, L. D. O., Ara, F., Neto, R. D. M., Sicuro, F. L., & Verassani, F. 2020. *Journal Pre-proof*. <https://doi.org/10.1016/j.geobios.2020.06.007>
- Sheth, J. 2020. Impact of covid-19 on consumer behavior: will the old habits return or die? *Journal of Business Research*, 117, 280–283. <https://doi.org/10.1016/j.jbusres.2020.05.059>
- Stephen, A. T. 2016. The role of digital and social media marketing in consumer behavior. *Current Opinion in Psychology*, 10, 17–21. <https://doi.org/10.1016/j.copsyc.2015.10.016>
- Verhoef, P. C., Reinartz, W. J., & Krafft, M. 2010. Customer engagement as a new perspective in customer management. *Journal of Service Research*, 13(3), 247–252. <https://doi.org/10.1177/1094670510375461>
- Vithayathil, J., Dadgar, M., & Osiri, J. K. 2020. Social media use and consumer shopping preferences. *International Journal of Information Management*, 53(October 2019), 102117. <https://doi.org/10.1016/j.ijinfomgt.2020.102117>
- Wang, T., & Lee, F. Y. 2020. Examining customer engagement and brand intimacy in social media context. *Journal of Retailing and Consumer Services*, 54(January 2019), 102035. <https://doi.org/10.1016/j.jretconser.2020.102035>

## Penta Helix participation in developing rural tourism: A case study in Bringin, Malang

M.H.I. Abbas\*, A. Sumanto & M.P. Priambodo

*Faculty of Economics, Universitas Negeri Malang, Malang, Indonesia*

J. Kustiandi

*Universiti Kebangsaan Malaysia, Malaysia*

**ABSTRACT:** Bringin Village is one of the many villages in Malang Regency that is developing rural tourism to become a village icon. One of the most intensively developed places is the Sumberwiwit springs tourism. This study aims to analyze the development process of Sumberwiwit tourism with the Penta-Helix approach. The research approach used is the qualitative method. In the context of Penta-Helix, researchers also act as the academicians. In addition, other stakeholders also participated in this research as part of the Penta-Helix actors. In essence, all stakeholders are not only sources of data but also decision-makers in the process. The results of the study show that of the five elements in Penta-Helix, the participation of the media and entrepreneurs is still not optimized in the development of Sumberwiwit tourism in Bringin Village. Thus far, the role of media is played by academicians through Student Community Service (KKN) program conducted by universities. The role of businessmen is also still not optimal because the potential products of Bringin Village are still not optimally developed. One of the efforts that must be made to promote Sumberwiwit tourism is to develop village potential products that can support sustainable village tourism. When all of the Penta-Helix actors are well synergized, Bringin Village will not only have a rural tourism place, Sumberwiwit to be the icon, but also become a well-organized tourism village.

### 1 INTRODUCTION

The development approach in rural areas that considers poverty, unemployment, poor infrastructure, and production factors as problems that must be solved in rural areas will only create need-based programs. Such a development approach will ultimately focus on identifying and solving problems faced by a village, so we will never know the actual potential of the village (Bijker et al. 2012; Parnell & Warawege 2011; Solikatur & Masruroh 2018). Responding to this phenomenon, through Law no. 6 of 2014, the Indonesian government has mandated the villages and given them full authority to develop their potential (Sholahuddin 2014).

Law No. 6 of 2014 concerning villages constructs village authority in Article 18, which includes authority in Village Administration, Village-Development's Implementation, Development of Village Community, and Empowerment of Village Community, which is based on the community initiatives, origin rights, and its customs. Article 19 states that village authorities include a) authority based on local wisdom; b) village-scale local authority; c) authority assigned by all levels of government; and d) other authorities assigned by all levels of government following the provisions of the legislation (Kushandayani 2015, p. 73).

In line with the spirit of Law No. 6 of 2014, villages are encouraged to develop innovations to manage their potential to improve the welfare of the community. As mandated in Law No. 6 of 2014,

---

\*Corresponding Author: muhammad.hasyim.fe@um.ac.id

there are five important aspects concerning community development. First, encouraging people's initiatives, movements, and participation in developing village potentials and assets for prosperity; second, forming a professional, accountable, effective, and efficient village government; third, improving public services for the residents to accelerate the general welfare realization; fourth, improving the sociocultural resilience of the community to create a village community that is able to maintain a social unity as part of national resilience; fifth, strengthening the village community that acts as the subject of economic development (Wardiyanto et al. 2014).

With regard to the rural potential in Indonesia, East Java, as one of the provinces with a reasonably significant contribution to the Indonesian economy, it can develop in its rural areas. One area of East Java that can still be developed is Malang Regency. The great potential of Malang Regency is tourism. Geographically, Malang Regency has natural advantages that are rarely possessed by other regions. Malang Regency has coastal areas as well as mountainous areas. This research focuses on tourism development in Malang Regency, precisely in Bringin Village, Wajak District. One of the great potentials of Bringin Village in the tourism sector is its springs, which have not been considered by professionals to become a tourist attraction. By local people, this spring is called "Sumberwiwit".

In developing tourism potential such as Sumberwiwit, all stakeholders should play a role. Government, society, business, academics, and media must contribute to developing Sumberwiwit tourism. The collaboration of these five elements is what we know as the Penta-Helix model. This study aims to analyze and assess the role of these five elements. Using participatory research, the authors act as academics and participate as a subject and object of the study. The method also places other parts not only as of the objects but also the subjects to solve the problems they face. The results of this analysis are expected to create innovative strategies in the development of Sumberwiwit tourism to improve the economy of the local community.

## 2 LITERATURE REVIEW

### 2.1 *The Penta Helix model*

Building human civilization cannot be done by one element. In the theory of change, there is the term "Penta helix", "Penta" means five, and "helix" means a braid. The five elements in the Penta-Helix are government, society, academics, businessmen, and media (Widowati et al. 2019). The general concept of the Penta-Helix Model is shown in Figure 1.

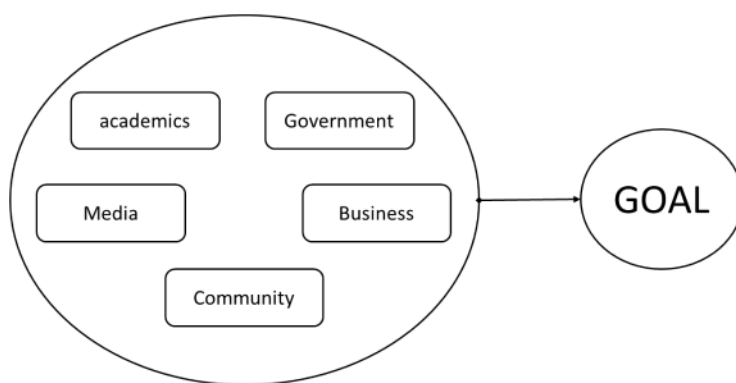


Figure 1. Penta-Helix model.

In the Penta-Helix model, the government takes part as a regulator. The government also acts as a controller who regulates and takes responsibility for developing the object. In this case, the government involves activities such as planning, implementing, monitoring, controlling, promoting,

allocating the budget, licensing, legislating, researching and developing, formulating the public innovation policy, and supporting innovation networks and partnerships. The government also plays a role in coordinating with other stakeholders.

The business people in the Penta-Helix model act as enablers. The business people are the ones who carry out business processes in maintaining sustainable growth and creating value-added. The business people also act as enablers that provide infrastructure. In addition, businessmen act as promoters or contribute to the budget in providing value or income in the form of funding in the sector's development.

Academics on the Penta-Helix model act as drafters, such as standardizing the activities carried out on an object of development and certificating the human resource skills. Academics are a source of knowledge using the latest concepts theories relevant to activities or sectors developed to gain a sustainable competitive advantage.

The media in the Penta-Helix plays a role as an expander. In this case, the media plays a role in supporting publications to promote and create a brand image. In the cooperation development program, the media can be an influential element in tourism development. Technology and media today are the dominant elements in life. What is conveyed by the media becomes a topic that is quite influential in people's lives and has a very good effect on tourism if appropriately used.

Community, the last actor in the Penta-Helix model, acts as an accelerator. In this case, the community means all people who have the same interests and have relevance to the business being developed. The community can also play a role as an intermediary between stakeholders to assist the development process of the sector.

## 2.2 *Tourism development*

The development of tourism sites is an alternative way to encourage economic potential and conservation efforts. The development of them is carried out by rearranging several potentials of natural and biological resources in an integrated manner. In addition, tourism development aims to improve the quality of life and welfare and provide benefits to meet the needs of the community.

Tourism development is a continuous process to conduct continuous matching and adjustment between the supply and demand sides of tourism to achieve the goal or mission that has been determined. It is because there is always competition in the tourism sector. Therefore, the tourism sector can experience a decline in attractiveness and competitiveness. It can rarely be fatal; therefore, supply and demand adjustments must be made continuously following the demands of tourism development. In developing a tourist attraction, a product must also be created related to attractiveness, differences from other tourism sites, facilities for tourists, transportation and accommodation, telecommunications, and other facilities that support tourism. Thus, tourism development can take place smoothly because it is focused not only on certain objects but also on other tourism-supporting facilities mentioned before.

Tourism development has various benefits obtained by both the community and the government or other stakeholders. The importance of tourism development in an area can impact the community's economy. If the site can manage a tourist area with regional characteristics, such as culture, which will attract tourists who want to visit and see the tourist area. Tourism development has various benefits in terms of economy, social culture, and the environment. Tourism development can create new economic activities in an area through job creation, support for development in other sectors, and increasing community income.

The tourism destination development framework contains the same goals, including attraction, amenity, accessibility, and ancillary. These things are also called the four components of tourism.

- 1) Attraction. It is the most crucial thing in tourism, is a significant aspect in attracting visitors. An area can be a tourist destination if its conditions support it to be developed into a tourist attraction where there are spots or things attracting potential tourists to visit it. The things that can attract people include natural products or human creations.

- 2) **Amenity.** It is all forms of facilities that provide visitors with all their needs while staying and visiting a tourism site. Facilities also mean tourism infrastructure and all facilities allowing tourism facilities to thrive and provide services to visitors to meet the needs of those in tourism areas. For example, accommodation facilities include facilities for cleanliness, security, communication, entertainment venues, hotels or inns, restaurants, banks or ATMs, merchandise shops, public toilets, health centers, places of worship, etc. In addition, there is also social and economic infrastructure. Social infrastructure is related to matters in which transportation is used as a tool to achieve the destination of a tourist attraction area. Communication infrastructure is a tool to determine the existence of a tourist attraction area. In contrast, social infrastructure includes an education system that can assess the quality of human resources.
- 3) **Accessibility** is a critical aspect of tourism. This aspect is undoubtedly related to road infrastructure and the ease of accessing public transportation. Tourist attractions with good accessibility will attract tourists to visit the place.
- 4) **Ancillary.** It must be provided by the local government of a tourist site both for tourists or visitors and tourism stakeholders. The available services include marketing, physical development (roads, railroads, drinking water, electricity, telephone, etc.), and the tourist attraction. Ancillary itself is also essential that strongly supports tourism, such as management agencies, tourist information, travel agents, and stakeholders (local governments, investors, local communities) who play a direct role in tourism.

### 3 METHOD

This study uses a descriptive qualitative research method. According to Denzin and Lincoln (in Moleong, Lexy. J, 2011: 5), qualitative research is a study using a natural setting. It intends to interpret a phenomenon that occurs and is carried out by involving various existing methods. This qualitative study was conducted based on phenomena originating from the real world (empirical conditions), where the actual conditions were attempted to be captured by the researchers as research instruments. A qualitative descriptive research method was used in this study to describe and explain the situation of Bringin Village development related to tourism activities through the support of stakeholders who are in direct contact with the research location. The type of data used is primary data (main data) sourced from key research informants, which is obtained by interviewing, observing, and documenting. Secondary data was obtained through intermediary media from literature, records, or historical reports from the Bringin Village apparatus and tourism management groups. Data collection techniques used observation, documentation, and in-depth interviews with research informants and stakeholders. The stages of data analysis carried out are data reduction, data presentation, and describing conclusions/verification.

### 4 RESULT AND DISCUSSION

#### 4.1 *The general view of Bringin village*

According to the topographic condition, Bringin Village is classified as an area with mountains, and most of its territory is highlands. Bringin Village, along with several other villages, is included in the government area of Wajak District, Malang Regency. Based on the world map, Bringin Village is located at 8° latitude and 112° east longitude. Meanwhile, Bringin Village geographically lies in the north and west of Dadapan Village, east of Bambang Village, and south of Sankerto Village. From these conditions, Bringin Village has natural potential, starting from the land that is *Gemah Ripah Loh Jinawi*, and abundant agricultural products. In addition, it also has tourism potential that has developed previously. One of the tourism potentials that have been owned is the Winong Pine Forest, which is already well known by the surrounding community. Winong is managed jointly by the village and the Perhutani (Government Forestry Enterprise) Office, so legally, there is a dispute

because Winong is not one hundred per cent owned by the village. In addition to Winong, Bringin Village also has one potential that is thought to increase Bringin's existence in the community. Sumberwiwit is a water source that never dries and is used by residents for various household activities.

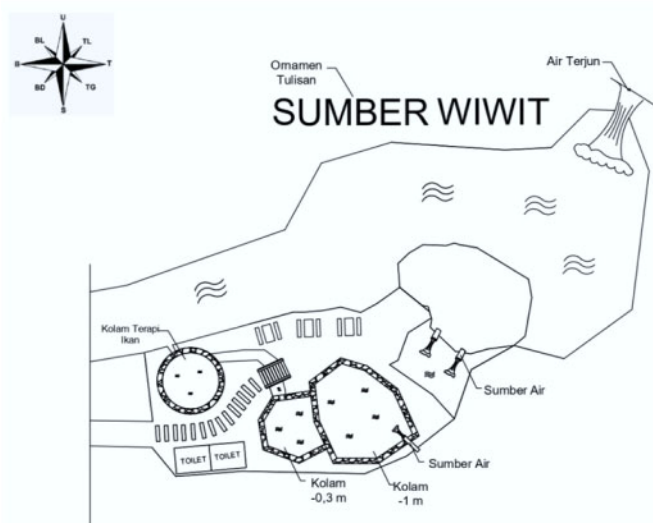


Figure 2. Site plan of Sumberwiwit.

#### 4.2 *Penta-Helix collaboration in Bringin*

Tourism development is realized by implementing tourism development plans by taking concern of the diversity, specific, and uniqueness of culture and nature and human needs for tourism. One of the tourism development programs launched by the government is the application of the Penta-Helix model. For the first time, the Penta-Helix model was established by the Minister of Tourism Arif Yahya and subsequently formulated into the Minister of Tourism Regulation of the Republic of Indonesia Number 14 of 2016 concerning Guidelines for Sustainable Tourism Destinations. The Penta-Helix model seeks to encourage the tourism sector and the tourism system by increasing the role of business, government, community, academic, and media to create value for tourism benefits and benefits for society and the environment. The Penta-Helix model used in developing tourism potential in Bringin Village is a continuation of the village government program to empower village communities to have better economic capacity and capability.

The Penta-Helix model is a model of socioeconomic development that encourages a knowledge-based economy to pursue innovations, networking, and entrepreneurship through beneficial collaborations and partnerships between academics, government, business people, civil society, and mass media (Tonkovic et al. 2015). The Penta-Helix model has its origins in the Triple Helix of Etzkowitz and Leyesdorff (2000), where tri-lateral networks of academia, corporations, and government combine to create profits from implementing innovative research projects developed in educational institutions and turning these projects into products fit for use or commercial services (Etzkowit & Leydesdorff 2000). As conditions change, the Penta-Helix concept complements the synergy in developing local economic potential. Bringin Village began to develop rural tourism with the Penta-Helix approach when the tourism office visited with NGOs from abroad in the Cross-Cutting Community Development (CCCD) program. Many revolving funds are used to create various programs to strengthen the local communities' capacity and improve village infrastructure. Academics also appear with multiple activities that involve lecturers and students to provide recommendations and conduct studies of the activities carried out. To support the implementation of



multiple programs related to tourism development, a tourism support village community (Pokdarwis) was formed. The Pokdarwis formed in Bringin Village later became the planner, implementer, and supporter of existing rural tourism potential development activities.

### 4.3 The role of each Penta-Helix actor

Strategic planning of tourist destinations is complex. It is because of the interdependence of various stakeholders and fragmented control over destination resources (Jamal & Getz 1995). Therefore, sustainable tourism development at the regional level requires cooperation and collaboration between actors through optimizing the roles of the five actors—government, academic, business, community, and mass media—as stated in the Minister of Tourism Regulation Number 14 of 2016 concerning The Guidelines for Sustainable Tourism Destinations.

The fundamental understanding of collaboration is different from several other concepts that mean collaboration, put forward by Peter Shergold (2008), by distinguishing four concepts that reflect a process of transformation to an understanding of collaboration, as illustrated in Table 1:

Table 1. Four concepts of collaboration.

NO	Process	Activity
1	<i>Command</i>	<i>The process of centralized control, which includes clearly defined hierarchical authority lines.</i>
2	<i>Coordination</i>	<i>The process of collective decision making-imposed on participating institutions</i>
3	<i>Cooperation</i>	<i>The process of sharing ideas and resources for mutual benefit</i>
4	<i>Collaboration</i>	<i>The process of collaborative invention, which is facilitated by independent institutions.</i>

The four understandings of the above concepts are Command, Coordination, Cooperation, and Collaboration. The difference between the four concepts lies in the purpose of cooperation and the form of dependence. Command is a control process that is centralized with clear lines of hierarchical authority. Coordination is a collective process of decision-making imposed on the participating institutions. Cooperation is a process of sharing everything, especially ideas and resources for mutual benefit. At the same time, Collaboration is a process of co-creation mediated between autonomous institutions. Of the four understandings of this concept, the autonomy of the parties in a collaborative relationship is a differentiating factor from other concepts.

The management of public affairs is further developed by the concept of collaborative governance. The core of the terminology, Chris Ansel and Alison Gash, put forward collaborative governance as the involvement of non-government stakeholders in handling public policies. The term stakeholder refers both to the participation of citizens as individuals through the involvement of organized groups of stakeholders. Collaboration implies two-way communication and influence between institutions and stakeholders, meeting together in a deliberative and multilateral process and being directly involved in decision-making. Collaboration also implies that private stakeholders will have real responsibility for policy outcomes (Ansell & Gash 2008).

A more practical understanding of collaborative governance is put forward by Sink 1998 (in Dwiyanto, 2015: 253). He said that collaborative cooperation is a process in which organizations or people that have an interest in a particular problem try to find solutions determined jointly to achieve goals that they cannot achieve on their own. This conceptual understanding shows that collaborative governance is based on the purpose of solving common problems or specific issues of the parties involved.

Getz and Jamal (1995) conducted a case study in Canmore, Alta (Canada), a rapidly growing mountain tourism destination, and found that collaborative transformation initiatives are being attempted at several levels in overall tourism and regional development strategies. For example, the local environment, between cities, and through community and non-profit organizations (Jamal &

Getz 1995). In essence, the concept of collaborative governance arises when the government relies not only on the internal capacity to solve public problems through specific policies or programs.

Experts argue that every policy process always involves multiple actors. Actors are essential in successful implementation (Nutt & Backoff 1993). According to Howlett and Ramesh (1995), policy players include elected politicians, appointed officials, interest groups, research institutions, such as universities, relevant experts or policy consultants, and the mass media. Limited resources and networks encourage the government to collaborate with various parties. The parties refer to the government, academics, the private sector/businesses, the community, and the mass media or better known as the Penta-Helix model. These elements are further elaborated.

#### 4.3.1 *Government*

In policy implementation, the local government is the most responsible administrative party. The application structure in both developed and developing countries is a component of backward mapping that helps implementation. The bureaucracy has great jurisdiction to fully manage the field of policy execution in its operation area, as mandated by the legislature (Yuningsih et al. 2019).

The Regional Office or Technical Institution, which participates in tourism, culture, and art affairs; planning tourism development and arranging the Strategic Plan (RENSTRA); providing access and infrastructure related to tourism activities; facilitating industry and trade sectors; promoting investment and one-gate entry are the local bureaucrats who are involved in the Penta-Helix synergy in developing tourism in Bringin Village. Bureaucrats are the primary implementers of public policy. However, another actor in the legislature is involved in the implementation of policies. When the legislature decides numerous precise regulations and performs the tasks of legislation, budgeting, and control, it is involved in implementation.

Based on interview with Mr. Gatot Kasiono, the village secretary, an informant representing the village government, it was revealed that as a regulator, the government's role in the formation of tourist destinations includes from the beginning of preparation for the formation of a tourist village to the monitoring and evaluation stages. 1) The initial stage (preparation) for the government's role is to start by equating the views of the community, village government, village-level institutions on how to make a commitment on how to jointly create a tourist village, persuasive and continuous approaches, conducting formal and non-formal meetings involving components of society, young people, women community, farmer groups, MSME groups, youth organizations, and other village community institutions—forming institutions, providing reinforcement to village-level organizations, and preparing vision plans for structuring Bringin Village. Then there is a declaration, and there is an academic study, the making of government regulations, and village regulations. 2) The implementation stage of the formation of tourism villages, the role of the government is as follows: Prepare planning and budget provision in the procurement and improvement of supporting infrastructure for destinations, providing training and technical guidance to the community for organizing events, workshops, pieces of training, certification of guides (tour guides), to develop existing resources so that people are more aware of tourism, and formulating policies. 3) Monitoring the formation of tourist villages and evaluating for improving the management of tourism villages.

#### 4.3.2 *Academics*

Academics as actors who are often involved in policy have expertise that plays a role in policy implementation. In tourism development, academics, represented by universities and research institutions, play an important role in shaping a knowledge-based society. Academics can shape society by supplying the necessarily qualified workforce for the development of economic knowledge. It also teaches people how to think critically, develop talents, and generate information and new skills (Halibas et al. 2017).

Academic involvement in the diffusion of knowledge and the application of technology, as well as entrepreneurship through beneficial alliances and partnerships between academia, government, business, community, and mass media, is characterized by innovation. Universities' participation in Bringin Village contributes to the development of tourism and local socioeconomics.

According to the informant statement, the potential of tourist destinations owned by the Bringin Village, if managed and appropriately packaged, will become an attractive attraction for tourists and can create jobs for the local community. Regarding the collaboration with the Penta-Helix model, according to Mr. Gatot Kasiono, the role of academics is divided into several stages, namely: 1) the initial stage of preparation for the formation of a tourist village by identifying the potential of village tourism destinations carried out in 2019; 2) in the implementation stage of the establishment of a tourist village, the academics provide training in the field of tourism including character building, guiding, and also developing digital products. The training includes how to fulfill the facilities of an inn (homestay), providing good service to visitors who come and spend the night at the inn, and training in culinary diversification by utilizing existing materials in the village; 3) monitoring stage by evaluating and suggesting what improvements have been achieved and what needs to be improved in achieving the goals.

#### 4.3.3 *Businessman*

A tourist attraction in Bringin Village offers residents the opportunity to contribute to the regional economy by becoming a businessman or entrepreneur. As a result, the community will have opportunities to do business in the tourism sector. Services provided to consumers, such as tourism objects as the main product offered; transportation; tour guides (business owners can employ people near tourist objects to become tour guides); accommodation or lodging; and culinary businesses, as well as services or products that are in line with the needs and desires of customers, are examples of business products that can be developed in this case.

Based on the results of interviews with Mr. Sukirman, an informant who represents business people, it was revealed that the role of businessmen as a travel agency industry is: 1) implementation stage by developing travel products by making and selling Bringin Village packages through village potential analysis, such as historical sites, friendly communities, natural beauty, and agriculture to be assembled into tourism products. According to the informant, the role of industry is crucial because travel agents play an essential role in bringing in guests to create a tourist village, to introduce and present all existing tour packages. The business opportunity is significant because Bringin Village has interesting natural, artistic, and cultural potential so that it makes it easier for the industry to sell Bringin Village to become a tourism village, and bring in guests and benefit both parties; 2) monitoring and evaluation phase, the role of business people is to provide input on things that are still lacking for the improvement of the tourism village, according to information from tourists who have visited the village. Despite various efforts, the role of business is still not felt because many entrepreneurs focus more on exploiting natural resources in the form of sand mining in Bringin Village.

#### 4.3.4 *Community*

The community is another player in the tourism industry. Local communities, non-governmental organizations (NGOs), or groups based on interests or hobbies that intend to explore or promote tourism in the area are all included in this study. The community plays a part in tourist development as one of the stakeholders. The community's role in tourist development in the region begins with planning and ends with implementation. The idea of Community-Based Tourism (CBT) aims to explain the role of the community in tourism, which is positioned as the principal actor through empowerment, with the goal of allocating as much of the tourism profits as possible to the local community's welfare. Representatives from these communities are gathered in village Pokdarwis who are given the right to manage the developed tourist destinations, namely Sumberwiwit.

It was revealed that the Bringin Village community plays a role as the leading actor in developing Sumberwiwit tourism, starting from the preparation, implementation and monitoring, and evaluation stages.

- **Preparation Stage**

In this stage, the communities participate in both formal and non-formal meetings with all stakeholders in the context of establishing a tourist village, forming groups, participating in training

organized by academics, government, and other parties ranging from training and learning information, ways of serving guests, knowledge of local wisdom and the environment, maintaining cleanliness in homestays, and creative economy training in villages.

- **Implementation Stage**

In this stage, the communities carry out improvements and structuring of supporting infrastructure for tourist areas that have not been touched, making handicrafts, souvenirs, and culinary products from agricultural products and become a guide (tour guide), because the local community is the one who knows their own area best.

- **Monitoring and Evaluation Stage**

In this stage, the communities carry out monitoring and evaluation to improve the development of tourist villages on the advice and input of all relevant parties, including tourists who have visited the village.

#### 4.3.5 *Media*

The mass media is one of the key players in tourism industry. The mass media serves as a channel for policy socialization and communication, as well as a link between the public and policymakers (Howlett & Ramesh 1995). In today's modern culture, the mass media evolves and changes at a tremendous speed. We only knew that mass media consisted of print media, such as newspapers, magazines, and other print media, as well as electronic media, such as television and radio broadcasts, at the period. Meanwhile, as technology and the internet have developed, new media, such as media platforms, like Facebook, Instagram, Twitter, YouTube, and others, have emerged. While focusing on the communication process, a medium can combine/integrate/converge all media features from earlier forms.

Because of increased sophistication in technology, information, and communication, the rise of new media is beneficial for social connections between digital, networked, and computerized humans (Kurnia 2005). Social contacts that are easily established in communicating, for example, through social networks such as Facebook, Instagram, YouTube, Twitter, and others, demonstrate that location and time are no longer barriers to modern communication. The tourism industry makes use of the mass media's ability to transmit information without being constrained by the boundaries of place and time. Natural tourism, cultural tourism, spiritual tourism, and other sorts of tourism are all still promoted by regions. In this digital era, the need for promotion is the main thing. A tourist destination should already have a website and social media because every time a tourist wants to visit a tourist spot, the first thing to do is search in digital media to find information related to the tourist spot. As a place of publication and promotion so that it can be known by many people, coverage of activities in tourist villages including community life and customs and awards that have been achieved, news coverage presented must follow the reality on the ground so that tourists will get correct information.

Furthermore, as a connection between the community, merchants, and the government, the media disseminates information about Bringin Village and Sumberwiwit tourism spots through internet media. However, the media's contribution to the growth of Bringin Village as a tourist destination is still unrecognized. There are still no official social media platforms in Bringin Village, such as websites or social media that promote tourism spots.

#### 4.4 *Assessment of the collaboration*

The development of tourist destinations carried out in Bringin Village through promotional efforts, strengthening community capacity, and improving tourism management institutions have been carried out. Although media still has not shown its significant contribution, all stakeholders have played a role. The role of the community is vital because the perpetrators of tourism service providers are the community itself. The concept of community empowerment, as much as possible, the community should go directly to become tourism actors. Good relations between the community and academics/universities are the primary capital in realizing the development of Wiwit source tourist destinations. It certainly positively impacts the community because of the additional insights

gained from academics. Academics have provided knowledge-based assistance and a form of capacity building for the Bringin Village Pokdarwis to raise awareness about the Bringin Village community about their tourism potential and the need to improve existing problems. Assistance and cooperation between tourism actors will help realize the achievements of tourism village development, which will ultimately be able to prosper the village community due to the large number of tourist visits visiting the tourist village. The government, in this case, is also the village apparatus as a driver of motivating the community further to improve their performance as tourism actors in the village. The role of the government is also to create jobs, providing assistance, monitoring, evaluation, supervision, guidance, and granting permits. The role of businessmen is no less critical, such as helping the provision of supporting infrastructure, such as making camping grounds (campgrounds), swimming pools, and also conservation activities together with the community so that the development of sustainable tourism villages can be carried out, and investing and selling tourist attraction packages.

The media is one part of tourism. The media serves a link between the community, business owners, and the government. The media also plays an important role in promoting tourism growth. However, media's role in promoting the Bringin Village and the Wiwit source tourism attraction continues to be ineffective. The collaboration of the Penta-Helix scheme implemented in the village of Bringin in the development of rural tourism is shown in Figure 3:

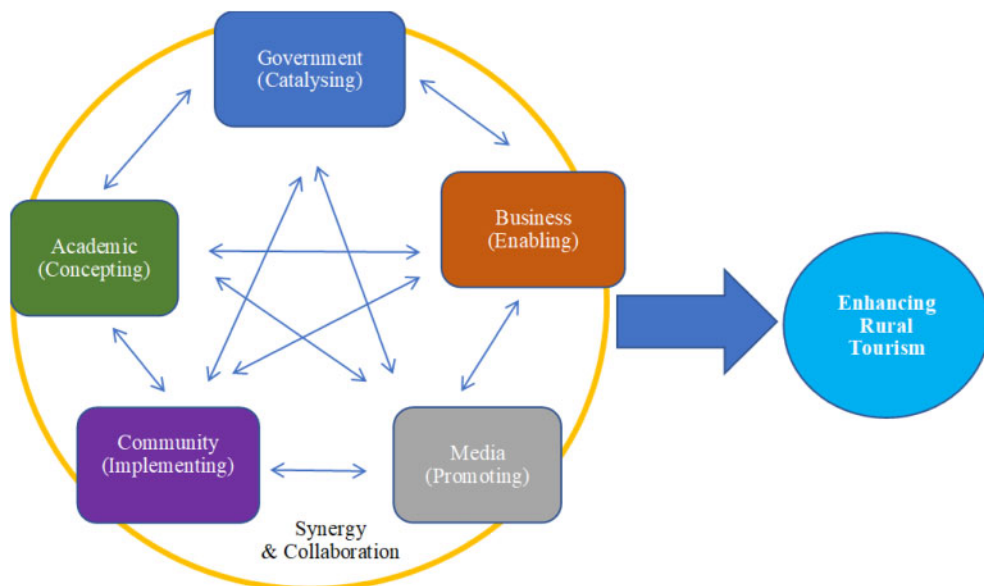


Figure 3. Model of the Penta Helix collaboration in the village of Bringin.

## 5 CONCLUSION

Building collaboration with the interrelationships between stakeholders in the Penta-Helix model starts from the planning stage of sustainable rural tourism development. Each actor's responsibility is to do their best in promoting tourism development that benefits society and the environment. Increasing coordination and collaboration among fellow actors in the region, as well as strengthening institutional capacity for stakeholders and technical institutions involved in the development and promotion of tourism, culture, and arts in Bringin Village, can help optimize Penta-Helix in the development of tourism based on local wisdom. The collaboration of these five stakeholders

has been running. Still, the role of the business and media has not been going well, so it needs to be developed to become an information promoter for tourist destinations in Bringin Village.

## REFERENCES

- Andayani, S., Anwar, M. R., & Antariksa, A. 2012. Pengembangan kawasan wisata balekambang kabupaten malang. *Rekayasa Sipil*, 6(2), 168–178.
- Ansell, C., & Gash, A. 2008. Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*. <https://doi.org/10.1093/jopart/mum032>
- Auesriwong, A., Nilnoppakun, A., & Parawech, W. 2015. Integrative participatory community-based ecotourism at Sangkhom District, Nong Khai Province, Thailand. *Procedia Economics and Finance*, 23, 778–782.
- Dwiyanto, A. 2015. *Manajemen pelayanan publik: Peduli, inklusif dan kolaboratif*. Yogyakarta: Gadjah Mada University Press.
- Elmore, R. F. 1980. Backward mapping: Implementation research and policy decisions. *Political Science Quarterly*.
- Etzkowitz, H., & Leydesdorff, L. 2000. The dynamics of innovation: From national systems and “mode 2” to a triple helix of university-industry-government relations. *Research Policy*. [https://doi.org/10.1016/S0049-0078\(99\)00055-4](https://doi.org/10.1016/S0049-0078(99)00055-4)
- Halibas, A. S., Sibayan, R. O., & Maata, R. L. R. 2017. The penta helix model of innovation in Oman: An hei perspective. *Interdisciplinary Journal of Information, Knowledge, and Management*.
- Howlett, M., & Ramesh, M. 1995. *Studying public policy: Policy cycles and policy subsystems*. Oxford University Press.
- Jamal, T. B., & Getz, D. 1995. Collaboration theory and community tourism planning. *Annals of Tourism Research*, 22(1), 186–204. [https://doi.org/10.1016/0160-7383\(94\)00067-3](https://doi.org/10.1016/0160-7383(94)00067-3)
- Kecamatan Wajak Dalam Angka.2018.(Online) BPS Kab Malang.go.id
- Parnell, S., & Walawege, R. 2011. Sub-Saharan African urbanization and global environmental change. *Global Environmental Change*, 21, S12-S20.
- Pathumporn, J., & Nakapaksin, S. 2015. Participatory action research model for sustainable community based tourism development. *International Journal of Business and Administrative Studies*, 1(3), 89–93.
- Sholahuddin, M. 2014. Urbanisasi spasial dan pengaruhnya terhadap perubahan struktur spasial pada rumah tinggal (Studi Kasus di Sewon, Bantul, Yogyakarta). *Journal of Urban Society's Arts*, 1(2), 149–161.
- Soedigdo, D., & Priono, Y. 2013. Peran ekowisata dalam konsep pengembangan pariwisata berbasis masyarakat pada taman wisata alam (twa) bukit tangkiling kalimantan tengah. *Jurnal Perspektif Arsitektur*, 8(2).
- Solikatur, S., & Masruroh, Y. 2018. Kemiskinan dalam pembangunan. *Jurnal Analisa Sosiologi*, 3(1).
- Suntajaya, I. G. K. 2014. Faktor-faktor yang mempengaruhi terjadinya urbanisasi di provinsi bali. *Piramida*, 10(2).
- Tonkovic, A. M., Veckie, E., & Veckie, V. W. 2015. Applications of penta helix model in economic development. *Economy of Eastern Croatia Yesterday, Today, Tomorrow*, 4, 385–393. Retrieved from <https://ideas.repec.org/a/osi/eecytl/v4y2015p385-393.html>
- Von Stamm, B. 2004. Collaboration with other firms and customers: innovation's secret weapon. *Strategy & Leadership*. <https://doi.org/10.1108/10878510410535727>
- Wanna, J., & Shergold, P. 2008. Governing through collaboration. In *Collaborative Governance*. <https://doi.org/10.22459/cg.12.2008.02>
- Widowati, S., Ginaya, G., & Triyuni, N. N. 2019. Penta helix model to develop ecotourism. *International Journal of Social Sciences and Humanities*, 3(2), 31–46.
- Yuningsih, T., Darmi, T., & Sulandari, S. 2019. Model pentahelik dalam pengembangan pariwisata di Kota Semarang. *JPSI (Journal of Public Sector Innovations)*, 3(2), 84. <https://doi.org/10.26740/jpsi.v3n2.p84-93>

## Financial development and economic growth of ASEAN countries during the COVID-19 pandemic

S. Hodijah & D. Hastuti\*

*Faculty of Economics and Business, Universitas Jambi, Indonesia*

**ABSTRACT:** Financial growth and economic growth are considered benchmarks for the success of a country. The current problems during the COVID-19 pandemic have been recognized worldwide as impacting the decline in economic growth, which is also felt by a country's financial security. This study investigates the relationship between financial development and economic growth in several ASEAN countries, including Indonesia, Malaysia, Singapore, Thailand, and Philippines during 2010–2020. Data analysis uses the vector error correction model (VECM) to see financial, economic growth, and economic growth in the short and long term at the beginning of the COVID-19 pandemic. This study found that the current economic growth depends on the health conditions applied in several ASEAN countries. The long-term policy is to optimize financial institutions in the banking sector and procedures to increase economic growth by encouraging spending in the health and education sectors.

### 1 INTRODUCTION

The current instability in the world economy is due to the COVID-19 pandemic. The COVID-19 outbreak has significantly impacted the economy and slowed economic growth in ASEAN countries from the beginning of 2020 until now. This condition also results in the emergence of financial problems, such as unemployment, poverty, and even the number of crimes. Therefore, the government continues to make the best efforts to minimize the occurrence of a recession and other worst possibilities.

The high daily positive number of COVID-19 will weaken the economy because the activities of economic actors are limited by working from home and keeping a distance. Various world phenomena will affect financial development, so that it can be said that the financial system is unstable. The Harrod-Domar theory shows that developing an excellent monetary system will encourage the restoration of economic stability.

One of the critical macro indicators in analyzing the development and performance of a country's economy is its economic growth (Aprilia & Hariyanti 2014), (Febryani 2017). By examining economic growth, it can be seen that the factors that affect ASEAN-6 economic growth consist of trade openness, gross fixed capital formation, and inflation (Aprilia & Hariyanti 2014). Based on Febryani (2017) there is significant influence between population growth and unemployment on economic growth in Indonesia, Malaysia, the Philippines, and Thailand with the analytical method used using Fixed Effect Model (FEM) panel data.

According to Suliswanto (2016), the ASEAN country with the most open economy is Singapore, followed by Malaysia, Thailand, Indonesia, and the Philippines. Compared to other ASEAN

---

\*Corresponding Author: dwihastuti@unja.ac.id

countries, Indonesia's position has a lower level of openness (Suliswanto 2016). This openness is also in line with technological improvements, job creation, and human resource development (Tinaningsih 2014). The existence of transparency in both trade and the financial sector will benefit all countries involved; for example, it can encourage the entry of foreign capital (capital inflow) and accelerate the occurrence of capital accumulation and technology transfer (Purnomo 2020).

In addition, they were expanding the concept of efficiency, energy transition, and the inclusion of capital values in economic life in minimizing financial system risks to avoid a crisis (Jouvet & De Perthuis 2013). Therefore, the development of technology that will encourage the improvement of the financial system and reduce the impact of shocks, such as in 2008 wherein the crisis originated in developed countries or other words, financial developments will increase resilience which will then encourage economic growth (Omkanath 1997), (Lee et al. 2020).

Various financial phenomena and economic growth are again related to the financial crisis. Significant increase in credit will boost inflation, weaken the banking system, and cause a financial situation to hampered economic development (Rousseau & Wachtel 2011).

Financial sector development has a positive and significant relationship to economic growth (Jalil & Feridun 2011). Meanwhile, Al-Malkawi et al. (2012) show that financial results have a negative and powerful influence. Based on this difference, the authors are interested in studying more specifically related to financial development and economic growth in ASEAN countries.

During 1990–2019, the highest GDP per capita of ASEAN countries was shown by Singapore at USD 65,233 and Brunei Darussalam at USD 31,087 (World Bank 2021). These two countries have a reasonably high-income level compared to the other eight ASEAN countries.

High economic growth with high per capita income cannot be separated from the conditions and economic policies of the country. According to Lee et al. (2020), regulation has an essential role in developing financial growth because of the mediating effect on the objective and economic sectors. It will react differently to positive and negative changes in the financial system. In addition, according to Koetter & Wedow (2010), the quality of intermediation has a positive and significant effect on economic growth.

Further, the ASEAN country's current account movement in 2019 was the highest in Singapore at USD 61,252,273,991, while Indonesia had an adverse BoP, which was USD 32,019,400,162. The negative movement is due to Indonesia's investment in development, which causes spending on goods and services to be higher than its exports.

ASEAN country with the highest number of cases affected by COVID-19 is Indonesia compared to other ASEAN countries (WHO 2021). The increased spread is due to Indonesia being late in implementing the lockdown and relevant protocols that are still often ignored. It is different from other ASEAN countries where the government has implemented a lockdown and handling of COVID-19 patients so that the number of deaths tends to be small.

Each ASEAN country has relatively significant economic linkages (ASEAN Community 2020). It was recorded that in 2019, the total intra-ASEAN trade in goods reached USD 632 billion or 22.4% of the total. As is the case in the rest of the world, economic contraction is quite challenging to avoid. Some ASEAN countries have entered a recession since the second quarter of 2020, such as Singapore and the Philippines. ASEAN economic growth also contracted by 2.7% in 2020 (ASEAN Community 2020).

The COVID-19 pandemic has short- and long-term impacts and will have a crisis impact (Ayati et al. 2020). The COVID-19 pandemic has become an economic crisis and is spreading in Southeast Asia and even the whole world (Menon 2020). To anticipate this phenomenon, proper identification is needed to reduce the socioeconomic burden due to the slowing industry during the COVID-19 pandemic with various economic stimuli and loosening the lockdown to accelerate economic growth.

The decline in the economic development of ASEAN countries was also due to the COVID-19 pandemic. There are indicators of economic openness and the influence of international trade and



foreign direct investment (FDI) on GDP in ASEAN countries. The association of ASEAN countries that are members can be seen from the value of intra-ASEAN exports and intra-ASEAN FDI, which simultaneously contributes 90.7%. This shows that trade cooperation among ASEAN members is very beneficial for each member, including Indonesia, increasing its competitiveness and economic growth (Fathoni et al. 2017).

However, not all goods produced by ASEAN countries are in demand. For example, Indonesian tea as a leading commodity is less attractive in ASEAN countries (Satryana & Karmini 2016). Therefore, special regulations are needed as one of the determinants of growth by conducting international trade with other countries (Silberberger & Königer 2016).

Chow & Fung (2013) conducted research related to the relationship between financial development and economic growth in 69 sample countries using the autoregression vector panel model showing the effect of causality from change to financial development. Based on the background that has been explained, the authors are interested in analyzing each ASEAN country's economic growth during the COVID-19 pandemic.

## 2 LITERATURE REVIEW

### 2.1 *Financial development*

Countries with developing financial systems tend to grow faster in increasing economic growth (Omkarnath 1997). In addition, this program also reduces poverty and inequality issues by expanding access to finance with risk management facilities (Omkarnath 1997). Thus, the quality of regulation plays an essential role in increasing financial growth and preventing financial system crises caused by a mediating effect on the real and economic sectors (Lee et al. 2020).

The benefits of financial development will allow a person to start his own business, enter new companies, increase competition, and encourage growth (Guiso et al. 2009). The advantages of openness in the financial sector can facilitate the entry of foreign capital (capital inflow) and accelerate the occurrence of capital accumulation and technology transfer (Purnomo 2020).

Omkarnath (1997) shows that the financial indicators consist of the ratio of assets of financial institutions to GDP, the ratio of liquid liabilities to GDP, and the ratio of savings to GDP (Omkarnath 1997). In addition, private sector credit as a ratio to GDP and total domestic credit tends to be conducive to growth. Whether financial development is good or bad depends on the indicators of financial development used (Adu et al. 2013). This is in line with Lo Prete (2013), which states that market modernization and financial development aim to take advantage of new investment opportunities and help reduce inequality.

According to Go McKinnon (1973), Shaw (1973), and Gurley-Shaw (1955) there is a correlation between financial and economic developments. With financial liberalization, savings and credit supply will encourage investment and economic growth (Dixon 1997, p. 752). This is also in line with research (Rahman 2004) which states that a good financial system will encourage faster economic growth (Rahman 2004).

Research (Rahman 2004) using SVARs shows that when financial development impacts investment and per capita income, it will create additional demand for financial services and help the financial system, which is not too large.

Chow & Fung (2013) conducted research related to the relationship between financial development and economic growth in 69 sample countries using the autoregression vector panel model showing a 1-direction causality effect from growth to financial development.

Based on Purnomo's research (2020) using panel data estimation results with the best model being the Fixed Effect Model (FEM) where the variables resulting from the trade openness (TO) and Foreign Direct Investment (FDI) models have a positive and significant impact on ASEAN

economic growth, while government spending and inflation variables do not affect economic growth.

Al-Malkawi et al. (2012) analyzed the relationship between financial development and the growth of a small open economy in the United Arab Emirates (UAE) with data from 1974–2008 using the autoregressive distribution lag (ARDL) approach to determine financial developments. Financial development indicators consist of the monetization ratio (M2/GDP) and the credit ratio. The results showed that the monetization ratio variable and economic growth had a negative and significant relationship. Meanwhile, Jalil & Feridun (2011) show that financial sector development has a positive and significant effect on economic growth.

According to Sehwat & Giri (2015), based on the results of ARDL test, it shows that financial developments, economic growth, and inflation can exacerbate income inequality in both the short and long term.

## 2.2 *Economic growth*

By encouraging economic growth through capital accumulation and technological progress by increasing savings, mobility will affect foreign investment and optimize the allocation of capital (Omkanath 1997). Indicators of the success of economic growth in developed and developing countries can be seen from the size of a country's GDP (Shin 1980). The high income is inseparable from the increase in a country's GDP per capita in the middle class in the investment sector (Brueckner et al. 2018).

According to Levine & Zervos (1998) stock size, volatility, and international integration are not closely related to growth. The higher economic growth indicates economic freedom (De Haan & Sturm 2000).

Several indicators show that the impact of education, professional development, and health status on economic growth and social capital also affects human social capital on institutions and economic growth (Curea & Ciora 2013), (Glaeser et al. 2004).

## 2.3 *COVID-19 in ASEAN countries*

The COVID-19 pandemic has a negative impact on various sectors that disrupt economic activity and growth throughout the world (Association of Southeast Asian Nations (ASEAN) 2020), (Ayati et al. 2020). In addition to the economic problems, the pandemic is also related to the burden of health (World Economic Forum 2020) (Ayati et al. 2020). Therefore, there is need for a strategy to develop the post-COVID-19 economy so that, in this case, stakeholders have a reasonably significant role (World Economic Forum 2020). Then the government is expected to be able to make planning strategies to overcome COVID-19 pandemic (Ayati et al. 2020) by easing the lockdown to minimize risks and accelerate economic recovery (Menon 2020).

Brueckner et al. (2018) stated that the increase in GDP per capita experienced by the ASEAN economy during 1970–2010 significantly contributed to the income of the middle class. The existence of trade and investment openness has a positive and significant effect on ASEAN economic growth, while government spending and inflation variables have no significant impact on economic growth (Purnomo 2020).

The COVID-19 pandemic, where many people are infected with COVID-19, has caused the government to impose PSBB, known as large-scale social restrictions. These challenges and regulations in several countries are causing layoffs (PHK). This condition illustrates that economic activity is limited and disrupted in almost all countries as a long-term impact.

The impact of the COVID-19 pandemic is marked by changes in demand, revision of regulations, changes in research and development processes, shifts toward telecommunications so that economic growth slows down due to a slowing industry, delays in approvals as a long-term impact of the COVID-19 pandemic (Ayati et al. 2020). Currently, the COVID-19 pandemic continues to be a health emergency and has even become an economic crisis in parts of East Asia, which has caused an increase in the number of unemployment and poverty (Menon 2020).

## 2.4 *Data sources and measurements of variables*

The scope of this study is carried out in ASEAN-5 countries, which are the center of the association of Southeast Asian countries that aim to improve the economy, culture, social, and peace. In addition, Indonesia is also included in the member. Based on the discussion in this study, the objective of this study is to determine relationship between financial development and economic growth of each ASEAN-5 country.

Furthermore, the data used in this study were obtained from the World Bank and the International Monetary Fund (IMF). Based on the research questions, we see the long-term and short-term relationship between financial development indicators and economic growth in each ASEAN country, with the help of EViews 10 with the VECM method. The results of this study are expected to be a basic reference to the formulation of policies related to optimizing financial development and economic growth during the COVID-19 pandemic.

## 2.5 *Data types and sources*

The data used in this research are secondary data obtained from various sources, such as the World Bank, IMF, WHO, and others. ASEAN members who have joined to date, include Indonesia, Malaysia, Singapore, Thailand, Philippines, Brunei Darussalam, Vietnam, Cambodia, Laos, and Myanmar. Then the research is conducted only on ASEAN-5 countries, namely Indonesia, Malaysia, Singapore, Thailand, and the Philippines. The determination of the ASEAN population is due to the impact of COVID-19 on the economy of each Southeast Asian country that is part of the ASEAN group. In addition, to see how the government's strategy allocates the budget to stabilize the economy to avoid the abyss of recession.

Based on the data used in this study secondary data were used published by the official and trusted websites and qualitative data, namely data in the form of exact numbers. Data collection was carried out using tabulations in Excel before the analysis process was carried out in EViews. The data used is from the period 1990–2020.

## 2.6 *Analysis tools*

This research is included in the category of secondary research. The collected data is then analyzed using the description method, with qualitative analysis. The long-term and short-term relationship between financial development indicators and economic growth was carried out with the help of the EViews 10 program using the Granger Causality Test method. Specifically, to answer questions related to problems with the analytical tools used, the research objectives are as given.

This research was previously divided into 2 parts, namely high-income ASEAN countries and low-income ASEAN-5 countries. According to De Gregorio & Guidotti (1995), indicators that affect financial development include credit, investment rate, primary school, secondary school, GDP per capita, government spending, revolution coups per year, index of associations, and interest rates using the VECM model.

Based on the research by Shabri M. Abd. Majid and Mahrizal (2007), the relationship between short-term and long-term financial growth during the post-1997 financial crisis in ASEAN-4 countries (i.e., Indonesia, Malaysia, Thailand, and the Philippines) time series techniques, such as ARDL, vector error correction models (VECM), variance decompositions (VDCs) and impulse-response functions (IRT-s) were used.

## 2.7 *Unit root test*

As discussed earlier, modeling using VECM is based on time series data, which is not stationary but cointegrated. To check the stationarity of the data, a unit root test can be used; the test statistic

used is Augmented Dickey-Fuller (ADF), as follows:

$$\Delta Y_t = \gamma + \delta_t + \rho Y_{t-1} + \sum_{j=1}^K \varphi_j \Delta Y_{t-j} + e_t$$

With  $\gamma = -1$  and  $\delta_t = 1$ . Hypothesis  $\rho = 0$  (there is a unit root). At the 100% significance level (1), 0 is rejected if the ADF statistic is less than the critical value or smaller than the significance value. If 0 is rejected, then the data is stationary.

Johansen Cointegration Test

Then, for the cointegration test, the Johansen cointegration test is used as follows:

It is known that the model ( $p$ ) is

$$y_t = A_1 y_{t-1} + \dots + A_p y_{t-p} + B X_t + \varepsilon_t$$

where  $y_t$  is a vector with a non-stationary variable  $I(1)$ ,  $X_t$  is a vector with a deterministic variable,  $\varepsilon_t$  is an error vector. The equation ( $p$ ) can also be written as

$$\Delta y_t = \Pi y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta y_{t-i} + B y_{t-i} + \varepsilon_t$$

Where:

$$\Pi = \sum_{i=1}^p A_i - 1, \Gamma_i = - \sum_{j=i+1}^p A_j$$

For hypothesis testing, the following trace test statistics can be used:

$$LR_{tr}(r|k) = -T \sum_{i=r+1}^k \log(1 - \lambda_i)$$

Furthermore, a statistical test of the maximum Eigen value test is carried out

$$\begin{aligned} LR_{max}(r|r+1) &= -T \log(1 - \lambda_{r+1}) \\ &= LR_{tr}(r|r+1) - LR_{tr}(r+1|k) \end{aligned}$$

The VECM model restricts the long-term relationship between the variables so that it converges into a cointegration relationship while allowing dynamic changes in the short term. This cointegration terminology is known as error correction because if there is a deviation from the long-term balance, it will be corrected gradually through gradual short-term partial adjustments. The VECM model consists of two equations, namely:

$$\Delta Y_t = \alpha + \beta_{1e1,t-1} + \beta_{2e2,t-2} + \beta_3 \Delta G_{t-1} + \beta_4 \Delta G_{t-2} + \beta_5 \Delta X_{t-1} + \beta_6 \Delta X_{t-2}$$

$$\Delta X_t = \alpha + \beta_{1e1,t-1} + \beta_{2e2,t-2} + \beta_3 \Delta G_{t-1} + \beta_4 \Delta G_{t-2} + \beta_5 \Delta X_{t-1} + \beta_6 \Delta X_{t-2}$$

Where, in the VECM model, there is  $e_{t-1}$ , which is an error correction in the short-term to achieve long-term balance.

### 3 RESULTS AND DISCUSSION

Before estimating the short-term and long-term relationship between ASEAN-5 economic development and growth, the first step should be to determine the lag length in the first-different variable.

According to Bahmani-Oskooee and Bohl (2000) the first-different is sensitive to lag length. To verify this, by concatenating lag lengths equal to 1 to 4.

Furthermore, Table 1 shows the results of the F statistic calculated for each lag length with a critical value at the bottom of the table. As reported, the results of the significance level test for ASEAN-5 countries vary with the choice of lag length. Except for lag-length = 1, for all other lag-lengths, the significance level is at least 95% for Indonesia on the F statistic. For Malaysia and Singapore, only lag lengths = 2 and 3 were found to be significant at the 90% and 95% levels, respectively, while lag lengths = 1 and 4 were not significant. Except for lag length = 4, all other lag lengths = 1, 2, and 3 were found to be significant, at least at the 95% level for Thailand. Finally, for the Philippines, only lag length = 1 and 2 were found to be significant at the 95% and 99% levels, respectively. The results seem to provide evidence of a long-term relationship between economic growth, financial depth, investment share, and inflation in ASEAN-5 countries. In other words, these variables are found to have long-run equilibrium in which the variables have a tendency to move together in the long run. These results should be considered preliminary and indicate that in estimating Equation (1), we must maintain the level of the lagging variable.

Table 1. F-statistics for testing the existence or long-run growth equation.

Lag-Length	F-Statistics				
	Indonesia	Malaysia	Thailand	Philippines	Singapore
1	1.432	2.8058	3.4299''	5.2444''	6.2444./*
2	4.5643''	2.5761.	5.7558'''	5.9056..'	5.2056..'
3	8.4377/*	4.1525..	7.8024'''*	2.3598	4.1467..
4	6.3432./*	0.2050	3.6887	1.2725	4.2525..

Note: The relevant critical value bounds are taken from Narayan (2004) [Case II with a restricted intercept and no trend and number of regressors = 3 horn]. They are 4.480—5.700 at the 99%; 3.170—4.160 at the 95%; and 2.618—3.502 at the 90% significance levels respectively. \*, \*\*, and \*'' denotes that F-Statistics falls above the 90%, 95% and 99% upper bound, respectively.

Table 2. The long run ARDL model estimates.

Country	Indonesia [2,0,1,2]	Malaysia [2,1,2,1]	Thailand [2,2,0,0]	Philippines [2,3,0,0]	Singapore [0,0,1,0]
C	0.63478' (1.9982)	7.7997''* (5.2776)	1.69793''. (14.3626)	1.84978' (1.8878)	1.49953' (1.8878)
GDP	1.20932 (0.2819)	1.83342'' (2.2325)	0.44564 (1.7916)	-0.13396'' (-2.1440)	0.64975''' (3.5945)
LF	0.376t (0.5803)	-3.9231 (-1.1143)	0.62345''' (3.7832)	-30.3755 (-1.69121)	0.629876''' (3.7659)
M	-0.198436''' (-2.8754)	2.36421''' (8.4321)	0.028731'' (2.10802)	0.545322''* (4.0455)	0.0687545'' (2.10802)
DCR	0.678412' (1.9982)	7.7412''* (5.2776)	1.7832''. (14.3626)	1.9743 (1.8878)	1.29763' (1.49778)
SCP	1.20845 (0.4819)	1.7322'' (3.2325)	0.04591 (1.76816)	-0.10354'' (-2.1230)	0.69717''' (3.90725)
Gov.Edu	0.64053' (1.90872)	7.7864''* (5.2776)	1.6872''. (14.3626)	1.8273' (1.8878)	1.8253s (1.8878)

(continued)

Table 2. Continued.

Country	Indonesia [2,0,1,2]	Malaysia [2,1,2,1]	Thailand [2,2,0,0]	Philippines [2,3,0,0]	Singapore [0,0,1,0]
FDI	2.43984 (0.2819)	1.96563 (2.2325)	0.045432 (1.7916)	−0.17854'' (−2.1440)	0.64256''' (3.5887)
Gov.Cons	2.4342 (0.2819)	1.69042'' (2.2325)	0.04280 (1.7916)	−0.18760'' (−2.1440)	0.76321''' (3.6725)
	Adj-R <sup>2</sup> = 0.7898 D-W = 2.3693	Adj-R <sup>2</sup> =0.95234 D-W = 2.3216	Adj- R <sup>2</sup> =0.990370 D-W = 2.4762	Adj- R <sup>2</sup> =0.909832 D-W = 1.8745	Adj- R <sup>2</sup> =0.88990 D-W = 1.8745

Note: \*, \*\* and \*\*\* denotes significantly at 10%, 5% and 1% level of significance, respectively. Figures in the parentheses and squared parentheses are the i-statistics values and the selected ARDL model. D-W denotes Durbin-Watson test for autocorrelation.

In the second stage, we maintain the level of the lagging variable and estimate it in Equation (2) using the Akaike Information Criterion (AIC) lag length selection criterion. Based on the F-statistics value, the maximum lag length is set at 4 for Indonesia, Singapore, Malaysia, and Thailand, while for the Philippines, the maximum lag length is set at 2. The estimated long-term ARDL model chosen, based on the AIC criteria for ASEAN-10 countries, is presented in Table 3. In summary, the familiar sources of economic progress/downturn among ASEAN-5 countries are price stability and financial developments.

Interestingly, both the error correction terms (ECTs) and the short-term Granger causality channel are transiently active for our primary model (when GDP is considered the dependent variable) for all ASEAN-10 countries. The importance of ECT, at least for our primary model, confirms the existence of a long-term relationship between variables as documented in previous ARDL models, namely, ARDL [12, 0, 1, 2] for Indonesia, ARDL [2, 1, 2, 1] for Malaysia, ARDL [2, 2, 0, 0] for Thailand, ARDL [2, 3, 0, 0] for the Philippines, and ARDL [0, 0, 1, 0] for Singapore. Specifically, it implies that SET, GDP, FDI, and M adjust to correct any deviation from the long-run relationship in the Indonesian economy. At the same time, any departure from the long-run equilibrium relationship in Singapore, Malaysia, Thailand, and the Philippines is mainly due to changes in GDP. In other words, GDP bears the burden of short-run adjustments to long-run equilibrium.

We also note that there are only two short-run dynamic interactions between the Indonesian, Malaysian, and Philippine equations. We find bidirectional causes between PDB and SI. Thus, while we find no long-run causality between GDP and SI in these countries (see Table 4), short-term interactions exist. Finally, we find unidirectional causes running from (i) SET to GDP for Indonesia; (ii) SET to FDI for Malaysia; (iii) FDI to GDP for Malaysia; and (iv) GDP to M for the Philippines. Thus, in the short term, the economic development of Indonesia, Malaysia, and the Philippines are highly dependent on investment performance. While we find no short-term causes from financial consequences and price stability to economic growth in the Indonesian and Philippine economies, one short-term interaction runs from FDI to GDP in the Malaysian economy. For the Thai economy, we find only one short-run interaction between the variables, namely, bidirectional causality between GDP and FDI.

As for Malaysia, the variation of economic growth is more responsive to shocks in the financial depth of around 0%–1.20% of the variance of the error in economic growth forecasts. Meanwhile, Malaysia responded to a financial depth of about 0%–4.26%. On the other hand, the variation of economic growth in Thailand and the Philippines is more responsive to shocks in the investment share of around 0%–8% and 0%–16.33% error variance in economic growth forecasts after the same period. However, variations in economic growth in ASEAN-5 countries are highly dependent on their innovations. This finding seems to support Shabri M. Abd. Majid and Mahrizal (2007) about the short-term dynamic causality among the variables examined in this study.

Table 3. Multivariate “VECM” causality.

Dependent Variables		Independent Variables									
		SET	GDP	LF	M	DCR	SCP	Gov.Edu	FDI	Gov.Cons	ECTt.;
Indonesia	SET		8.5676''*	0.1601	−0.7008''	7.5326''*	8.5676''*	0.1601	−0.7008''	8.5676''*	−1.4307''''
			[0.0015]	[0.8529]	(−2.1981)	[0.0015]	[0.0015]	[0.0051]	(−2.1981)	[0.00125]	(−3.5972)
	GDP	0.5945		0.2588	3.7362	0.0801	0.0801	0.2203	3.7362	0.0801	−0.1975'
		[0.6596]		[0.8048]	(0.1258)	[0.9233]	[0.9233]	[0.8038]	(0.1258)	[0.9233]	(−2.0432)
	LF	4.79881'•*	9.5476''*		−0.4931	8.8676''*	0.1601	0.3724	−0.3931	0.3724	0.0385
		[0.0012]	[0.0215]		(−0.8328)	[0.0015]	[0.8529]	[0.6928]	(−0.8328)	[0.6928]	(1.2656)
	M	1.6465	8.5676''*	0.1631		8.5676''*	8.5676''*	0.1601	−0.7008''	8.5676''*	−0.5203'
		[0.2075]	[0.2415]	[0.8529]		[0.0015]	[0.0015]	[0.8529]	(−2.1981)	[0.0015]	(−2.7004)
	DCR	1.6465	8.5676''*	0.1641	1.6465		0.1611	0.2403	3.7262	0.0821	−0.1969*
		[0.2275]	[0.0010]	[0.8529]	[0.2175]		[0.8629]	[0.8338]	(0.1358)	[0.9233]	(−2.6202)
SCP	8.5876''*	0.1641	−0.7358''	8.5876''*	8.5676''*		−0.7008''	8.5276''*	8.5676''*	0.1010	
	[0.0205]	[0.8529]	(−2.1981)	[0.0015]	[0.0015]		(−2.1981)	[0.0015]	[0.0015]	(1.5771)	
Gov.Edu	0.0871	0.2233	3.7366	0.0871	0.0881	0.2203		0.0801	0.0801	0.1021	
	[0.2331]	[0.8611]	(0.1258)	[0.9233]	[0.9093]	[0.8038]		[0.9233]	[0.9233]	(1.2543)	
FDI		0.3794	−0.3931	0.57216	0.6576	0.3024	−0.4031		8.5676''*	−1.2379	
		[0.6928]	(−0.8788)	[0.6388]	[0.6668]	[0.6908]	(−0.8328)		[0.0015]	(−0.9070)	
Gov.Cons	8.5676''*	0.5776	−0.7008''	8.5676''*	8.5676''*	0.1601	−0.7008''	8.5676''*		−0.1896''	
	[0.0015]	[0.6358]	(−2.1981)	[0.0015]	[0.0015]	[0.8529]	(−2.1981)	[0.0015]		(−2.2609)	
Malaysia	SET		0.2203	0.5776	0.0801	0.0881	0.2283	3.7862	2.0821	1.0701	−6.5886
			[0.8038]	[0.6358]	[0.9233]	[0.8633]	[0.6538]	(0.1258)	[0.9233]	[0.033]	(−0.6431)
	GDP	0.9605		0.5776	0.5776	0.1010	−0.7008''	−0.7008''	8.5676''*	8.5676''*	0.1865
		[0.4266]		[0.6358]	[0.6358]	(1.5771)	(−2.1981)	(−2.1981)	[0.0015]	[0.0015]	(0.9933)
	LF	6.7934'''	1.7017		1.3949	0.1010	3.7362	3.7362	0.0801	0.0801	1.3983
		[0.0021]	[0.2055]		[0.2689]	(1.5771)	(0.1258)	(0.1258)	[0.9233]	[0.9233]	(0.2240)
	M	5.6994•••	1.118	0.9050		−1.2129	0.5256	0.9066	1.5049	0.1630	−0.7008''
		[0.0049J]	[0.2488]	[0.55941]		(−0.9070)	[0.6358]	[0.6358]	[0.2344]	(1.5771)	(−2.1981)
	DCR	0.5435	1.3219	0.5636	1.55429		−0.7738''	0.52126	8.1276''*	8.3216''*	3.7362
		[0.4266]	[0.2344]	[0.6358]	[0.2344]		(−2.1981)	[0.6358]	[0.0015]	[0.0015]	(0.1258)
SCP	6.9834'''	1.7036	1.7521	1.3223	0.12121		3.37662	0.51176	1.0801	−1.4307''''	
	[0.0021]	[0.2055]	[0.2344]	[0.2689]	(1.2543)		(0.1258)	[0.6358]	[0.9233]	(−3.5972)	
Gov.Edu	5.6664•••	1.4828	0.7050	1.5509	−1.2379	0.5776		1.5509	0.5776	−0.1975'	
	[0.0049J]	[0.2488]	[0.55941]	[0.2344]	(−0.9070)	[0.6358]		[0.2344]	[0.6358]	(−2.0432)	

(continued)

Table 3. Continued.

Dependent Variables	Independent Variables									
	SET	GDP	LF	M	DCR	SCP	Gov.Edu	FDI	Gov.Cons	ECTt.;
Thailand	FDI	0.9655 [0.4266]		0.5776 [0.6358]	1.5509 [0.2344]	0.1010 (1.5771)	−0.7324'' (−2.1981)	−0.7008'' (−2.1981)	8.5676''* [0.0015]	0.0385 (1.2656)
	Gov.Cons	6.7934''' [0.0021]	1.7017 [0.2055]	1.5509 [0.2344]	1.3949 [0.2689]	0.1021 (1.2543)	3.7362 (0.1258)	3.7362 (0.1258)	0.0801 [0.9233]	−0.5203' (−2.7004)
	SET		1.4828 [0.2488]	0.7050 [0.5594]	1.5509 [0.2344]	−1.2379 (−0.9070)	0.5776 [0.6358]	0.5776 [0.6358]	1.5509 [0.2344]	0.1010 (1.5771)
	GDP	6.2808**' [0.0027]		0.0456 [0.8327]	1.6271 [0.2143]	−6.5886 (−0.6431)	3.7362 (0.1258)	3.7362 (0.1258)	0.0801 [0.9233]	0.0801 [0.9233]
	LF	1.7114 [0.1913]	1.4930 [0.2417]		0.3608 [0.5537]	0.1982 (0.992)	0.5126 [0.6358]	0.5732 [0.6358]	1.5909 [0.2344]	0.1012 (1.5771)
	M	0.9655 [0.4266]	5.6664*** [0.0049]	0.5776 [0.6358]		0.1010 (1.5771)	−0.7321'' (−2.3961)	−0.7008'' (−2.1981)	8.5676''* [0.0015]	8.5676''* [0.0015]
	DCR	6.7832''' [0.0021]	1.7220 [0.2055]	5.6664*** [0.0049]	1.2121 [0.2344]		3.7442 (0.1258)	3.7362 (0.1258)	0.0801 [0.9233]	0.0801 [0.9233]
	SCP	5.6664*** [0.0049]	1.4828 [0.2488]	0.7050 [0.5594]	5.6664*** [0.0049]	−1.2379 (−0.9070)		0.5776 [0.6358]	1.5509 [0.2344]	0.1010 (1.5771)
	Gov.Edu	6.2808**' [0.0027]		0.0456 [0.8327]	1.6271 [0.2143]	−6.5886 (−0.6431)	3.7362 (0.1258)		0.0801 [0.9233]	0.0801 [0.9233]
	FDI	1.7114 [0.1913]	1.4930 [0.2417]		0.3608 [0.5537]	0.1865 (0.9933)	0.5776 [0.6358]	0.5776 [0.6358]		0.1010 (1.5771)
Philippines	Gov.Cons	3.8362 (0.1258)	3.7649 (0.1258)	0.0891 [0.9233]	0.0821 [0.9233]	3.7462 (0.1258)	5.7362 (0.1258)	0.0909 [0.9233]	0.0891 [0.9233]	−0.7008'' (−2.1981)
	SET		0.5226 [0.6908]	1.4599 [0.2554]	0.1014 (1.5671)	0.5808 [0.6303]	0.5300 [0.4804]	1.2109 [0.2344]	0.1104 (1.5311)	0.08531 [0.9643]
	GDP	10.0171'.* [0.006]			0.3724 [0.6928]	−0.3931 (−0.8328)	1.5509 [0.2244]	0.1010 (1.5771)	0.5776 [0.6358]	0.5776 [0.6358]
	LF	0.5776 [0.4258]	3.3764* [0.0549]		1.08t1 [0.3088]	−0.1896'' (−2.2609)		0.3724 (0.6928)	−0.3931 (−0.8328)	−0.3931 (−0.8328)
	M	0.0640 [0.0749]	3.3738* [0.0749]	1.7714 [0.7957]		−0.1896'' (−2.2609)	1.7714 [0.7957]	1.08t1 [0.3088]	−0.1896'' (−2.2609)	−0.1896'' (−2.2609)
	DCR	6.2348**' [0.0027]	1.73454 [0.8957]	0.0456 [0.8327]	1.6271 [0.2143]		1.7714 [0.7957]	1.03211 [0.3088]	−0.1896'' (−2.2609)	−0.1896'' (−2.2609)
										−0.5203' (−2.7004)

(continued)



Table 3. Continued.

Dependent Variables	Independent Variables									
	SET	GDP	LF	M	DCR	SCP	Gov.Edu	FDI	Gov.Cons	ECTt.;
SCP	1.7114 [0.1913]	1.4930 [0.2417]	1.08t1 [0.3088]	0.3608 [0.5537]	0.1975 (0.9933)		1.5371 [0.2143]	-6.5426 (-0.6531)	-6.8886 (-0.641)	-0.1969* (-2.6202)
Gov.Edu	0.8098'' [0.0460]	5.0694** [0.0081]	0.751915 [0.4832]	-0.1969* (-2.6202)	0.0069 [0.9233]	0.2603 [0.8038]		0.0801 [0.9233]	0.2203 [0.8038]	0.1010 (1.5771)
FDI	0.8378'' [0.0460]	5.0694** [0.0081]	0.75115 [0.4832]	-0.1969* (-2.6232)	-6.6086 (-0.6431)	0.3864 [0.6928]	-0.3831 (-0.8328)		0.3744 [0.6928]	0.1021 (1.2543)
Gov.Cons	0.8375'' [0.0460]	5.0594** [0.0081]	0.75205 [0.4932]	-0.1259* (-2.6202)	0.0930 [0.9003]	0.4243 [0.8038]	3.7852 (0.1258)	1.0801 [0.9243]		-1.2379 (-0.9070)
SET		5.0784** [0.4581]	0.753915 [0.4232]	-0.1969* (-2.6202)	0.0456 [0.8327]	0.3724 [0.6928]	-0.3931 (-0.8328)	3.7362 (0.1258)	0.3724 [0.6928]	-0.1896'' (-2.2609)
GDP	0.85077'' [0.0340]		0.70215 [0.34812]	-0.2129* (-2.6252)	0.3404 [0.9243]	0.2203 [0.8904]	3.7462 (0.13498)	0.09031 [0.9403]	0.2203 [0.0328]	-6.5886 (-0.6431)
LF	0.8374'' [0.0423]	6.0643** [0.0011]		-0.2969* (-2.6202)		0.3754 [0.7028]	-0.3331 (-0.8428)	3.2362 (0.1358)	0.3224 [0.670]	0.1865 (0.9933)
M	1.8078'' [0.0450]	5.04504* [0.050]	0.75091 [0.4802]		8.5676''* [0.0015]	0.1601 [0.8529]	-0.7008'' (-2.1981)	8.5676''* [0.0015]	0.1601 [0.8529]	1.3983 (0.2240)
DCR	0.8328'' [0.0360]	5.0694** [0.0103]	0.75075 [0.4832]	-0.2893* (-2.6073)		0.2203 [0.8038]	3.7362 (0.1258)	0.0801 [0.9233]	0.2203 [0.8038]	-0.7008'' (-2.1981)
SCP	1.8328'' [0.0460]	5.9034** [0.0500]	0.75065 [0.4832]	-0.5423* (-2.8342)	8.5676''* [0.0015]		-0.3932 (-0.8218)	0.2203 [0.87504]	0.3724 [0.6928]	3.7362 (0.1258)
Gov.Edu	0.8248'' [0.0460]	5.0694** [0.0081]	0.7525 [0.4832]	-0.8021* (-2.8323)	8.5676''* [0.0015]	0.1601 [0.8529]		8.5676''* [0.0020]	0.1601 [0.8529]	-1.4307''' (-3.5972)
FDI	0.3498'' [0.0432]	5.9032** [0.0081]	0.75240 [0.48289]	-0.2021* (-2.6322)	0.0801 [0.9233]	0.2203 [0.8308]	3.7362 (0.1258)		0.2203 [0.8504]	-0.1975' (-2.0432)
Gov.Cons	0.4234'' [0.0210]	5.9034** [0.0081]	0.75095 [0.4093]	-0.2370* (-2.9642)	0.3724 [0.6928]	0.3724 [0.6803]	-0.3931 (-0.8302)	0.0801 [0.9129]		0.0385 (1.2656)

Note: \*\*\*, '' and \* represent significance at the 1%, 5% and 10% levels, respectively. ECTt.t is derived by normalizing the cointegrating vectors on the GDP as proxy for economic growth, producing residual r. By imposing restriction on the coefficients of each variable and conducting Wald test, we obtain f-statistics for each coefficient in all equations. Figures in the parentheses and squared parentheses represent t-statistics and probabilities for f-statistics, respectively.

Table 4. Variance decompositions.

Horizon (Year)	Explained by shocks in:								
	SET	GDP	LF	M	DCR	SCP	Gov.Edu	FDI	Gov.Cons
Indonesia	1	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
	2	95.39	0.10	4.18	0.33	95.39	0.10	4.18	95.39
	4	89.07	0.78	4.96	5.19	89.07	0.78	4.96	89.07
	5	87.46	1.12	5.03	6.39	87.46	1.12	5.03	6.39
	12	87.19	1.20	5.06	6.55	87.19	1.20	5.06	6.55
Malaysia	1	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
	2	93.15	2.33	2.46	2.06	95.39	0.10	4.18	95.39
	4	91.50	3.58	2.84	2.08	89.07	0.78	4.96	89.07
	5	85.09	11.02	2.42	1.47	87.46	1.12	5.03	6.39
	12	80.20	16.33	2.30	1.17	87.19	1.20	5.06	6.55
Thailand	1	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
	2	93.15	2.33	2.46	2.06	95.39	0.10	4.18	95.39
	4	91.50	3.58	2.84	2.08	89.07	0.78	4.96	89.07
	5	85.09	11.02	2.42	1.47	87.46	1.12	5.03	6.39
	12	80.20	16.33	2.30	1.17	87.19	1.20	5.06	6.55
Philippines	1	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
	2	91.57	5.09	0.04	3.30	93.15	2.33	2.46	2.06
	4	74.59	4.31	17.02	4.08	91.50	3.58	2.84	2.08
	5	74.25	4.32	17.80	3.63	85.09	11.02	2.42	1.47
	12	74.23	4.26	18.04	3.4Z	80.20	16.33	2.30	1.17
Singapore	1	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
	2	91.57	5.09	0.04	3.30	93.15	2.33	2.46	2.06
	4	74.59	4.31	17.02	4.08	91.50	3.58	2.84	2.08
	5	74.25	4.32	17.80	3.63	85.09	11.02	2.42	1.47
	12	74.23	4.26	18.04	3.4Z	80.20	16.33	2.30	1.17

#### 4 CONCLUSIONS

Based on statistical tests, this paper is empirically related to the short-term and long-term relationship between financial development and economic growth in ASEAN-5 countries during the financial crisis post-financial shocks in 2008. It also attempts to empirically investigate the dynamic causality between variables using the vector error correction (VECM) model, retesting the model in the form of levels, and producing variance decomposition (VD-Cs). Based on the defined ARDL model, this paper finds a long-run balance between economic growth, financial depth, investment share, and inflation. The study also documents that the familiar economic progress/regression sources among ASEAN-5 countries are price stability and financial developments. In particular, this implies that in promoting economic growth in ASEAN 5 countries, respected governments must maintain price stability by keeping the money supply. This will lead to efficient investment allocation and interaction between stock and currency markets after a negative economic shock can exacerbate macroeconomic instability and reduce long-term growth.

In addition, specifically, ASEAN-5 countries tend to have different types of financial institutions in that country, so that the level of economic development leads to differences in policies and institutions. For further research, it is necessary to compare the analysis related to the 2008 financial

turmoil with COVID-19 using quarterly data to better understand the significant fluctuations related to the refocusing of the budget for health financing about economic growth in ASEAN countries.

## REFERENCES

- Aprilia., & Hariyanti, D. 2014. Determinasi pertumbuhan ekonomi di negara ASEAN-6. *Media Ekonomi*. <https://doi.org/10.25105/me.v22i3.3192>
- Adu, G., Marbuah, G., & Mensah, J. T. 2013. Financial development and economic growth in Ghana: Does the measure of financial development matter? *Review of Development Finance*. <https://doi.org/10.1016/j.rdf.2013.11.001>
- Al-Malkawi, H.-A. N., Marashdeh, H. A., & Abdullah, N. 2012. Financial development and economic growth in the UAE: Empirical assessment using ARDL approach to co-integration. *International Journal of Economics and Finance*. <https://doi.org/10.5539/ijef.v4n5p105>
- Association of Southeast Asian Nations (ASEAN). 2020. Economic impact of Covid-19 outbreak on ASEAN. *Association of Southeast Asian Nations (ASEAN)*.
- Ayati, N., Saiyarsarai, P., & Nikfar, S. 2020. Short and long term impacts of COVID-19 on the pharmaceutical sector. *DARU, Journal of Pharmaceutical Sciences*. <https://doi.org/10.1007/s40199-020-00358-5>
- Brueckner, M., Dabla-Norris, E., Gradstein, M., & Lederman, D. 2018. The rise of the middle class and economic growth in ASEAN. *Journal of Asian Economics*. <https://doi.org/10.1016/j.asieco.2017.12.008>
- Chow, W. W., & Fung, M. K. 2013. Financial development and growth: A clustering and causality analysis. *Journal of International Trade and Economic Development*, 22(3), 430–453. <https://doi.org/10.1080/09638199.2011.570364>
- Curea, Ş. C., & Ciora, C. 2013. The impact of human capital on economic growth. *Quality - Access to Success*. [https://doi.org/10.1016/s2212-5671\(15\)00258-0](https://doi.org/10.1016/s2212-5671(15)00258-0)
- De Gregorio, J., & Guidotti, P. E. (1995). Financial development and economic growth. *World Development*, 23(3), 433–448. [https://doi.org/10.1016/0305-750X\(94\)00132-I](https://doi.org/10.1016/0305-750X(94)00132-I)
- De Haan, J., & Sturm, J. E. 2000. On the relationship between economic freedom and economic growth. *European Journal of Political Economy*. [https://doi.org/10.1016/S0176-2680\(99\)00065-8](https://doi.org/10.1016/S0176-2680(99)00065-8)
- Fathoni, R., Musadieg, M., & Supriono, S. 2017. Pengaruh ekspor intra-asean dan fdi intra-asean terhadap pertumbuhan ekonomi negara ASEAN (Studi pada Negara Indonesia, Malaysia, Singapura, Filipina, dan Thailand Tahun 2006–2015). *Jurnal Administrasi Bisnis S1 Universitas Bravijaya*.
- Febryani, T. 2017. Determinan Pertumbuhan ekonomi di 4 Negara ASEAN. *Jurnal Ilmu Ekonomi Terapan*. <https://doi.org/10.20473/jiet.v2i1.5501>
- Glaeser, E. L., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. 2004. Do institutions cause growth? *Journal of Economic Growth*. <https://doi.org/10.1023/B:JOEG.0000038933.16398.ed>
- Gujarati, Damodar. 1995. *Ekonometrika dasar*. Penerbit Erlangga: Jakarta
- Jalil, A., & Feridun, M. 2011. Impact of financial development on economic growth: Empirical evidence from Pakistan. *Journal of the Asia Pacific Economy*. <https://doi.org/10.1080/13547860.2011.539403>
- Jouvet, P. A., & De Perthuis, C. 2013. Green growth: from intention to implementation. *International Economics*. <https://doi.org/10.1016/j.inteco.2013.05.003>
- Koetter, M., & Wedow, M. 2010. Finance and growth in a bank-based economy: Is it quantity or quality that matters? *Journal of International Money and Finance*. <https://doi.org/10.1016/j.jimonfin.2010.05.015>
- Lee, C. C., Olasehinde-Williams, G., & Olanipekun, I. 2020. Financial systems, regulatory quality, and economic growth. *Journal of International Trade and Economic Development*. <https://doi.org/10.1080/09638199.2020.1847172>
- Levine, R., & Zervos, S. 1998. Stock markets, banks, and economic growth. *American Economic Review*. <https://doi.org/10.2307/116848>
- Menon, J. 2020. Special review: COVID-19 in east Asia: Impacts and response#. In *Thailand and the World Economy*.
- Omkarnath, G. 1997. Financial development. *Review of Development and Change*. <https://doi.org/10.1177/0972266119970206>
- Purnomo, R. N. (2020). Analisis pengaruh keterbukaan ekonomi terhadap pertumbuhan ekonomi (studi kasus: ASEAN Tahun 2007–2017). *Jurnal Dinamika Ekonomi Pembangunan*. <https://doi.org/10.14710/jdep.2.2.20-35>
- Rahman, H. 2004. Financial development-economic growth nexus: A case study of Bangladesh. *The Bangladesh Development Studies*.

- Rousseau, P. L., & Wachtel, P. 2011. What is happening to the impact of financial deepening on economic growth? *Economic Inquiry*. <https://doi.org/10.1111/j.1465-7295.2009.00197.x>
- Shabri M.Abd. Majid and Mahrizal. 2007. Does financial development cause economic growth In the Asean-4 Countries?, *Savings and Development*, 31(4), 369–398
- Satryana, M., & Karmini, N. 2016. Analisis daya saing ekspor teh Indonesia ke pasar ASEAN Periode 2004–2013. *E-jurnal ekonomi pembangunan universitas udayana*.
- Sehrawat, M., & Giri, A. K. 2015. Financial development and income inequality in India: An application of ARDL approach. *International Journal of Social Economics*. <https://doi.org/10.1108/IJSE-09-2013-0208>
- Shin, D. C. 1980. Does rapid economic growth improve the human lot? Some empirical evidence. *Social Indicators Research*. <https://doi.org/10.1007/BF00286477>
- Silberberger, M., & Königer, J. 2016. Regulation, trade and economic growth. *Economic Systems*. <https://doi.org/10.1016/j.ecosys.2016.05.001>
- Suliswanto, M. S.W. 2016. Tingkat Keterbukaan Ekonomi Di Negara Asean-5. *Neo-Bis*.
- Tinaningsih, C. 2014. Perkembangan ekonomi cina pasca mao zedong dan hubungan ekonomi cina dengan asean-cina free trade area. *Fib Ui*.
- World Economic Forum. 2020. Future of consumption in fast-growth consumer markets: ASEAN. *World Economic Forum Insight Report*.

## E-commerce tax: Is it an opportunity or a defiance for Indonesian government during the Covid-19 pandemic?

A. Herdiani\*, K. Ayuningtyas, Y.T. Setiaji & S. Mariyah

*Faculty of Economics, Universitas Negeri Malang, Indonesia*

A.T. Hsi

*United Microelectronics Corporation, Taiwan*

**ABSTRACT:** Indonesian Government established tax regulation, PMK No. 48/PMK.03/2020 concerning taxes on trade through electronic systems. This regulation was rejected by the public, business entities, and digital commercials, while basically the tariff used was 10% for sales in accordance with the value added tax (VAT) rate. This study aims to analyze whether the application of the e-commerce tax provides an opportunity or challenge in obtaining a source of state revenue to restore the Indonesian economy in the midst of Covid 19. This also supports the point eight of SDGs, economic growth and decent work. By conducting literature review and in-depth interviews, the results indicate that the implementation of e-commerce tax regulations provides an additional source of state revenue. On the other hand, it presents challenges in collecting electronic business taxpayers who are considered difficult to identify. In addition, a review is needed to strengthen and clarify the regulations governing e-commerce taxes.

### 1 INTRODUCTION

Digital era brings important changes in economic and social life. In fact, digital era has had a massive impact on the economy in Indonesia (Herdiansyah 2019). This is defined by one of the factors in the development of Micro, Small and Medium Enterprises (MSMEs), utilizing rapid technological developments (Asri 2020). Utilization of technology, smartphones, as a means of developing markets, using applications, is already available to support business processes, as well as in banking sector that aims to provide fundings.

Research conducted by Google and Temasek in 2019 showed Indonesia as the largest contributor to the digital economy in the Southeast Asia region (Widowati 2019). E-commerce is the main factor driving the growth of the digital economy with the market value predicted to reach US\$ 153 billion by 2025. The current increase in e-commerce represents the awareness of business actors in taking advantage of digitalization conditions (Mulya et al. 2020). Bank Indonesia stated that in 2019, the number of e-commerce transactions reached Rp11 trillion – Rp13 trillion (Media Indonesia 2019).

Changes in people's consumption patterns during the Covid-19 pandemic have also led to an increase in e-commerce. Based on a survey conducted, 92% of consumers have tried new shopping methods during the pandemic, in which 58% of consumers shopping digitally, 48% shopping through pick-up services and delivery applications, and 37% trying new brands (McKinsey 2020). The growth of e-commerce market reached 91% with the transaction value increasing by 400% (Natalia 2020). In terms of new users, the number who registered during the pandemic was 12 thousand business actors (Sircolo 2020). Based on these data, the presence of the Covid-19 pandemic has had a positive impact in terms of e-commerce which has boosted the Indonesian economy. The increase in e-commerce transactions can also be proven by the increase in the volume of e-commerce transactions by 150.16 million transactions or an increase of 79.38% on an annual

---

\*Corresponding Author: [aulia.herdiani.fe@um.ac.id](mailto:aulia.herdiani.fe@um.ac.id)

basis, or if calculated on a monthly basis the transactions experienced a growth of 1.7% (Elena 2020; Walfajri 2020). Furthermore, based on data released by the Central Statistics Agency, it shows that most business owners in e-commerce have an income of less than Rp 300 million per year with the proportion of 75.15%, Rp 300 million to 5 billion as much as 19.56%, Rp 2.5 – 50 billion as much as 4.97%, and more than Rp 50 billion by 0.33% (Central Bureau of Statistics 2020).

The positive growth trend of e-commerce can increase the amount of state revenue, especially in the digital economy sector. This supports one of Sustainable Development Goals (SDGs). SDGs are sustainable goals echoed by the United Nations in 2015 which consists of 17 sustainable goals (United Nation 2015). The seventeen goals are supported by 169 targets with 200 indicators (National Development Planning Agency 2017). All countries, including Indonesia, agreed to make this happen by 2030. The goal of SDGs point eight is to increase inclusive and sustainable economic growth, productive and comprehensive employment opportunities, and decent work for all (Eisenmenger et al. 2020; National Development Planning Agency 2017). Based on a report from eEconomy SEA which shows that the contribution of the digital economy to Indonesia's GDP in 2020 reaches Rp 614 trillion. This is in line with one of the indicators in point eight, the increase in a country's GDP.

The increasing use of e-commerce among the public opens up opportunities for the government to collect taxes from these activities (Sudrajat 2020). This is evidenced by the issuance of PMK Number 210 of 2018 concerning Tax Treatment of Trade Transactions Through Electronic Systems (E-Commerce) (Thomas 2019). However, PMK regulations on e-commerce taxes reap various pros and cons (Haryadi et al. 2020; Munthe 2020; Rachmasariningrum 2020). Minister of Finance, Sri Mulyani said that the application of this tax could already be applied in Indonesia because many other countries had already implemented it (Thomas 2019). However, the reality on the ground based on research conducted by Mulya & Agatha, (2020) assessed that the policy has not been effectively implemented in Indonesia.

The number of pros and cons in the community made the PMK regarding e-commerce tax revoked by Sri Mulyani. This occurs because there are differences in perceptions where people think that new taxes will arise (Pebrianto & Widyastuti 2019). Based on the explanation above, the author realizes that there is potential for taxation which can be a challenge or opportunity for the government. Therefore, the author has the initiative to examine stakeholder perceptions regarding the existence of e-commerce taxes, which will be a challenge in determining taxpayers or a new hope for the government due to new sources of income. By using a qualitative research approach and literature study methods as well as interviews with entrepreneurs, this study reveals that the implementation of e-commerce tax regulations provides an additional source of state revenue. On the other hand, in its implementation, this tax presents challenges in collecting electronic business taxpayers who are considered difficult to identify. In addition, a review is needed to strengthen and clarify the regulations governing e-commerce taxes.

## 2 METHODS

This research is qualitative research using literature study and in-depth interviews. Literature study is an activity to collect data and information based on relevant sources (Nazir 1999). Meanwhile, literature studies are also related to the development of culture and social norms that exist in society (Sugiyono 2012). The topic of the problem to be studied will be found based on a literature review of previous research that has been carried out by other researchers. So finding a research gap is an interesting topic in a study to be studied more deeply. Information obtained from various sources such as news in digital newspapers, reputable national and international journals, as well as laws and regulations is understood and read in depth so that core conclusions can be drawn and compared with research results and current phenomena.

Data analysis used three stages. First, data reduction was conducted by selecting and simplifying data. Following, data presentation was done by compiling all information that provides the possibility of drawing conclusions and actions. The last step was drawing conclusions from the

results of the study. The various information that has been collected were used to draw the core conclusion.

### 3 RESULTS AND DISCUSSION

#### 3.1 *The development of e-commerce in narrowing the income gap of the community*

The development of e-commerce in Indonesia in the last 10 years has increased by 17 percent with a total number of businesses reaching 26.2 million units (Rahayu 2019) providing fresh air for the Indonesian economy. This is because the Indonesian economy which was still conventionally turned into digital since the rapid flow of the industrial revolution 4.0 (Rahayu 2019). In addition, the Covid-19 pandemic also helps the process of accelerating digitization because everything must be done from home and all digital (Asri 2021; Fauzia 2020).

*"The existence of this covid is honestly a challenge for me and my husband. We have to survive in the midst of uncertain income. The problem is that my husband's work is mediocre or it can be called odd jobs. So, while I was selling at the market, the market was not as busy as it was before the pandemic. It is like before the pandemic I was able to sell 200 packs of merchandise, after this pandemic, at most 150 packs it's been random."*

The statement from one of the respondent is in line with the results of a survey conducted by EconomySea which shows that 84% percent of the people admit that their income has decreased during the COVID-19 pandemic (Febriantoro 2018; Indayani & Hartono 2020; Setiawan 2020). The decline in income also has an impact on the poverty rate in Indonesia (Arnani, 2021). Based on data released by the Central Statistics Agency in September 2020, the number of people in the poor family group is 27.55 million people. Indonesia's poverty rate in September 2020 increased by 1.13 million compared to March 2020 (Arnani 2021).

Although these pros and cons appear, in fact the pandemic and the rapid flow of digitalization can be a supporting factor in increasing income and Gross Domestic Product. Gross Domestic Product is one of the supporting factors and indicators in the context of realizing the 2030 SDGs (National Development Planning Agency 2017; Eisenmenger et al. 2020; Sinha et al. 2020). One sector that plays a role in Indonesia's GDP is MSMEs that use e-commerce platforms. This is because during the COVID-19 pandemic, the income received by MSMEs, e-commerce users, has actually increased (Awali & Rohmah 2020; Febriantoro 2018; Ikhsan & Hasan 2020; Kala'lembang 2020), because many consumers have switched from the conventional system to digital systems.

#### 3.2 *The development of e-commerce taxes creates a trust gap between the public and government policies*

The growth of e-commerce which has increased by 500% over the last 4 years based on Google research and e-ConomySEA shows that Indonesian e-commerce transactions have penetrated Rp 391 trillion (Rachmasarinigrum 2020). The high level of income from e-commerce sector should be able to have a significant impact on state tax revenues (Akbar 2020; Rachmasarinigrum 2020). Therefore, there must be an optimal step from the government to maximize state tax revenues from the e-commerce sector.

Electronic commerce means that business activities are carried out freely or do not recognize geographical boundaries. The point is that buying and selling activities can be done anywhere, anytime, and by anyone. However, this raises the question of whether the regulation regarding taxation is clear in anticipating revenue from the e-commerce sector. Considering the potential for tax revenue from this sector, in 2018 the government through the Ministry of Finance issued Minister of Finance Regulation (PMK) No.210/PMK.10/2018 regarding tax treatment of trade transactions through electronic systems (Pramesti 2019).

The presence of these regulations certainly reaps many pros and cons in society which lead to different perceptions. According to research conducted by Munthe (2020) states that the existence

of strong regulations can be a clear legal umbrella for stakeholders. However, the emergence of the PMK is considered to be too hasty due to the absence of thorough socialization to the community (Sudrajat 2020), thus creating a constraint because e-commerce users think that the emergence of this regulation can lead to new taxes and the system is too complicated (Pramesti 2019). Behind it all, actually this e-commerce sector tax is an opportunity for the state to get new income considering the very rapid growth of e-commerce (Marlinah 2021; Mungkasa 2020). However,

*"I am confused about the government's policies which seem to be wishy-washy. It is like isuk dele awan tempeh (a Javanese idiom which means for one thing, it can be rapidly changed as the Government wish). I, as an MSME actor, is actually okay if there is such a policy, but if it was suddenly changed, I would be confused. There are so many uncertain policies from the government. Yes, actually it would be better if the government socialized it first so that the public would know. To be honest, if that's the case, people will continue to distrust the government, including me."*

The government's inconsistency regarding the regulations makes people confused and indecisive about government policies. Not only in policies regarding taxation, but various policies echoed by the government such as the Omnibus Law Bill which raises the pros and cons, the increase in VAT, VAT for basic necessities and others are also still unclear and detailed, though it has begun to be discussed and some have been ratified (CNN Indonesia 2021). Various policies and policy plans that are not clear and without prior trials have made the public less trust in the performance of the government. In fact, if the regulations have been socialized and prepared carefully before the issuance of the regulations, it can narrow the gap between the government and the community.

### 3.3 E-commerce taxes stimulate economic development

The increase in e-commerce in Indonesia is one of the important points in the growth of the digital economy (Kominfo 2019). The digital economy is considered a form of adaptation of the Indonesian people in the face of the rapid development of digitalization. Initially, the components of the digital economy that could be identified were e-commerce transactions, digital distribution of goods and services, and technology and communication andemics (Firmansyah & Rahayu 2020). Over the time, the use of technological advances not only encourages changes in human behavior patterns but also the emergence of various new businesses with the theme of digitization such as e-commerce, payment services, application services, online advertising, and cloud computing (OECD 2015).

The primadona of the digitalization process in Indonesia is the existence of e-commerce that provides a multiplier effect on other sectors. The impacts include employment, participation in rural areas, and changes in people's consumption patterns (Rahayu 2019). Based on research conducted by Jahangard & Pourahmadi (2013), one of the factors that influence economic growth is the dissemination of ideas and information among the public which will later support the sustainability of economic activities. Meanwhile, according to the theory of Schumpeter (1934) the fundamental difference between growth and economic development lies in the source of the cause. Economic growth is caused by the number of factors of production, while economic development is caused by real actions from the community in the form of innovation.

The presence of e-commerce in the digitalization era is a source of information and innovation for the community to increase economic growth and development. This is in line with data from the Ministry of Cooperatives and SMEs, which recorded that as of November 26, 2020, the number of Micro, Small and Medium Enterprises (MSMEs) that had gone digital was 10.25 million (Nurhaliza 2020). On the other hand, there are many innovations in the form of application services that are useful for facilitating community mobility such as Bukalapak, Shopee, Zalora, Tani hub, and other applications. The Indonesian government also supports the electronic trading system or e-commerce by issuing Government Regulation Number 80 of 2019 related to supervision and development of trade through electronic systems.

The Covid 19 pandemic that was present in the midst of economic growth had a calming impact on every sector of the economy in Indonesia. Economic and social activities stopped simultaneously, this was due to the Large-Scale Social Restrictions (PSBB). According to Sri Mulyani, the economy contracted very deeply, which was -5.32% (Sembiring 2020). The decline was due to



household consumption and investment that was still a pandemic and led to a slowdown in economic performance (Fauzia 2020). Digitalization is one way to maintain the existence of business actors in the Covid-19 era. The growth of electronic trading systems is growing rapidly during a pandemic, as evidenced by the fact that there are 12 million new e-commerce players (Meodia 2020). MSME actors are also expected to be able to take advantage of e-commerce to maintain the existence of their business (Annur 2020). The potential for e-commerce success in the Covid-19 era is also marked by the volume of e-commerce transactions increasing by 99% while the nominal increase in transactions reaches 58% (Octaviano 2021). The government is aware of the high potential of e-commerce as a source of state revenue in the midst of the COVID-19 pandemic by issuing PMK No. 48/2020 related to PMSE VAT. The implementation of this tax is seen as a stimulus to increase state revenue because e-commerce is the only pandemic that continues to run amid weakening economic activity (Ashar 2020). On the other hand, the presence of e-commerce taxes is a form of justice given by the government to digital and conventional business actors so that they continue to pay their obligations, especially Income Tax (PPH) and Value Added Tax (VAT) (Prastowo 2018). However, the process of collecting e-commerce taxes requires an infrastructure that can capture all digital transactions either through the marketplace or social media. Sustainable development or SDGs point 8, namely increasing inclusive and sustainable economic growth in line with the 2020-2024 Medium Term Development Plan (RPJMN), one form of the 2020 Government Work Plans (RKP), increasing Human Resources for Growth Qualified (Agustin 2020).

The success of the Sustainable Development Goals cannot be separated from the role of the Indonesian people, human resources are the holders of the baton of success. Therefore, the Ministry of Finance as the financial manager formulates the 2020 APBN in line with the predetermined RKP (Agustin 2020). Tax revenues are used to finance Central Government Expenditures which are focused on improving quality human resources. However, the state budget posture must be overhauled due to the impact of the Covid-19 epidemic. According to Sri Mulyani, the government must increase tax revenue without causing the economy to weaken (Santoso 2020).

### 3.4 *Challenges of implementing e-commerce taxes*

Advances in dynamic and rapidly developing information technology have an impact on all aspects of human life, including the world of the digital economy (Handayani 2018). Digital trade, which is widely discussed in various forums, turns out to have gaps and challenges for the government, especially in tax collection. WTO (World Trade Organization) at the Ministerial Conference in Nairobi in December 2015 set a moratorium on collecting import duties on the import of digital goods through e-commerce until 2017 (Sinaga 2018). Regulatory clarity is the main door in digital tax collection or e-commerce (Handayani 2018). However, in practice, e-commerce tax regulations in Indonesia are still not firm and only started to be confirmed this year (Kemenkeu 2020).

E-commerce transactions that occur anytime and anywhere, both during delivery and payment, make tax and customs authorities respond quickly and create an effective and efficient system (Sinaga 2018). In addition, considerable storage requirements by being centralized in one country and another may be possible. This can result in data being piled up in one country, so it is possible that the country will not get the tax it should receive. If Indonesian government do not immediately respond well to the developments taking place, it is likely to lose a sizeable income from this e-commerce transaction (Wijayanti 2020).

## 4 CONCLUSION

The potential of e-commerce in the digital era provides an opportunity for the government to be used as a stimulus for additional sources of state revenue through taxes. However, in the process of implementing PMK No.210/PMK.10/2018 regarding tax treatment on trade transactions through the electronic system, there are pros and cons. The Covid-19 epidemic condition that occurred and the rapid development of technology should make e-commerce tax revenue a supporting factor in

order to restore the Indonesian economy. The pandemic impact given during the Covid-19 pandemic requires business actors to be able to adapt to digitalization. The decision to collect e-commerce taxes presents challenges for the government, among others, technology and information systems must be more adequate to detect taxpayers, create synergy between stakeholders, and socialize the implementation of e-commerce taxes. Tax revenue is allocated to improve the quality of human resources. This refers to the 8th SDGs point, increasing inclusive and sustainable economic growth which is represented through the 2020-2024 Medium Term Development Plan (RPJMN). Through this research, the government as a regulator need to consider the opportunities provided by e-commerce taxes. In addition, business actors who take advantage of digitalization should find out how e-commerce taxes are applied.

## REFERENCES

- Agustin, S. 2020. Tax facility for sustainable development goals. *Directorate General of Taxation*.
- Akbar, LR. 2020. Performance analysis of the directorate general of taxes in optimizing tax revenue in the era-pandemic Covid 19. *JABE (Journal of Applied Business and Economics)*, 7(1), 98.
- Alridhani, D., & Persada, AG .2020. Implementation of social media and e-commerce in improving marketing of vegetable and livestock products (case study: Sumberejo Village). *Automata*, 1(2).
- Annur, CM. 2020. Collaborating with e-commerce, kemenkop targets 10 million msme to use marketplace. Data said.
- Arnani, Mela. 2021. *Indonesia's poverty rate rises, this is data per province*. Retrieved from <https://www.kompas.com/tren/read/2021/02/18/11030865/angkapoverty-Indonesia-ride-this-data-per-province?page=all>, accessed on 15 June 2021.
- Ashar, S. 2020. *This is an important point of the e-commerce tax collection rules in Perpu No 1/2020*. Kontan.Co.Id.
- Asri, JD .2021. Effect of information technology and ecommerce on competitive. *Multidiciplinary and Multidimentional Journal Effect*, 1(1), 15–26.
- Bunn, D., Elke, A., & Enache, C. 2020. *Digital taxation around the world*. In *Tax Foundation*. <https://files.taxfoundation.org/20200610094652/DigitalTaxation-Aroundthe-World1.pdf>
- Central Bureau of Statistics. 2020. *E-Commerce statistics 2020*.
- CNN Indonesia. 2021. *11 adverse government policies during the pandemic in eye laborer*. Retrieved from <https://www.cnnindonesia.com/nasional/20210430074718-20-636716/11policy-government-harmful-moment-pandemic-in-eye-laborer>, accessed on 16 June 2021.
- Eisenmenger, N., Pichler, M., Krennmayr, N., Noll, D., Plank, B., Schalmann, E., Wandl, M.-T., & Gingrich, S. 2020. The sustainable development goals prioritize economic growth over sustainable resource use: A critical reflection on the sdgs from a socio-ecological perspective. *Sustainability Science*, 15, 1101–1110.
- Elena, M. 2020. *e-commerce transactions increase 79.38 percent in the middle economic recession*. *Business*. Retrieved from <https://ekonomi.bisnis.com/read/20201109/9/1315333/transaksie-commerce-increase-7938-percent-in-middle-recession-economy>, accessed on 08 June 2021.
- Fauzia, M. 2020. *The impact of the pandemic: Indonesia recession, unemployment reaches 9.77 million*.
- Febriantoro, W. 2018. Studies and supporting strategies for the development of e-commerce for MSMEs in Indonesia. *Managerial Journal*, 17(2), 184–207.
- Firmansyah, B., & Rahayu, N. 2020. Tax authority readiness analysis in taxation of the digital economy. *Journal of Public Sector Innovations*, 5(1).
- Handayani. 2019. *E-commerce between gap and challenge*. Tax Magazine. <https://majalahpajak.net/e-commerce-antara-gap-dan-tantangan/amp/>
- Hanoatubun, S. 2020. The impact of covid-19 on the Indonesian economy. *Journal of Education, Phsycology and Counseling*, 2(1), 146–153.
- Haryadi, B., Sari Trunojoyo University, Madura, A., Raya Telang, J., Telang Inda, P., Bangkalan, K., Timur, J., & Article, I. 2020. Measuring the potential of state revenue on e-commerce taxes, regulatory tug and barriers to tax revenue: A study of the literature. *Journal of Research and Applications: Accounting and Management*, 4(3), 331–341.
- Indonesian media. 2019. *E-Commerce contributes to indonesia's economic growth*. Media Indonesia.Com.
- Ikhsan, M., & Hasan, M. 2020. Analysis of the impact of using e-commerce in increasing sales turnover of micro, small and medium enterprises in Makassar City. *Journal of Economic Education and Entrepreneurship Studies*, 1(1), 39–46.

- Jahangard, E., & Pourahmadi, Z. 2013. The effects of broadband infrastructure on economic growth in developing countries. *Iranian Journal of Economic Studies*, 2(2).
- Kala'lembang, A. 2020. Adoption of e-commerce in supporting the development of micro, small and medium enterprises (MSMEs) in the future covid-19 pandemic. *CAPITAL: Journal of Economics and Management*, 4(1), 54–65.
- Koerniawan, D. 2019. *No need to fuss with e-commerce taxes*. directorate general of taxation. <https://pajak.go.id/article/tak-perlu-gaduhdengan-pajak-e-commerce>
- Kominfo. 2019. Indonesia will be the biggest digital economy player in southeast asia. Ministry of Information and Communication.
- Kumala, R., & Junaidi, A. 2020. Business strategy and utilization of tax policy during the covid-19 pandemic and new normal era (case study of SME marketplace actors). *Proceedings of the Stiami Seminar*, 7(2).
- Marlinah. Lilih. 2021. Utilizing MSME tax incentives in an effort encouraging lili's national economic recovery. *Journal of IKRA-ITH Economics*, 4(2), 73–78.
- Media, A. 2020. *There were 12 million new "e-commerce" users during the pandemic*. Antaranews.
- Mulya, AS, & Agatha, SV. 2020. Can value added tax on ecommerce be applied in Indonesia. *Journal of Accounting Science and Technology*, 1(1), 40–60.
- Mungkasa, O. 2020. Working from home (WFH): Towards new order in the era of the covid-19 pandemic. *Journal of Development Planning: The Indonesian Journal of Development Planning*, 4(2), 126–150.
- Munthe, DT. 2020. Utilization of e-commerce in tax revenue. *Journal of Taxation*, 1(2), 182–190.
- National Development Planning Agency. 2017. *summary metadata of indonesia's sustainable development goals (TPB)/indicators of sustainable development goals (SDGs)*. In the Ministry of National Development Planning/Bappenas.
- Nazir, M. 1999. *Research methods*. Ghalia Indonesia Publisher.
- Nurhaliza, S. 2020. Boost the national economy, government urges SMEs to go digital 2021. Idx Channel.
- Octaviano, A. 2021. *The pace of digital transactions in e-commerce increased in the first quarter of 2021*. Kontan.Co.Id.
- OECD. 2015. Addressing the Tax Challenges of the Digital Economy. OECD/G20 Base Erosion and Profit Shifting Project.
- Online tax. 2017. *Online retail e-commerce tax*. tax online. Retrieved from <https://www.online-tax.com/seputar-PPN-invoice/tax-eonline-commerce-retail>, accessed on 05 June 2021.
- Pebrianto, F., & Widyastuti, RAY. 2019. *Cancel taxes, sri mulyani assesses e-commerce business ecosystem*. Tempo.Co Business.
- Potia, A., & Dahiya, K. 2020. *Optimistic, digital, generous: COVID-19's impact on Indonesian consumer sentiment*. McKisney & Company.
- Pramesti, IA. 2019. Announcement: Sri Mulyani withdraws e-commerce rules, *Cancel All!* CNBC Indonesia. Retrieved from <https://www.cnbcindonesia.com/tech/20190329160155-37-63738/announcement-sri-mulyani-pull-rule-e-commerce-cancelled-all>,
- Prasetyanto, A. 2018. *Various e-commerce tax regulations in the world*. business coil. <https://kumparan.com/kumparanbisnis/ragam-regulationtax-e-commerce-in-world/full>.
- Prastowo, Y. 2018. *E-commerce tax wise*. CNBC Indonesia.
- Rachmasarinigrum, R. 2020. Juridical analysis of the impact of e-commerce on the potential loss of indonesian state taxes. *Journal of Civic Law*, 5(2), 230-241.
- Rahayu, N. 2019. *This is the impact of e-commerce development for Indonesia*. Economic News.
- Santika, WG, Anisuzzaman, M., Simsek, Y., Bahri, PA, Shafiullah, GM, & Urmee, T. 2020. Implications of the sustainable development goals on national energy demand: The case of Indonesia. *Energy*, 196.
- Santoso, YI. 2020. *2021 tax revenue depends on controlling the Corona virus pandemic*. Kontan.Co.Id.
- Schumpeter, J. 1934. *Theory of economic development*. MA: Harvard University Press.
- Sembiring, LJ. 2020. *Sri Mulyani's update on the economic crisis due to corona*. Cnbc Indonesia.
- Setiawan, S. 2020. *Survey: 84 percent of the public admit that their income has decreased because of the corona virus*. Compass. <https://money.kompas.com/read/2020/06/26/122922726/survei-84-percent-community-admit-income-drop-because-corona?page=all>
- Sinha, A., Sengupta, T., & Saha, T. 2020. Technology policy and environmental quality at crossroads: designing SDG policies for select asia pacific countries. *Technological Forecasting and Social Change*, 161, 1–39.
- Sirclo. 2020. *Navigating Indonesia's e-commerce: Covid-19 impact & the rise of social commerce*. Sirclo.Com.
- Sudrajat, A. 2020. E-Commerce taxes, solutions and solutions. *Journal of Vocational Taxes (JUPASI)*, 2(1), 22–36.
- Sugiyono. 2012. *Qualitative quantitative research methods and r&d*. Alphabet.
- Thomas, VF . 2019. *The e-commerce tax dilemma: Impact on goods prices & the digital economy*. Tirto.Id.

- United Nations. 2016. Transforming our world: The 2030 agenda for sustainable development. arsenic research and global sustainability – *Proceedings of the 6th International Congress on Arsenic in the Environment, USA 2016*, 12–14. <https://doi.org/10.1201/b20466-7>.
- Verboven, H., & Vanherck, L. 2016. Sustainability management of SMEs and the UN Sustainable Development Goals. *Uwf UmweltWirtschaftsForum*, 24(2–3), 165–178.
- Walfajri, M. 2020. E-commerce transactions grew 79.38% in September 2020, fintech aims for the digital economy. Cash. Retrieved from <https://keuangan.kontan.co.id/news/transaksi-e-commerce-grow-7938september-2020-fintech-aim-digital-economy>, accessed on 10 June 2021.
- Widowati, H. 2019. *Indonesia is the largest contributor of the digital economy in southeast asia*. databox.
- Yenti Sumarni. 2020. Covid-19 pandemic: Economic and business challenges. *Al Intaj: Journal of Islamic Banking and Economics*, 6(2), 46–58.

## Lexicon Syariah: Lexicon mobile learning application development based on individual learning in Islamic economics

V.A. Qurrata\*, L. Seprillina, E. Yusida & S. Merlinda

*Economic Development Department, Universitas Negeri Malang, Java, Indonesia*

M.R. Palil

*Universiti Kebangsaan Malaysia, Malaysia*

**ABSTRACT:** Along with the development of smartphones, innovation has emerged to make the Lexicon Mobile Learning Application easier for students to understand Islamic Economics terms through individual learning. This application will later be named Lexicon Syariah, presenting various features, including terms on contracts in Islamic financial institutions, inheritance, zakat, waqf, and other Arabic words used in the learning process. This study wants to describe the results of trials conducted by this application on 75 students of Islamic Economics from Universitas Negeri Malang. Based on the survey results, students stated that it was easier for them to know various terms in Islamic Economics, and they felt satisfaction in using Lexicon Syariah. They prefer to use Lexicon Syariah in the teaching and learning process compared to the traditional reading dictionaries. Furthermore, Lexicon Syariah can increase motivation and desire to learn, but there is still no further research on self-confidence in student learning.

### 1 INTRODUCTION

Islamic Economics learning is learning related to economics based on the Al-Quran and Hadith. In Islamic Economics, it is inseparable from the many terms in Arabic, which are the root of difficulties in the learning process. Therefore, individual learning in Islamic Economics is very much needed because they will have trouble understanding the knowledge given without understanding. However, media is required to overcome the weaknesses of implementing Islamic Economics learning in the classroom, given the limited time in studying it. Therefore, many Islamic Economics teaching materials need to be presented using the media, especially those related to economic terms in Arabic.

Along with the development of electronic devices in the form of smartphones that students can use freely in class, there has been an innovation in the development of m-learning products in all Islamic Economics concentration courses. However, based on an interview with one of the lecturers of the Islamic Economics course, it is stated that many lecturers carry out learning in a lecturer center, and not many use multimedia for learning in the classroom. This circumstance proves that there are still many lecturers who do conventional learning, only using textbooks.

According to Mudjiman (2011), independent learning is an active learning activity driven by a motive to master competence and is built with the knowledge or competence possessed. On the other hand, Miarso (2007) explains learning independence as a learning program arrangement organized so that each student can choose and determine their learning materials and progress. From these two opinions, it can be concluded that learning independence is active learning supported by motivation from within the students so that they can organize themselves to be able to improve students' competence.

---

\*Corresponding Author: vika.annisa.fe@um.ac.id

The concentration of Islamic Economics became one of the most choices by students of the Department of Development Economics. With this phenomenon, it is hoped that students will more easily understand the many economic terms in Islamic Economics and be more critical of the economic case. Based on the explanation above, the researcher develops a dictionary application in Islamic economics presented to be used by students. Students can access the application from personal gadgets for individual learning, so that it is hoped that this will help them to be able to hone their understanding of Islamic Economics material. This application is “Lexicon Syariah: Lexicon Mobile Learning Application Development Based on Individual Learning in the Concentration of Islamic Economics.” Based on the above background, this development aims to create a Lexicon Mobile Learning application in increasing students’ understanding of terms in Islamic Economics.

## 2 LITERATURE REVIEW

### 2.1 *Mobile learning application development*

The definition of m-learning has evolved in various ways and directions since the first decade of the 2000s. However, according to Bara (2014), the evolution of these definitions mainly highlights the positive characteristics of m-learning such as mobility (Sharples et al. 2009), access (Parsons et al. 2006), proximity (Kynäslähti 2003), situative (Cheon et al. 2012), ubiquity (Kukulska-Hulme et al. 2009), convenience (Kynäslähti 2003), and contextuality (Kearney et al. 2012).

These different emphases reflect the expected but unexpected impact of introducing this digital technology in the learning process. The former definition was more device-driven (focusing on proximity, convenience, access, and mobility). The latter was more personal and social, exploring the costs associated with new technological features of mobile devices such as location awareness, motion detection, and augmented reality (Baran 2014).

Khan et al. (2015) stated that m-learning is the latest challenge from the development of education in technology and information. It is shown that developed countries such as South Korea, the United States of America, Japan, Taiwan, Singapore, Malaysia, the European Union, and Australia have used mobile devices in the education sector. However, some developing countries still find it challenging to develop m-learning. We can learn five things from developing m-learning in developed countries: national-level initiatives, public-private partnerships, student characteristics, and cultural norms, m-learning infrastructure, and awareness. Samari (2015) states that the developed m-learning significantly influences critical thinking skills and learning independence.

They can develop learning media on mobile devices that are easy to carry anywhere, such as smartphones and tablets (Squire 2009). In addition, students can quickly interpret data, improve understanding, condense information, present data, and arouse students’ motivation and interest in learning. Students listen to explanations from the teacher, and through learning media, students can also make more observations, and demonstrations (Sudjana & Rivai 2011). The development of media in mobile education can meet the criteria of support for learning objectives and content, suitability to student characteristics, the efficiency of learning time, and students’ ease of use.

According to Wilson & Bolliger (2013), mobile learning in principle aims to make it easier for students to learn anywhere and anytime according to their time. Due to its nature, mobile learning can be accessed virtually from anywhere by providing access to all different learning materials. Mobile Learning also provides content sharing for each user using the same content and allows for instant feedback. The presence of mobile learning can support the concept of lifelong education (long-life education). The nature of mobile learning based on open source allows everyone to develop and use it according to the wishes and needs of learning (Belina & Batubara 2013).

E-learning and mobile learning generally have search features according to the user’s wishes so that various types can be quickly searched and found. Based on the opinion of Jones & Brown (2011), one of the crucial factors influencing the transfer of concepts from printed learning resources (printed) to electronic formats (in the form of e-learning or mobile learning) is in terms of ease of accessibility. Android is a Linux-based mobile operating system developed by Android Inc and later acquired by Google. According to Purwantoro et al. (2013), Android is a software (software)

used on mobile devices (running devices) which includes an operating system, middleware, and core applications.

According to Satyaputra & Aritonang (2014), Android is an operating system for smartphones and tablets. Huda (2013) argues that Android is a Linux-based operating system specifically for mobile devices such as smartphones or tablets. Meanwhile, Nasution (2013) said that the advantages of Android are taking a comprehensive approach, being an open-source, free platform, and a populist operating system. Meanwhile, the weakness of Android has always connected to the internet, several advertisements displayed, and does not save battery power. Learning media development, especially on Android devices, is one of the new alternatives to exciting and fun learning.

The development model, according to Allesì & Trollip (2001), emphasizes the flexibility aspect, which is based on seven main principles, namely, (a) standards-based, (b) empirical approach principles, (c) project management, (d) products are developed based on psychological principles, (e) progressive, (f) creative aspect, and (g) approach to teamwork orientation. In the learning process, the use of learning media needs to be based on learning theories, namely behavioral, cognitive and constructivist learning theories.

## 2.2 *Individual learning*

Miarso (2007) explains individual learning as a learning program arrangement organized so that each student can choose and determine their learning materials and progress. From these two opinions, it can be concluded that learning independence is active learning supported by motivation from within the students so that they can organize themselves to be able to improve students' competence. Hidayati & Listyani (2010) state six indicators of student learning independence: independence from others; have self-confidence; behaving in a disciplined manner; having a sense of responsibility, conducting on their initiative; and exercising self-control.

Having self-confidence is one of the parameters, which shows that self-confidence is found in students. Self-confidence significantly affects the independence of students. Self-confidence can be seen based on self-confidence can achieve learning goals, belief in solving problems and obstacles. Behaving disciplined is one of the determinants of independence. The education institution can demonstrate disciplined behavior by planning learning activities, being present, and submitting assignments on time. Having a sense of responsibility is indicated by enthusiasm in learning, trying to carry out learning activity plans well, and focusing attention. Behave on their initiative, shown by thinking according to their own opinion, acting consciously, and planning their learning activities.

Doing self-control can be seen by reflecting on whether or not it impacts students, evaluating learning outcomes, and observing the increase and decrease in learning outcomes obtained. Sudjana & Rivai (2011) define student learning outcomes as changes in behavior as learning outcomes that include cognitive, affective, and psychomotor fields. Bettencourt (2015) states a relationship between learning outcomes and learning activities on the achievement of learning outcomes. Keshavarz (2011) says that learning outcomes and results-based approaches have implications for curriculum design, teaching, learning, assessment, and student quality assurance.

## 3 METHODS

### 3.1 *Research design*

This research will be conducted using the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) approach. We will show the implementation stages in detail in Figure 1. This picture will contain the steps of analysis, design, development, implementation, and evaluation.

The analysis phase consists of identifying the needs of students and lecturers, identifying problems, and identifying user needs. In addition, at this stage, it examines concepts and theories related to the smartphone-based e-learning model. At the same time, field surveys are carried out to collect data relating to students, lecturers, curriculum, methods, media, learning resources, and facilities infrastructure.

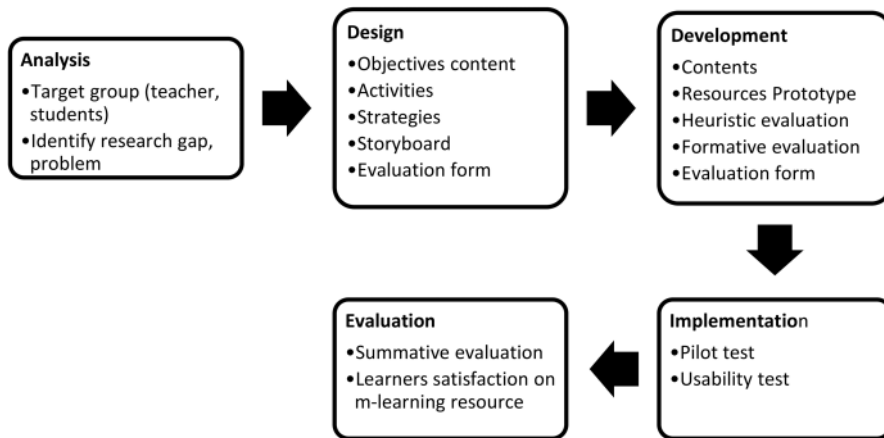


Figure 1. Research steps.  
Source: Authors, 2021.

The concept preparation stage begins with making an initial draft of the Lexicon Syariah design based on the terms in Islamic Economics. The initial drafting of the concept in making this mobile application will use the eXelearning application and Phone Gap. After the initial design is fulfilled, a trial phase will be carried out, intended to see the shortcomings in this application. Finally, the design that has been tested will be registered in the mobile application on the Play Store so that students can download it quickly and for free.

The design phase is carried out with a program design based on the results obtained in the analysis phase, which include: learning objectives, activities, strategies, and evaluation forms. In the implementation and evaluation stages, the results of the design are implemented through applications. At the same time, program testing is carried out in small classes through users based on usability, ease of use, ease of learning, and student satisfaction levels. The prototype will take a sample of 30 students, learning media experts, and material experts to operate it. This test will require the Lexicon Syariah application downloaded on the Play Store and trying all the available features. Test data that has been carried out, recorded, and used as evaluation material for improvement. Evaluation is held when there are deficiencies or input from all users. The final step is to refine the design and features on the website to be applied to an Android-based application. After testing on a small class, it was declared feasible to be tested on an extensive course. We tested this application in a large class with 100 user respondents. Respondents were spread into three provinces, namely East Java, Central Java, and West Java.

### 3.2 Procedure for sampling

The trial phase for large classes was carried out by distributing online questionnaires via an Authors. The population of the respondents is students of development economics in several public universities in Java. Sampling using a simple random sampling technique. The data obtained the number of respondent's sample of 100 students.

### 3.3 Data analysis and processing

After we collected the data from the evaluation results, data analysis was carried out using a descriptive quantitative approach. We analyzed the data based on the percentage in each evaluation category, namely usability, ease of use, ease of learning, and level of student satisfaction. The data is presented in the form of percentage graphs and descriptions.







Figure 3. Icon Lexicon Syariah.  
Source: Authors, 2021.

After users download and install the application on their Android phone, they can immediately use the application without logging in. It makes anyone free to use and apply Lexicon Syariah. The display in Lexicon Syariah is made simple to make it easier for users to search. Users need to look for the column “search for terms here” and then type in the words they want to find their meaning. The term developed in Lexicon Syariah applies two ways. If the user types a phrase in Arabic, Lexicon Syariah will display the purpose in Indonesian. And vice versa, when users type in keywords in Indonesian, Lexicon Syariah can immediately show some Arabic terms that match the keywords. The display of the inside of the Sharia Lexicon can be seen in Figure 4 below.

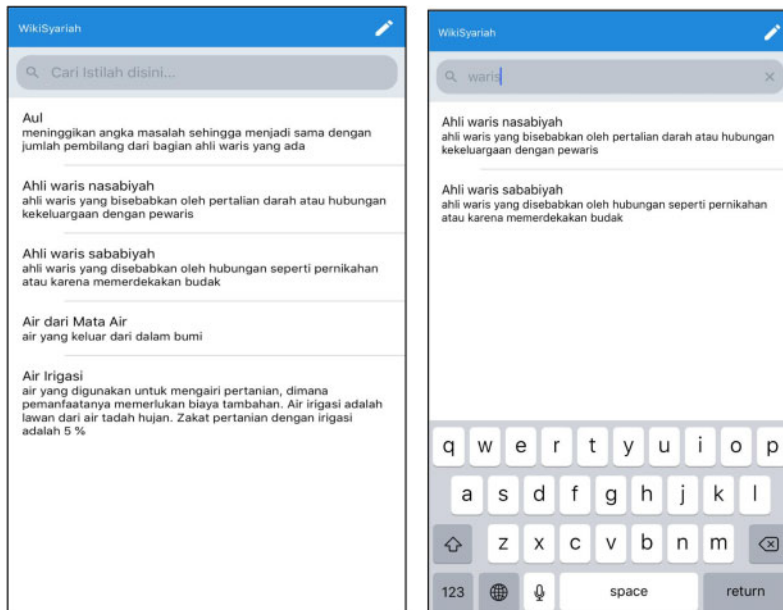


Figure 4. Design on Lexicon Syariah.  
Source: Authors, 2021.

#### 4.3 Product trial result

As a form of development of the Lexicon Syariah application, the development team has evaluated the Lexicon Syariah product. This evaluation was carried out using an online survey method by making an online questionnaire on an Authors. The list of questions in the questionnaire can be seen in Table 1.

Table 1. Evaluation questions for lexicon Syariah.

No.	Questions
Personal Data	
1.	Name
2.	Student Number
3.	Gender
4.	University
5.	Province
Lexicon Syariah Satisfaction	
6.	The difficulties of Islamic Economic
7.	The duration of using Lexicon Syariah
8.	The Easiness of Using Lexicon Syariah
9.	The Convenience of Using Lexicon Syariah
10.	The use of Lexicon Syariah is beneficial in understanding the lecture material
11.	Learning Islamic Economics is more accessible by using Lexicon Syariah
12.	I am satisfied with the completeness of Lexicon Syariah content in displaying the requested data or terminology.
13.	I am happy because the Lexicon Syariah data application is used online and offline
14.	Lexicon Syariah features are easy to understand and use
15.	I will always use Lexicon Syariah in studying Islamic Economics
16.	Lexicon Syariah's response was very fast in responding to my request
17.	Lexicon Syariah needs to be developed with additional hadith and Qur'an features.
18.	The display of Lexicon Syariah makes users more comfortable in using this application
19.	Terminology in Lexicon Sharia is correct and valid

Respondents from the product trial consisted of 100 respondents from the State University of Malang. The respondents were spread from three provinces, namely East Java, Central Java, and West Java. With the percentage as shown in Figure 5. Respondents are students with an age range

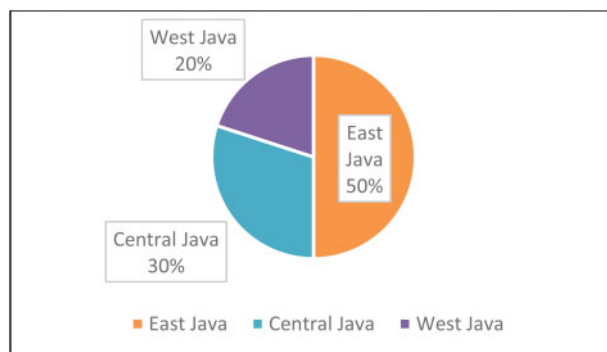


Figure 5. Respondents by province.  
Source: Authors, 2021.

between 18-20 years. Based on gender, most respondents are women with a percentage of 60%, while the rest are men. The primary segmentation of this Lexicon Syariah product is for students who are concerned or studying Islamic economics. So, this application is widely used by students of Islamic Economics by 48 percent were filled out by students who were taking the Islamic Economics study program.

In more detail, the Lexicon Syariah product evaluation survey results can be seen in Figure 6.

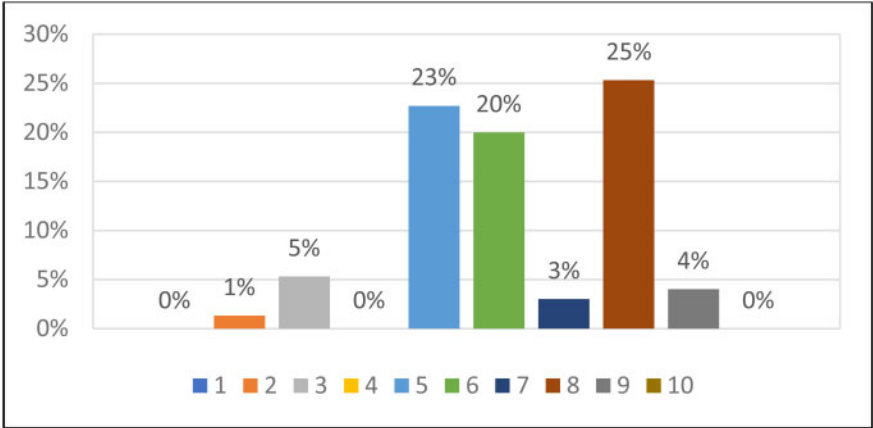


Figure 6. The difficulties of Islamic economic.  
Source: Authors. 2021.

Figure 6 explains that the level of difficulty of Islamic economics is relatively high. More than a half percent of students stated that the score was above five on the points of student difficulty level. The average student uses the Lexicon Syariah application for less than three months. It is because this application is still new. In addition, this application is very comfortable to use. Almost three-quarters percent of students stated an average score of 8 for comfort points in using the Lexicon Syariah application. More detail can be seen in Figure 7.

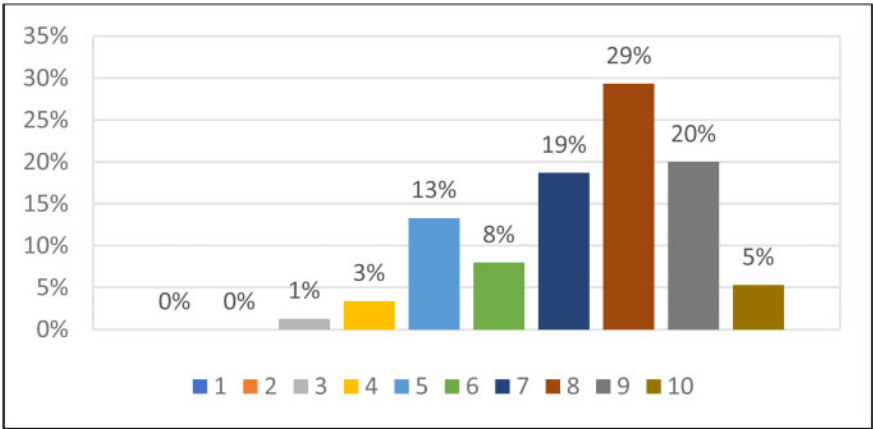


Figure 7. Convenience of Using Lexicon Syariah Application.  
Source: Author, 2021.

The college students can overcome the difficulty of this Islamic economic material with the Lexicon Syariah application. Based on Figure 8, as many as 86 percent of students stated that the

Lexicon Syariah application in helping lecture materials. Therefore, it makes it easier for students to learn Islamic economics material.

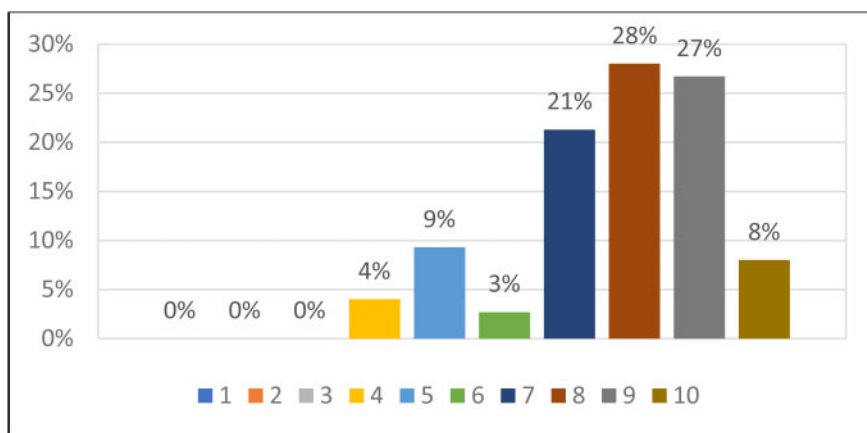


Figure 8. The Role of the Lexicon Syariah application in helping lecture materials.  
Source: Author, 2021.

When viewed from the level of student satisfaction, more than 90 percent of students stated that they were very satisfied with the completeness of the Lexicon Syariah application content in displaying the data or terminology they requested. (Figure 9.)

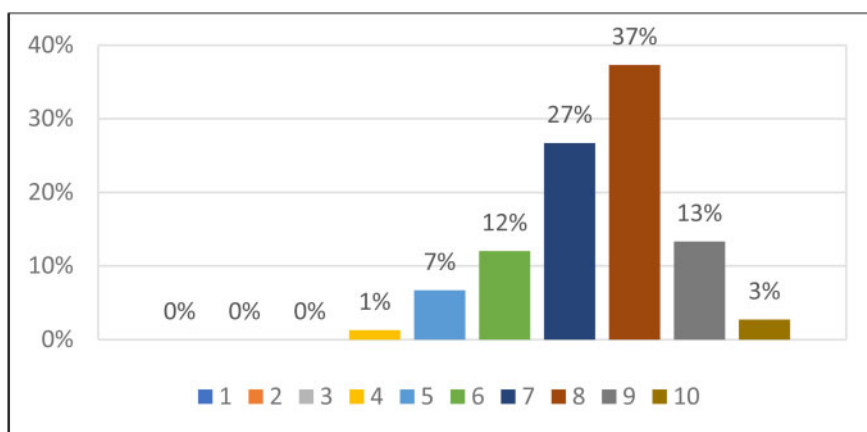


Figure 9. Student satisfaction with Lexicon Syariah application content.  
Source: Authors, 2021.

Furthermore, student satisfaction with the Lexicon Syariah application is also because they can use the data application online and offline. More detail can be seen in Figure 10.

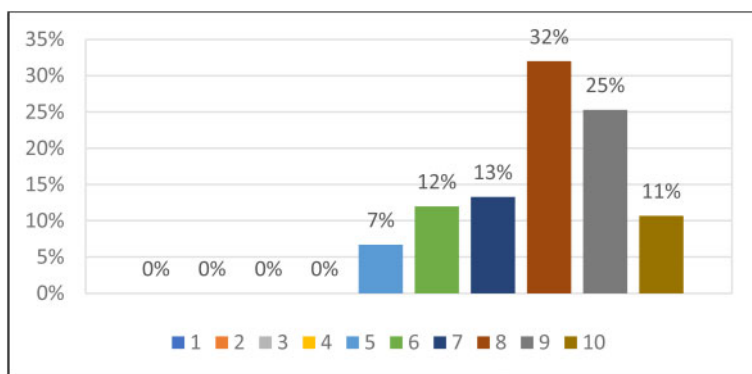


Figure 10. Student satisfaction with Lexicon Syariah for online and offline using.  
Source: Authors, 2021.

Figure 10 shows that 93 percent of students are pleased to use the Lexicon Syariah application online and offline. So, for students who do not have a quota or the quota has run out can still use the Lexicon Syariah application. Interestingly, Figure 11 shows that 90 percent of respondents consisting of students, stated that the Lexicon Syariah application features were easy to understand and use. It makes students not bored in operating Lexicon Syariah.

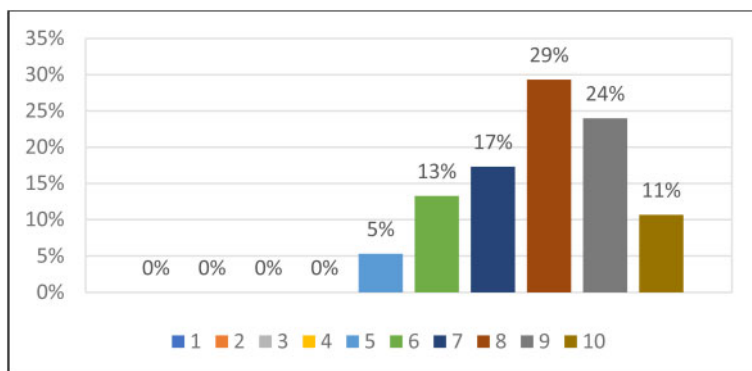


Figure 11. The easiness of Lexicon Syariah.  
Source: Authors, 2021.

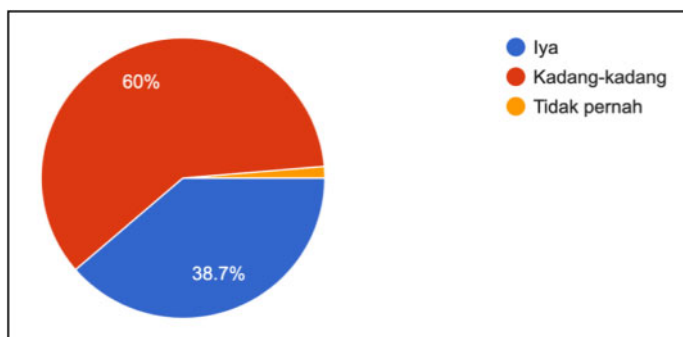


Figure 12. The consistency of Lexicon Syariah user.  
Source: Authors, 2021.

Figure 12 states that 38.7 percent of students stated that they would always use the Lexicon Syariah application in studying Islamic Economics. While 60 percent of respondents stated that they sometimes use the application, the rest never. It indicates that Lexicon Syariah is used as a reference dictionary if students have difficulty understanding Islamic economic terminology quickly. So this application is used when students need it. While those who answered never were students who had never taken Islamic economics courses or students outside the concentration of Islamic economics.

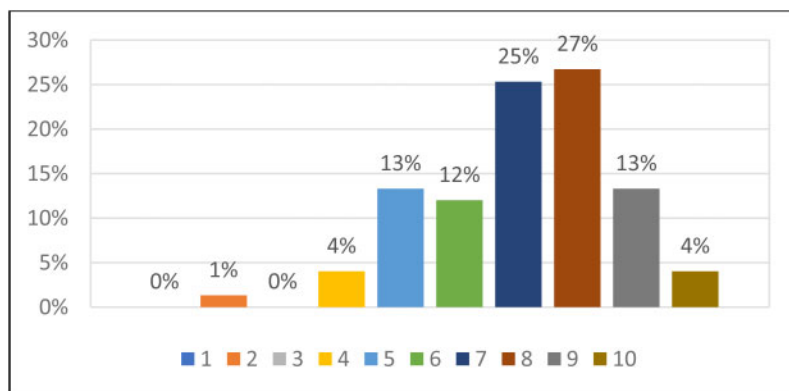


Figure 13. Lexicon Syariah response speed.  
Source: Authors, 2021.

Based on Figure 13, 69 percent of students stated that the Lexicon Syariah application response was very fast in responding to user requests. However, it indicates that there are still some users who feel the application response is slow. The slowness of this application is also influenced by the type of android phone of each user. Furthermore, 76 percent of students stated that the Lexicon Syariah application needed to be developed with other hadith and Al-Quran features. Later, this application will be a small dictionary and more on an electronic Islamic economics book (Figure 14). Therefore the development of this application is essential.

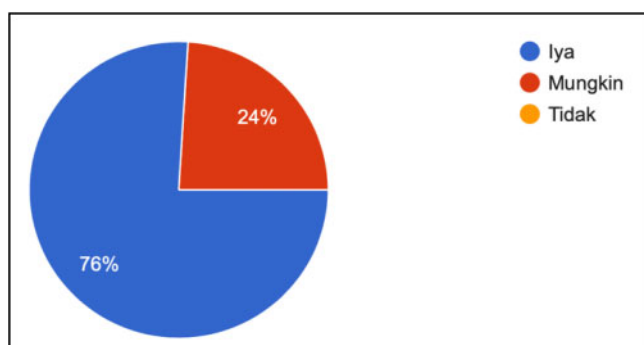


Figure 14. User perception on adding more features.  
Source: Authors, 2021.

More than 50 percent of respondents stated that the appearance of the Lexicon Syariah application makes users more comfortable in using this application (Figure 15).

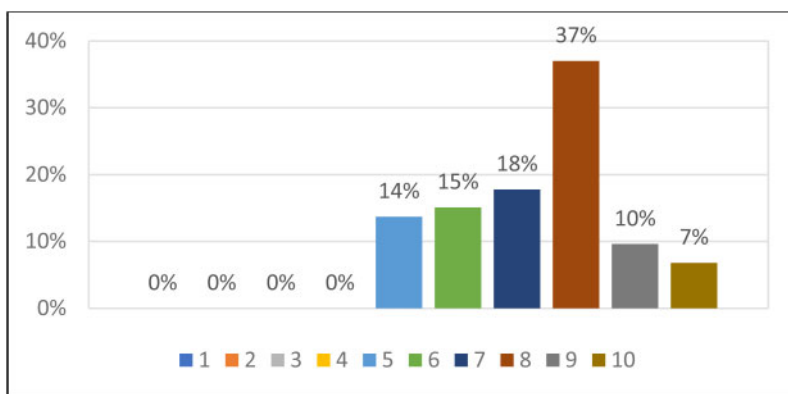


Figure 15. User convenience on the Lexicon Syariah display.  
Source: Authors, 2021.

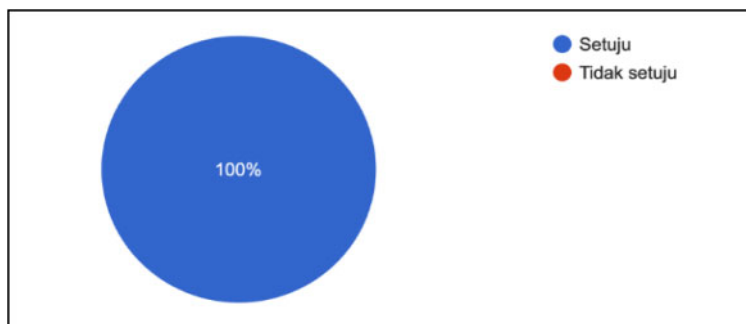


Figure 16. Terminology accuracy of Sharia Lexicon data.  
Source: Authors, 2021.

Last but not least, based on Figure 16, all (100%) respondents consisting of students stated that the terminology or terms in the Lexicon Syariah application were correct and valid. There is no doubt about the quality of the materials or materials in the Lexicon Syariah application. Based on the research results described above, it can be seen that the Lexicon Syariah application makes it easier for students to study Islamic economics. Students feel very helpful with this application. Students who initially had to find the meaning of a word that uses Arabic in their Islamic Economics book now have to open the Lexicon Syariah application and find the meaning. That is, students will be faster in discovering the definition of a term in Islamic economics to increase the effectiveness of their learning. In line with the research of Parvez et al. (2019) that m-learning-based applications can increase learning effectiveness. Nariman (2021) also proves that the use of m-learning increases learning effectiveness. This increase in learning effectiveness will also improve students' reading skills, especially in reading Arabic Terms in Islamic economics material. In line with Chee et al. (2017), which also proves that m-learning effectively improves reading skills.

The Lexicon Syariah developed in mobile or smartphone-based applications with the Android operating system will make it easier. Students always carry their cellphones wherever they go to study independently according to the time and place they want. Lexical Syariah comes in an application that supports students to explore independently, both indoors and outdoors. Following the research of Kazhan et al. (2020), it found that mobile apps help students work and study outside the classroom and improve their lexical competence.



The Lexicon Syariah can also increase motivation to learn Islamic economics because students feel comfortable and satisfied when using the application. Coupled with an application equipped with a live chat feature, students can interact directly with creators and provide suggestions when there are vague terms.

## 5 CONCLUSION

Innovation in the development and learning process is essential, one of which is in students' understanding of Islamic economics. It is due to the many terms in Arabic. One of the innovation efforts made is the creation of the Lexicon Mobile Learning Application to facilitate students in understanding Islamic economic terms through individual learning. This application will later be named Lexicon Syariah, which provides various features that include terms on contracts in Islamic financial institutions, inheritance, zakat, waqf, and other Arabic words used in the learning process.

In addition, there are also several illustrations in the sharia financial contract and live chat to make it easier for students to consult. This application will be freely downloadable through the play store. The development of this learning innovation begins with the drafting stage, starting with making an initial draft of the Lexicon Syariah design based on terms in Islamic Economics. The initial drafting of the concept in making this mobile application will use the eXelearning application and Phone Gap. Then, the analysis and design stages have been completed, followed by the stages of development, implementation, and evaluation. After the initial design is fulfilled, this research will carry out the experts' steps of exposure and verification, and trials are intended to see the shortcomings in this application.

Based on the results of product trials, as many as 80 percent of respondents consisting of students of Islamic economics concentration, stated that this product was very feasible in facilitating Islamic economics material. Both in terms of content (terminology), features, appearance, and speed of the Lexicon Syariah application. The need for development in enriching the description of each language by adding hadith and the Al-Qur'an.

## REFERENCES

- Allesi, S. M., & Trollip, S. R. 2001. *Multimedia for Learning: Methods and Development*. Pearson Education Inc.
- Baran, E. 2014. A review of research on mobile learning in teacher education. *Educational Technology and Society*, 17(4), 17–32.
- Belina, E. P., & Batubara, F. R. 2013. Perancangan dan implementasi aplikasi elearning versi mobile berbasis android. *SINGUDA ENSIKOM*, 4(3), 76–81.
- Bettencourt, M. 2015. Supporting Student Learning Outcomes Through Service Learning. *Foreign Language Annals*, 48(3), 473–490. <https://doi.org/10.1111/FLAN.12147>
- Chee, K. N., Yahaya, N., & Ibrahim, N. H. 2017. Effectiveness of Mobile Learning Application in Improving Reading Skills in Chinese Language and Toward Post-Attitudes. *International Journal Mobile Learning and Organization*, 11(3), 210–225.
- Cheon, J., Lee, S., Crooks, S. M., & Song, J. 2012. An investigation of mobile learning readiness in higher education based on the theory of planned behavior. *Computers and Education*, 59, 1054–1064. <https://doi.org/10.1016/j.compedu.2012.04.015>
- Hidayati, K., & Listyani, E. 2010. Pengembangan Instrumen Kemandirian Belajar Mahasiswa. *Jurnal Penelitian dan Evaluasi Pendidikan*, 14(1).
- Huda, A. A. (2013). *Live Coding 9 Aplikasi Android Buatan Sendiri*. STMIK AKAKOM Yogyakarta.
- Jones, T., & Brown, C. 2011. Reading engagement: a comparison between ebooks and traditional print books in an elementary classroom. *International Journal of Instruction*, 4, 6–2.
- Kazhan, Y. M., Hamaniuk, V. A., Amelina, S. M., Tarasenko, R. O., & Tolmachev, S. T. 2020. The Use of Mobile Application and Web 2.0 Interactive Tools for Students' German-Language Lexical Competence Improvement. In A. E. Kiv & M. P. Shyshkina (Ed.), *Proceedings of the 7th Workshop on Cloud Technologies in Education* (hal. 392–415). EUR Workshop Proceedings.

- Kearney, M., Schuck, S., Burden, K., & Aubusson, P. 2012. Viewing mobile learning from a pedagogical perspective. *Research in Learning Technology*, 20(1), 1–17. <https://doi.org/10.3402/rlt.v20i0/14406>
- Keshavarz, M. (2011). Measuring course learning outcomes. *Journal of Learning Design*, 4(4), 1–9. <https://doi.org/10.5204/JLD.V4i4.84>
- Khan, A. I., Al-Shihi, H., Al-Khanjari, Z. A., & Sarraf, M. 2015. Mobile Learning (M-Learning) adoption in the Middle East: Lessons learned from the educationally advanced countries. *Telematics and Informatics*, 32(4), 1–17. <https://doi.org/10.1016/j.tele.2015.04.005>
- Kukulska-Hulme, A., Sharples, M., Milrad, M., Arnedillo-Sánchez, I., & Vavoula, G. 2009. Innovation in mobile learning: A European perspective. *International Journal of Mobile and Blended Learning*, 1, 13–35.
- Kynäslähti, H. 2003. In search of elements of mobility in the context of education. In *Mobile learning*. IT Press.
- Miarso, Y. 2007. *Menyemai benih teknologi pendidikan*. Kencana.
- Mudjiman, H. 2011. *Manajemen pelatihan berbasis belajar mandiri*. Pustaka Pelajar.
- Nariman, D. 2021. Impact of the Interactive e-Learning Instruction on Effectiveness of a Programming Course. *Springer Nature Switzerland*, 588–597. [https://doi.org/https://doi.org/10.1007/978-3-030-50454-0\\_61](https://doi.org/https://doi.org/10.1007/978-3-030-50454-0_61)
- Nasution, M. I. P. 2013. Aplikasi Pusat Panggilan Tindakan Kriminal di Kota Medan Berbasis Android. *Seminar Nasional Informatika 2013 (SNIf-2013)*.
- Parsons, D., Ryu, H., & Cranshaw, M. 2006. A study of design requirements for mobile learning environments. *Proceedings - Sixth International Conference on Advanced Learning Technologies, ICALT 2006*. <https://doi.org/10.1109/icalt.2006.1652376>
- Parvez, K., Khan, M., Iqbal, J., Tahir, M., Alghamdi, A., Alqarni, M., Alzaidi, A. A., & Javaid, N. 2019. Measuring Effectiveness of Mobile Application in Learning Basic Mathematical Concepts Sign Language. *Sustainability*, 11(3064), 1–20. <https://doi.org/10.3390/su11113064>
- Purwantoro, S., Rahmawati, H., & Tharmizi, A. 2013. Mobile searching objek wisata Pekanbaru menggunakan Location Base Service (LBS) berbasis android. *Jurnal Politeknik Caltex Riau*, 1(14), 176–184.
- Samari, G. D. 2015. *Pengembangan mobile learning berbasis android materi sistem imun untuk meningkatkan kemampuan berpikir kritis dan kemandirian belajar siswa kelas XI SMA*. Universitas Negeri Yogyakarta.
- Satyaputra, A., & Aritonang, E. M. 2014. *Beginning Android Programming with ADT Bundle*. PT Elex Media Komputindo.
- Sharples, M., Arnedillo-Sánchez, I., Milrad, M., & Vavoula, G. 2009. Mobile Learning, Small Devices, Big Issues. *Technology-Enhanced Learning: Principles and Products*, 233–249. [https://doi.org/10.1007/978-1-4020-9827-7\\_14](https://doi.org/10.1007/978-1-4020-9827-7_14)
- Squire, K. 2009. Mobile media learning: multiplicities of place. *On the Horizon*, 17(1), 70–80. <https://doi.org/10.1108/10748120910936162>
- Sudjana, N., & Rivai, A. 2011. *Media Pengajaran*. Sinar Baru Algesindo.
- Wilson, M., & Bolliger, D. 2013. Mobile learning: endless possibilities for allied health educators. *Journal of Diagnostic Medical Sonography*, 29, 220–224.

## Spending on tourism in East Java with a demand system approach: Household micro data analysis

M. Rasyid\* & A.D. Prasetyoningtyas

*Faculty of Economics and Bussiness, Universitas Trunojoyo Madura, Timur, Indonesia*

**ABSTRACT:** This study aims to evaluate the pattern of consumer demand for spending on tourism. One area that is quite progressive in developing the tourism sector is East Java. Using East Java household microdata, this study yielded several important findings. First, the demand for the tourism sector is relatively inelastic. This means that price changes in this sector do not significantly affect household demand for tourism needs. Second, the income elasticity for tourism is relatively elastic. This suggests that improvements in household income have the potential to increase spending on the tourism sector. The results of the study strengthen the hypothesis that the tourism sector is one of the economic sectors that will soon recover after the economy is released from the COVID-19 snare.

### 1 INTRODUCTION

Tourism is one of the sectors most affected by the COVID-19 pandemic. Based on BPS data (2021), there was a significant decrease in the number of tourists, both local and foreign tourists. Total foreign tourist visits to Indonesia in 2020 amounted to 4.02 million visits. When compared to 2019, the number of foreign tourists decreased by 75.03 percent. Based on nationality, there are 5 countries that visited Indonesia the most in 2020, namely Timor Leste, Malaysia, Singapore, Australia, and China. Most of these countries are neighboring countries, except China.

Meanwhile, the Deputy for Destination Development and Infrastructure of the Ministry of Tourism and Creative Economy on the travel.detik.com page explained that the number of local tourists decreased by 61 percent when compared to the previous year. This significant decline in the number of tourists has a very significant impact on economic conditions because tourism plays an important role in increasing state income, foreign exchange, and employment. The pandemic threatens 13 million workers in the tourism sector and 32.5 million workers who are indirectly related to the tourism sector. (BPS 2020).

The country's foreign exchange earnings from the tourism sector also declined significantly. According to the Minister of Tourism and Creative Economy, Sandiaga Uno on the republica.co.id page, the projection of foreign exchange earnings from tourism in 2020 is between 4-7 billion US dollars. Prior to the pandemic, tourism foreign exchange earnings in 2020 were targeted at US\$ 19–21 billion. When compared to 2019, the decline was quite significant because tourism foreign exchange earnings in the previous year almost reached 20 billion US dollars.

The case of COVID-19 in Indonesia was first confirmed in early March 2020 (Ihsannudin 2020 in Kompas National). Since then this pandemic has quickly spread to all regions in Indonesia. COVID-19 is an infectious disease caused by a type of coronavirus that was first discovered in Wuhan, China, in December 2019 (WHO). This virus is now a pandemic that is happening in many countries around the world. The spread of COVID-19 has had a major impact not only on economic activities and the transportation sector but also on the tourism industry. The total number

---

\*Corresponding Author: mohtar.rasyid@trunojoyo.ac.id

of confirmed cases of COVID-19 in Indonesia is 1,111,671 as of February 3, 2021 (Google News 2021). This number continues to increase from day to day as evidenced by the shape of the curve that tends to continue to climb. The existence of this pandemic has caused a significant decrease in the number of tourists, both local and foreign. This of course causes the tourism industry to suffer considerable losses due to the closure of access for foreign tourists and the enactment of the policy of closing the tourist attraction itself. The policy of closing tourist attractions is carried out to minimize the presence of new clusters of the spread of COVID-19.

Given the close relationship between the tourism sector and the creative economy sector, it is hoped that the injection or injection of budget for the creative economy sector should have an impact on the recovery of the tourism sector. As an illustration, what is known as Virtual Tourism is currently being developed. This online-based tourism model is an example of the marriage between tourism and the creative economy. Virtual Tourism aka Virtual Tourism is an alternative that has emerged in the midst of the boredom of the COVID-19 pandemic. Virtual Tourism is present as a form of transformation and adaptation against the pandemic by utilizing technology, while waiting for the recovery process of the tourism world which has not been significant.

On that basis, this study aims to evaluate the pattern of consumer demand for spending on tourism. One area that is quite progressive in developing the tourism sector is East Java. Using East Java household microdata, this study yielded several important findings. First, the demand for the tourism sector is relatively inelastic. This means that price changes in this sector do not significantly affect household demand for tourism needs. Second, the income elasticity for tourism is relatively elastic.

## 2 METHODS

This ponders employments family miniaturized scale information distributed by the In-donesia Family Life Study (IFLS). This overview has been carried out since 1993 and in-termittently collected information once more in 1997, 2000, 2007, and 2014. This inquiry about family utilization will utilize the comes about of the most recent distributed family studies. IFLS information has been broadly utilized by analysts to analyze family behavior in Indonesia such as money-related exchanges between families and other related angles (Mohtar Rasyid 2021).

IFLS may be a frame of reasonably agent family board information. The test chosen was based on 1993 National Study information speaking to more than 80 percent of the popu-lace in Indonesia. Around 13 areas in Indonesia were chosen as tests. In 2012, IFLS spe-cifically distributed the comes about of information collection in eastern Indonesia.

In this consider, small-scale family information from the distribution of the national overview or publications from the Indonesia Family Life Study (IFLS) and other signifi-cant auxiliary information will be utilized. The information utilized comprises family utili-zation for a few commodities, the cost index for each product, and adding up to family use. In expansion, family miniaturized scale information utilized in this consider including the number of family individuals, family house status (village or city), and other family characteristics (Strauss et al. 2016).

IFLS families from the primary to the final wave continuously encounter an increment. Until the final wave, the number of family units that were effectively over-viewed come to more than 10 thousand family units. In this think about, not all families were chosen as tests. Concerning consumption information for power, water, fuel, and broadcast commu-nications, around 3 thousand households were chosen to supply answers to questions re-lated to utilization. A few families that may not grant an unequivocal reply or even did not reply were not included within the test for this inquiry.

Estimation of household consumption patterns will be carried out using a demand equation system model which is formalized as follows:

$$w_i = \alpha_i + \sum_{j=k}^k \gamma_{ij} \ln p_j + \beta_i \ln \left\{ \frac{m}{a(p)} \right\}, \quad i = 1, \dots, k \quad (1)$$

In this case  $w_i$  is the portion of consumption expenditure and  $p_j$  is the price level for the commodity in question. In the meantime,  $m$  is the full family use. The condition demonstrates (1) is known as the Almost Ideal Demand System (AIDS). Within the experimental domain, the AIDS model can be expanded in two ways. To begin with, this show is communicated in the quadratic frame, so it is known as the Quadratic Almost Ideal Demand System (QUAIDS). Moment, this show can be expanded by including statistic variables as a determinant of request.

The estimation of the coefficients in the AIDS equation can be done using the Feasible Generalized Non-Linear Least Square Estimation approach. In addition to parameter estimation, several important coefficients can be estimated using the Slutsky equation as follows:

$$\epsilon_{ij}^c = \epsilon_{ij} + \mu_i w_j \quad (2)$$

In this case  $\epsilon_{ij}^c$  is the price elasticity (compensated),  $\epsilon_{ij}$  is the uncompensated price elasticity and  $\mu_i$  is the income elasticity.

### 3 RESULTS AND DISCUSSION

As mentioned in the previous session, this research basically aims to estimate the coefficients in the QUAIDS model for electricity, water, fuel and telecommunications commodities. Technically, referring to the analytical model in equation (4), the estimated coefficients will consist of four groups, namely: alpha ( $\alpha$ ); beta ( $\beta$ ); gamma ( $\gamma$ ) and lambda ( $\lambda$ ).

The family utilization information accessible within the IFLS is very inexhaustible. For investigation purposes, as it were four sorts of family utilization consumption were analyzed. Utilization expenditure on other goods isn't utilized within the calculation. Hence, the full family uses as an intermediary for the family pay variable areas was restricted to the overall expenditure for individual merchandise, family products, tourism, and transportation. The share of family consumption in this think about the will to allude to the concept of the entire use in address. In expansion, the product cost variable in this consider was not gotten straightforwardly since the accessible study did not particularly inquire approximately it. The cost variable in this ponder is proxied by the buy esteem for each of the commodities in address.

To simplify the analysis, in this study, each commodity is coded as follows: 1 for personal spending; 2 for household spending; 3 for tourism spending and 4 for transportation. The code in the analysis will be placed after the underscore.

Table 1. Summary statistic of data.

Variables	Obs.	Mean	Std. Dev	Min	Max
Share_1	2,199	0.237801	0.156945	0.0032801	0.9036145
Share_2	2,199	0.1798508	0.1408807	0.0018599	0.8695652
Share_3	2,199	0.1105592	0.1545871	0.0008673	0.9708738
Share_4	2,199	0.4717891	0.25794	0.0055249	0.9864616
lnPrice_1	2,199	10.23744	1.408403	6.802395	14.91412
lnPrice_2	2,199	9.868189	1.192614	6.907755	13.12236
lnPrice_3	2,199	8.935566	1.440102	6.907755	15.20181
lnPrice_4	2,199	10.96574	1.910335	6.907755	15.76142
ln Exp	2,199	11.94866	1.464681	8.294049	15.90304

Source: Author calculation

The decline in the performance of the tourism sector due to COVID-19 has almost evenly occurred throughout the country, including tourism in Madura. Official data released by BPS East Java shows that during the January-December 2020 period, it was recorded as the period with the lowest number of foreign tourist arrivals in the last five years. The decline in foreign tourist

Table 2. Main result of QUAIDS model.

	Coef.	Std. Err.	z	P>z	Confidence Interval	
alpha_1	-0.4688757	0.0074589	-62.86	0.000000	-0.4834948	-0.4542565
alpha_2	0.4230073	0.0107594	39.31	0.000000	0.4019192	0.4440954
alpha_3	0.435513	0.0082784	52.61	0.000000	0.4192877	0.4517383
alpha_4	0.6103554	0.0076925	79.34	0.000000	0.5952784	0.6254324
beta_1	-0.2728579	0.0027979	-97.52	0.000000	-0.2783417	-0.267374
beta_2	0.0717669	0.0041378	17.34	0.000000	0.063657	0.0798769
beta_3	0.0693652	0.0031696	21.88	0.000000	0.0631528	0.0755776
beta_4	0.1317257	0.002781	47.37	0.000000	0.126275	0.1371765
gamma_1_1	0.34073	0.00354	96.38000	0.00000	0.33380	0.34766
gamma_2_1	-0.08494	0.00306	-27.78000	0.00000	-0.09094	-0.07895
gamma_3_1	-0.08027	0.00228	-35.17000	0.00000	-0.08474	-0.07579
gamma_4_1	-0.17552	0.00232	-75.74000	0.00000	-0.18007	-0.17098
gamma_2_2	0.12038	0.00186	64.61000	0.00000	0.11672	0.12403
gamma_3_2	-0.00499	0.00109	-4.59000	0.00000	-0.00711	-0.00286
gamma_4_2	-0.03045	0.00146	-20.81000	0.00000	-0.03331	-0.02758
gamma_3_3	0.10303	0.00140	73.37000	0.00000	0.10028	0.10578
gamma_4_3	-0.01777	0.00113	-15.67000	0.00000	-0.02000	-0.01555
gamma_4_4	0.22374	0.00210	106.58000	0.00000	0.21963	0.22786

Source: STATA output

arrivals even reached around 83.3 percent. The occupancy rate of five-star hotels in East Java until November 2020 only reached 45.47 percent. Objectively, the tourism sector cannot expect much from foreign tourist visits as long as COVID-19 cannot be suppressed effectively.

The year 2020 seemed to be a turning point for the success of the Madura tourism sector after in 2019 several Madura tourist destinations began to be visited by tourists. As is known, Madura tourism has started to squirm since the last five years with the increasing exposure of tourist attractions both by local governments and by local tourism actors. Starting from the tip of the island, namely Sumenep which is famous for its exotic island tours, Pamekasan with historical tours (palaces), Sampang with beach tourism, to Bangkalan with religious tourism, it has started to be widely known by the wider community. Moreover, access to this tourist spot is easier via the Suramadu Bridge or via the Surabaya-Sumenep flight. In essence, Madura's tourism potential is still much that can be developed.

The government has so far issued many policy packages to save the tourism sector which had been suppressed by COVID-19. The incentives for the tourism sector as reported by the Ministry of Finance of the Republic of Indonesia include incentives to bring in foreign tourists through airlines, travel agents, and tourism representatives, amounting to Rp. 298.5 billion; Regional grants to support tourism programs amounting to Rp. 147.7 billion; Compensation for reduced hotel tax rates of Rp. 3.3 trillion; Transportation incentives for domestic tourists amounted to Rp.433.3 billion; Avtur price reduction of Rp. 256.6 billion and a reduction in Air Passenger Service (PJPU) tariffs of Rp. 99.8 billion.

A sufficiently large incentive to restore the condition of the tourism sector will not be effective if it is not supported by stimulus from other sectors. One of the economic sectors closest to tourism is the creative economy. The creative economy is known as a sector that relies on human ideas and knowledge as the main production factor. The official website of the Ministry of Tourism and Creative Economy includes game developer, architecture, interior design, music, fine arts, product design, fashion, culinary, film, animation and video, photography, visual communication design, television and radio, crafts, advertising, arts show, publishing and applications. By identifying the creative economy sub-sector, it is clear that the tourism sector and the creative economy have a symbiotic relationship of mutualism.

## 4 CONCLUSION

This study found quite important results. Household spending for tourism needs in East Java is still relatively high. For non-food expenditure, expenditure on transportation is quite dominant. Furthermore, the income elasticity for tourism is relatively very elastic compared to spending on other goods. This indicates that an increase in income will trigger relatively large expenditures for tourism. This study also finds that the price elasticity for tourism is relatively inelastic. This shows that the people of East Java will continue to spend their income on tourism despite an increase in prices in the tourism sector. This finding has several important consequences. First, the tourism sector is still a sector that is in great demand by households in East Java. Second, the tourism sector has great potential to recover soon after COVID-19.

## REFERENCES

- Nganau, J. P. 2011. *Estimation of the parameters of a linear expenditure system (LES) demand function for a small African economy* (No. 31450; Munich Personal PePEc Archive, Issue 31450).
- Poi, B. P. 2012. Easy demand-system estimation with quads. *Stata Journal*, 12(3), 433–446. <https://doi.org/10.1177/1536867x1201200306>
- Rasyid, M. 2021. Demand for Agricultural Product and Sustainable Development Issues: Empirical Studies from Household Survey. *IOP Conference Series: Earth and Environmental Science*, 715(1). <https://doi.org/10.1088/1755-1315/715/1/012012>
- Schulte, I., & Heindl, P. 2016. Price and Income elasticities of residential energy consumption in germany: The role of income and household composition. *ZEW Discussion Paper*, 16–052(16).
- Setyari, N. P. W., & Kusuma, W. G. A. 2021. Economics and environmental development: testing the environmental kuznets curve hypothesis. *International Journal of Energy Economics and Policy*, 11(4), 51–58. <https://doi.org/10.32479/ijeep.11156>
- Sheng, T. Y., Shamsudin, M. N., Mohamed, Z., Abdullah, A. M., & Radam, A. 2008. Complete demand systems of food in Malaysia. *Agricultural Economics*, 54(10), 467–475. <https://doi.org/10.17221/279-agricecon>
- Strauss, J., Witoelar, F., & Sikoki, B. 2016. The fifth wave of the indonesia family life survey: Overview and field report: Volume 1. In *Rand Labor and Population* (Vol. 1, Issue March). <https://doi.org/10.7249/wr1143.1>
- Tewathia, N. 2014. Determinants of the household electricity consumption: A case study of Delhi. *International Journal of Energy Economics and Policy*, 4(3), 337–348.

## Digital marketing: The implementation in MSMEs

F.E. Edwy\*, Sulastris, D.M. Putri & S.N. Maharani

*Universitas Negeri Malang, Malang, East Java*

M.B. Kamaludin

*Universiti Malaysia Trengganu, Malaysia*

**ABSTRACT:** The COVID-19 pandemic and government regulations related to restrictions on community activities have limited people's mobility. Digital marketing can help MSMEs to market their products in these conditions. The purpose of this study was to find out how digital marketing practices in MSMEs in East Java. This research is descriptive-qualitative research. Data were obtained from interviews with MSME owners and literature studies. The results of the study show that most MSME actors have implemented digital marketing in their business. Most MSMEs use social media to introduce their business to the wider community. However, there are still a few MSMEs that use the marketplace for their business.

### 1 INTRODUCTION

The Coronavirus Disease-19 (Covid-19) pandemic has impacted various sectors in Indonesia, not only the health sector but also the economy sector. East Java is listed as one of the highest provinces in the case of the spread of Covid-19 virus. According to covid 19 data in September 2021, the accumulation of confirmed cases of covid-19 in East Java was 392.188 cases ([www.infocovid19.jatimprov.go.id](http://www.infocovid19.jatimprov.go.id)).

Due to this Covid-19 pandemic, the government issued the regulations restrictions on community activities during the Covid-19 pandemic along with physical distancing and work from home policies. This policy is accompanied by regulations on opening and closing hours of the shops and regulations on not being allowed to dine in. It makes people choose to stay at home and reduce community mobility.

Micro, Small and Medium Enterprises (MSMEs) are one of the economic sectors that have been affected by the Covid-19 pandemic. The Indonesian Institute of Sciences (LIPI) conducted a rapid assessment survey on the impact of the Covid-19 pandemic on the performance of Indonesian MSMEs. This survey aims to diagnose the impact of the pandemic on MSMEs survival and to identify strategies to restore MSMEs performance. Survey data shows that 94.69% of business experienced a decline in sales during the pandemic. Depending on the size of the business, sales decreased by over 75%, including 49.01% of ultra-micro companies, 43.3% of micro-enterprises, 40% of small enterprises and 45.83% of medium-sized enterprises ([lipi.go.id](http://lipi.go.id)).

Due to restrictions on community mobilization, MSMEs must think of various ways to continue their activities. One of the ways that can be taken by MSMEs is by utilizing the digital marketing. Digital marketing can help MSMEs to continue to market their products without having to meet

---

\*Corresponding Author: [ferby.edwy.fe@um.ac.id](mailto:ferby.edwy.fe@um.ac.id)



face-to-face with customers. Customers can also access MSMEs products anywhere and anytime as long as they are connected with internet. By utilizing the digital marketing, MSMEs can reach a wider range of customer. This is in line with the argument by (Trulline 2021) that in this Covid-19 pandemic situation, people will refrain from spending their money because they are mostly at home. This certainly has a major impact on the daily turnover obtained by the MSMEs sector. Therefore, the existence of social media and e-commerce as part of digital marketing will greatly help MSMEs actors to survive during the current pandemic.

In addition, one of the impacts of this pandemic is the acceleration of digital use in meeting consumption needs, production activities, and investment transactions. Thus, the use of digital platform can encourage stronger Micro, Small and Medium Enterprises (MSMEs) through capacity building that is more productive and innovative, facilitating the expansion of MSMEs access. Digitizing MSMEs will encourage MSMEs to be more advanced and able to be competitive in the new normal era after the Covid-19 pandemic (Bank of Indonesia 2021).

As one of the important pillars of the national economic sector, the thing that can be done to encourage MSMEs to develop is by digitalizing marketing (Kharisma & Nurkomalasari 2021). Therefore, digital marketing is an important thing that must be considered by MSMEs in order to survive in this pandemic condition. However, MSMEs have not maximized digital marketing. (Himawan 2019) explained that the use of digital channels is important for brands, and must be followed by MSMEs in order to remain competitive and grow (Arifen et al. 2019) explained one of the factors that caused the distribution of MSMEs products to be less widespread because it was still not optimally the online marketing. In addition, several research results also show the obstacles faced by MSMEs, (Trulline 2021) showed that although the role of MSMEs in the national economy is very good, they still experience various obstacles such as marketing and mastery of technology. (Bismala 2016) explained that so far the quality of human resources working in MSMEs is generally still very low, this is indicated by the low quality of products, limited ability to develop new products, slow application of technology, and weak business management. (Santoso 2020) explained that some MSMEs actors have not used digital marketing tools because they have not been able to use the internet properly. In addition, there are their limitations in terms of infrastructure which is still not or even unfit for internet service access.

Based on this explanation, this study aims to determine the implementation of digital marketing in MSMEs. This study is important to do, considering that MSMEs are one of the arteries of the Indonesian economy. As well as MSMEs having a big role in the economy and employment, it is very important for MSMEs to be able to survive in these conditions. The result of this study is expected to increase knowledge about the implementation of digital marketing in MSMEs.

## 2 LITERATURE REVIEW

### 2.1 *Digital marketing*

Marketing is a management and process that enables individuals or groups to get what they need and want through creating, offering and exchanging products of value with others, or any activity related to delivering products or services from producer to consumer (Shinta 2011). Digital marketing is an effort to promote a brand by using digital media that can reach consumers in a timely, personal and relevant manner (Pranoto et al. 2019).

According to (Sulaksono 2020), digital marketing is an advertising activity and market search through digital media on the internet using various media such as social media. Digital marketing consists of interactive and integrated marketing that facilitates interaction between producers, market intermediaries and potential customers. On the one hand, digital marketing allows companies to easily track and satisfy all the needs and wants of potential consumers, and potential consumers can

also search and obtain information about products simply by browsing cyberspace, thus simplifying the search process.

Digital marketing is a new approach to marketing, and not just traditional marketing based on digital elements. Digital marketing has its own characteristics and dynamics, which need to be understood in order to be able to choose effective marketing tactics and strategies (Himawan 2019).

## 2.2 *Micro Small and Medium Enterprise (MSMEs)*

There are various kinds of businesses in Indonesia, one of which is Micro, Small and Medium Enterprises (MSMEs). MSMEs provide a substantial contribution to employment and incomes in Indonesia. the importance of MSMEs can also overcome economic and social problems such as eradicating poverty, reducing unemployment, and reducing crime rates and income distribution (Moussa 2008). Based on Law No. 20 (2008) concerning MSMEs, the definition of MSMEs is as follows:

- a. Micro enterprises are productive businesses owned by individuals or individual business entities that meet the criteria as micro enterprises as stipulated in Law.
- b. Small business is a productive economic business that stands alone owned by individuals or business entities that are not subsidiaries or branches of companies that are controlled or become a part either directly or indirectly of a medium or large business that meets the criteria of a small business as stipulated in Law.

Micro, Small and Medium Enterprises (MSMEs) play a supportive role in Indonesia's economic growth, which acts as economic turnaround. The development of the MSMEs sector emphasizes efforts to promote economic growth and reduce poverty in the country. The growth and development of the MSMEs sector is often seen as an indicator of development success, especially in low-income countries (Sianturi 2020).

## 3 METHODS

This research is a descriptive qualitative research. This study uses a case study that was carried out on MSMEs in East Java with the consideration that East Java is one of the provinces with the highest accumulation of Covid-19 cases and includes provinces that implement policies to limit community activities, so that it has an impact on MSMEs activities. And also, MSMEs in East Java have successfully developed their business and have biggest contributions on GDRP of East Java.

The data on this research was collected through interviews with MSMEs owners and literature studies. After conducting the interviews, then data were analyzed using the model by Miles & Huberman (1994), the first step is to collect and select the data needed in this study, then the data is presented and the last step is the researcher concludes the results of the analysis to be the final result of the study.

Data verification used triangulation techniques to maximize qualitative data processing. In this research, the source triangulation method was used, where the researcher compared the answers to the same question from an informant with other informants.

## 4 RESULTS AND DISCUSSION

### 4.1 *Implementation of digital marketing in MSMEs*

Based on the research results, the informants of this research were MSMEs from various regions in East Java and various business sectors. The following is a summary to illustrate the research findings:

Table 1. Informant data.

Name	City/County	Business Type
U1	Banyuwangi	Batik Crafts
U2	Banyuwangi	Fashion
U3	Banyuwangi	Culinary
U4	Banyuwangi	Retail
U5	Banyuwangi	Retail
U6	Banyuwangi	Services
U7	Blitar	Printing, Stationery Retail
U8	Blitar	Culinary
U9	Blitar	Services
U10	Blitar	Services
U11	Kediri	Weaving Crafts
U12	Kediri	Culinary (pastries)
U13	Kediri	Culinary
U14	Malang	Retail
U15	Malang	Printing
U16	Malang	Printing
U17	Lamongan	Culinary
U18	Lamongan	Culinary (wingko)
U19	Lamongan	Crafts (folding mat)
U20	Lamongan	Services
U21	Lamongan	Culinary
U22	Mojokerto	Services
U23	Mojokerto	Retail
U24	Surabaya	Services
U25	Surabaya	Services (decoration)
U26	Trenggalek	Bamboo Crafts
U27	Trenggalek	Batik Crafts
U28	Trenggalek	Services
U29	Trenggalek	Furniture Industry
U30	Batu	Culinary
U31	Batu	Crafts
U32	Batu	Printing, Stationery Retail
U33	Tulungagung	Culinary (snacks)
U34	Tulungagung	Natural Stone Industry
U35	Tulungagung	Wood Processing Industry
U36	Tulungagung	Services

Source: (Processed Data, 2021)

As shown in the table, the most common types of business are culinary and services. Then followed by the craft industry.

Based on the results of the research that has been carried out on MSMEs in East Java, it can be concluded several things, namely:

MSMEs in **Banyuwangi**, the majority of informants have used social media for digital marketing. Even one of our informants have used marketplaces such as Shopee and Tokopedia. However, one of the informants, has not implementing digital marketing. They don't use social media or marketplace for their business. They still rely on word-of-mouth promotion.

*"Promotion using social media and marketplaces such as Shopee and Tokopedia as well as possible. Then also provide promo packages and discounts"* (Informant U2).

*"...We do not use social media to promote products. The promotion strategy uses relationships, maintaining product quality and customer satisfaction. So that satisfied customers will automatically promote our services"* (Informant U6).

The majority of MSMEs in **Blitar** have used digital marketing, and some have even used delivery applications such as Gojek. However, there are still MSMEs that have not used digital marketing. One of the informants felt that the location of her business was in a strategic position, so she did not need promotion.

*"...I did not do promotions because I opened a business in front of the school and was on the highway. This is a good opportunity to introduce my business" (Informant U9).*

The place of business is indeed one aspect of the marketing mix, but in this Covid-19 pandemic, it is a different matter. Many people do not leave their houses. We tried to dig deeper and the MSMEs owner says that:

*"...in this Covid-19 pandemic situation, schools were closed so not a lot of customers who come" (Informant U9).*

From the explanation above, it can be seen that this Covid-19 pandemic is affecting the sales of these MSMEs. Unfortunately, they have not taken advantage of digital marketing. Even though digital marketing can be one solution for this problem. This is in line with arguments by (Himawan 2019) that digital marketing provides opportunities for MSMEs to attract new customers and reach existing customers more efficiently.

Further to the **Kediri**, overall informants already utilize social media for digital marketing. One of the informants also uses food delivery application such as Gofood by Gojek.

*"...for Whatsapp, my targets are people around me and my customers. As for the use of Facebook, I think almost all ages are there, so my target is all circles. And for Instagram, my target is young people" (Informant U13).*

*"So far, it's still through social media such as Facebook, Instagram, Whatsapp and we usually participate in bazaars, besides that by wearing our products which many people might see and they will feel attracted to our product" (Informant U11).*

The majority of MSMEs in **Malang** have also implemented digital marketing. Malang is a city filled with many students, by using digital marketing, it can reach customers from the younger generation who are active on social media. But one of the informants has not implemented digital marketing in their business. The promotion method that they do is to put a banner in front of the store, wait for customers to come and provide friendly services.

*"So far, I have not used social media. Promotions are carried out directly, such as placing banners in front of the store and providing friendly service" (Informant U16).*

Next, we summarize the results of interviews from informants in **Trenggalek**, half of the informants have implemented digital marketing. However, the other half do not apply digital marketing and rely on word-of-mouth promotion. MSMEs have difficulty adapting digital marketing due to the lack of competent human resources to do so.

*"We participated in exhibitions in Surabaya and Jakarta. Provide training outside Trenggalek and join associations of batik in East Java and Indonesia. We have tried promotion through Instagram and TikTok, but it did not work because the content creators did not do their job and the content on TikTok wasn't professional" (Informant U27).*

The business undertaken by the informants in **Lamongan** is mostly in the culinary sector. This is also in line with the implementation of digital marketing for MSMEs in Lamongan, all of informants have used digital marketing such as social media and food delivery applications. The food delivery application that used by MSMEs in Lamongan is more diverse, such as Gojek, Grab and Cak Ed. Cak Ed is a delivery service that available in Lamongan.

*"We also collaborated with delivery service provider applications such as Gojek and Cak Ed" (Informant U17).*

*"Marketing is done offline and online via Whatsapp and Instagram" (Informant U18).*

MSMEs in **Mojokerto** have implemented both direct marketing and digital marketing. Direct marketing carried out by one of the MSMEs are word of mouth promotion, placing banners in front of the store and giving bonuses for certain purchases.

*“Promotion by word of mouth and through social media such as Facebook, Instagram and Whatsapp. At the grand opening of the store, we offer our products at sub-standard prices”* (Informant U23).

Informants in **Surabaya** have also implemented digital marketing and used marketplaces such as Shopee and Tokopedia for business promotion. Even one of the informants already has a website to support the implementation of digital marketing.

*“Online promotions are carried out directly by MSME owners through Tokopedia, Whatsapp and the website”* (Informant U24).

MSMEs in **Batu** and **Tulungagung** have also implemented digital marketing in their business. Batu is known as a tourism city, by utilizing digital marketing, MSMEs can reach tourists from outside the city.

*“Promotions are usually through Whatsapp groups, Instagram and word of mouth”* (Informant U30).

*“Product introduction through Whatsapp and Facebook because the target market is adults and the majority of them are active on Facebook”* (Informant U34).

The following is an overview of the types of digital marketing that used by MSMEs actors in East Java:

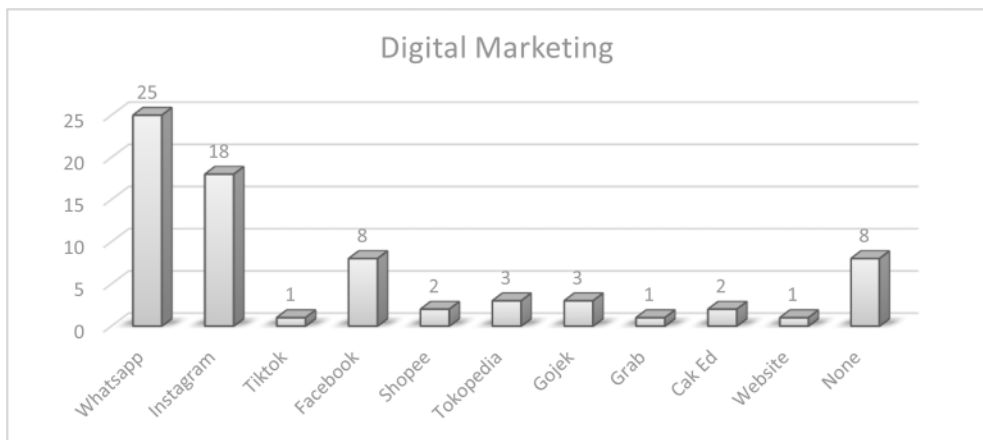


Figure 1. Types of digital marketing.

From the explanation and diagram above, it can be seen that the majority of MSMEs in East Java have implemented digital marketing. The most widely used type of marketing is WhatsApp and followed by Instagram. As shown in the diagram, there are many MSMEs owners who use social media for digital marketing but only a few use the marketplaces and only one MSMEs that has a website. This is because it takes a lot of money to manage a website.

After finding out about the use of digital marketing, we try to look for information more on any obstacles experienced by MSMEs during the Covid-19 pandemic and constraints in product promotion. The informants said that:

*The obstacle that I experienced was when I marketed the product, I couldn't reach the outlets outside the city*  
*...my business is still new and not well known to the public*  
*...the Covid-19 has caused a reduction in market share, which is usually students*  
*...the obstacle I experienced during marketing was limited capital and technology*

From the explanation above, it can be seen that some MSMEs are constrained in expanding their market as well as limited capital and technology in conducting promotions. By making the most of digital marketing, they can reach more costumers. The use of marketplaces can also be a solution for MSMEs, besides the costs required are not as big as website management. This is in line with the

argument put forward by (Pradiani 2018) that digital marketing is one of the marketing media that has a great influence and is in demand by the public. By utilizing digital marketing strategies and the media used can reach the target market and be increasingly known by the public. In addition, digital marketing can also increase profit and sales volume.

Currently there are many types of marketplaces available, the marketplace also has various promotions, MSMEs can take advantage of the promotions provided by marketplaces to promote their products. Shopee, one of the marketplaces, provides free shipping promotions for customers. This can be utilized by MSMEs to expand the reach of customers outside the region. Customers who want to buy MSMEs products do not need to pay for expensive shipping costs.

#### *4.2 Benefits of digital marketing for MSMEs*

In the midst of technological developments and digitalization of the economy, of course MSMEs must be able to adapt to existing changes. Marketing is not only done through word of mouth but can be done remotely and connected to each other via the internet. Pradiani (2018) stated that by utilizing digital marketing, communication and sales transactions can be done at any time and can be done globally. Social media users are increasing day by day, this is an opportunity for MSMEs to develop their market. Akhmad (2015) said that more and more people are using the internet and it's cheap and easy access, MSMEs required to make changes to increase competitiveness in order to survive and thrive.

Marketing is a major obstacle in developing small businesses. Small business will be unable to compete with large businesses that already have an extensive marketing network. Especially if small business is still using the conventional marketing systems. This obstacle can be overcome by utilizing digital marketing so that small businesses can improve their business at a lower cost (Situmorang et al. 2018). This is in line with research conducted by (Adrian & Mulyandi 2021) that marketing through social media has an important impact on brand awareness of MSMEs.

(Rizaldi & Putranto 2018) said that the utilization of digital marketing can support marketing and increase the selling value of a product or business. Research conducted by (Cleo & Sopiah 2021) found that social media activities have significant influence on purchase intention and brand awareness acts as a mediating factor of attraction in this relationship.

(Pranoto et al. 2019) said that one of the benefits of digital marketing is the savings in promotional costs. Promotion using the internet is cheaper than using conventional methods such as brochures, advertisement on radio or television and so on. (Susilowati 2021) said that by utilizing digital marketing, MSMEs can upload photos and descriptions of products, then include the procedures for ordering in marketplaces and social media. In this way, MSMEs can decrease the advertising and promotion cost. Various of social media platforms have also been equipped with "live" features so that they can help MSMEs in promoting their products in real time.

Digital marketing is a two-way communication that can lead to involvement of the public and awareness of a product. This allows customers to get overall information about a product and buying-selling transactions via the internet. Sellers can also observe customer needs and then provide the needs and wants of potential buyers without geographical or time restrictions (Sulaksono 2020).

Digital marketing allows MSMEs to earn income that is difficult to obtain in conventional ways. Business actors can serve many buyers at the same time with digital marketing through the internet. Customers can also directly choose products and complete the payment process without queuing or waiting to be served (Akhmad 2015).

Customers are an important aspect of the success of a business. Therefore, it is very important for MSMEs to build a good relationship with customers. Digital marketing can be a link for consumers and MSMEs. This is because the media used in digital marketing allows conversations to occur through cyberspace, so that the boundaries of space and time become smaller, and the intimacy between customers and sellers can be established more easily.

Research conducted by Handajani et al. (2019) states that there are several benefits of digital marketing for MSMEs, namely: a) expanding market share because it can be connected online easily, b) increasing the number of customers and product enthusiasts, c) being able to serve

customers in real time, d) savings in marketing costs, e) increased profits and f) can reduce the risk of products being stored too long so that it can also accelerate capital turnover.

## 5 CONCLUSIONS

Based on the results of the research that has been done, we can conclude that MSMEs actors in East Java have implemented digital marketing in their business but have not maximized its use. Social media is a type of digital marketing that is widely used by MSMEs. However, the use of the marketplace is still very little.

Whereas the marketplaces can help MSMEs in promoting and selling their products. MSMEs are expected to maximize the use of the marketplace and delivery application as a media for promoting and selling their products. Marketplace provides a place for business actors to market their products, as it is known that business actors can sell various kinds of products in the marketplace. This can be a solution for MSMEs to continue to carry out their business activities during restrictions on community mobility related to the Covid-19 pandemic. For this reason, it is recommended for MSMEs actors to learn more about the features that available in digital marketing and maximize their use. For academics and the government, it is suggested that they can dig deeper into digital marketing and provide education to MSMEs actors so that they can take full advantage of digital marketing. The limitation of this research is that is still in the stage pf exploration and the sample is still small, it is hoped that further research can be perfected.

## REFERENCES

- Adrian, D., & Mulyandi, M. R. 2021. Manfaat pemasaran media sosial pada pembentukan brand awareness toko online. *Jurnal Indonesia Sosial Sains*, 2(2), 215–222. <https://jiss.publikasiindonesia.id/index.php/jiss/article/view/195/329>
- Akhmad, K. A. 2015. Pemanfaatan media sosial bagi pengembangan pemasaran umkm (studi deskriptif kualitatif pada distro di kota surakarta). *DutaCom Journal*.
- Arifen, S. R., Purwanti, V. D., Suci, D. A., Agustian, R. H., & Sudrajat, A. R. 2019. Analisis Strategi pemasaran untuk meningkatkan daya saing UMKM. *Tantangan Administrasi Dalam Mewujudkan SDGs Di Era Revolusi Industri 4.0*, 309. <https://drive.google.com/file/d/1nPwB872XlnYxZGfBQ94WVUhP6k8yoDSz/view>
- Bank of Indonesia. 2021. *Indonesia Economic Report 2020 “Synergy to Build Optimism for Economic Recovery.”* 74. [https://www.bi.go.id/id/publikasi/laporan-tahunan/perekonomian/Documents/9\\_LPI2020.pdf](https://www.bi.go.id/id/publikasi/laporan-tahunan/perekonomian/Documents/9_LPI2020.pdf)
- Bismala, L. 2016. Model manajemen usaha mikro kecil dan menengah (umkm) untuk meningkatkan efektivitas usaha kecil menengah. *Jurnal Enterpreuner dan Entrepreneurship*.
- Cleo, & Sopiah. 2021. The influence of social media marketing activities on purchase intention through brand awareness. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v5i8.9361>
- Handajani, L., Akram, Furkan, L. M., & Rifa'i, A. 2019. Penggunaan pemasaran digital pada usaha home industry kopi lombok di desa sigerongan kabupaten lombok barat. *Abdi Insani*. <https://doi.org/10.29303/abdiinsani.v6i3.267>
- Himawan, A. F. I. 2019. Digital marketing: Peningkatan kapasitas dan brand awareness usaha kecil menengah. *Jurnal Analisis Bisnis Ekonomi*.
- Kharisma, D., & Nurkomalasari, N. 2021. Penerapan strategi bauran pemasaran di umkm katering di Semarang Barat. *Jurnal Gema Wisata*, 17(2), 994–998.
- Lipi.go.id. (n.d.). *lipi.go.id*. Retrieved September 18, 2021, from <http://lipi.go.id/berita/survei-kinerja-umkm-di-masa-pandemi-covid19/22071>
- Miles, M. & Huberman, A. 1994. *An expanded sourcebook: Qualitative data analysis (2nd Edition)*. In Sage Publications.
- Moussa, I. 2008. Pencatatan keuangan menurut pemahaman pelaku usaha mikro kecil dan menengah(umkm) di Surabaya. *Accounting Analysis Journal*.
- Pradiani, T. 2018. Pengaruh sistem pemasaran digital marketing terhadap peningkatan volume penjualan hasil industri rumahN. *Jurnal Ilmiah Bisnis dan Ekonomi Asia*. <https://doi.org/10.32812/jibeka.v11i2.45>

- Pranoto, P., Jasmani, J., & Marayasa, I. N. 2019. Pelatihan digital marketing untuk peningkatan perekonomian anggota karang taruna al barkah di kampung cicayur - tangerang. *Jurnal Pengabdian Dharma Laksana*. <https://doi.org/10.32493/j.pdl.v1i2.2425>
- RI, U.-U. 2008. *Undang-Undang Nomor 20 Tahun 2008 Tentang Usaha Mikro, Kecil, dan Menengah*.
- Rizaldi, T., & Putranto, H. A. 2018. Penerapan digital marketing sebagai strategi marketing dan branding pada UMKM. *Prosiding*.
- Santoso, R. 2020. Review of Digital marketing & business sustainability of e-commerce during pandemic covid19 in Indonesia. *Jurnal Ilmu Ekonomi Terapan*.
- Shinta, A. 2011. *Manajemen pemasaran*. In Universitas Brawijaya Press (UB Press).
- Sianturi, R. D. 2020. Manajemen pemasaran menggunakan analisis swot pada umkm guna meningkatkan daya saing UMKM. *Journal of Business and Economics Research*.
- Situmorang, S. H., Mulyono, H., & Berampu, L. T. 2018. Peran dan manfaat sosial media marketing bagi usaha kecil. *AJEFB - Asian Journal of Entrepreneurship and Family Business*.
- Sulaksono, J. 2020. Peranan digital marketing bagi usaha mikro, kecil, dan menengah (UMKM) Desa Tales Kabupaten Kediri. *Generation Journal*. <https://doi.org/10.29407/gj.v4i1.13906>
- Susilowati, I. H. 2021. Bauran pemasaran UMKM sektor kuliner Kota Bogor di masa pandemi covid 19. *Jurnal Pemasaran Kompetitif*. <https://doi.org/10.32493/jpkpk.v4i3.9416>
- Trulline, P. 2021. Pemasaran produk UMKM melalui media sosial dan e-commerce. *Jurnal Manajemen Komunikasi*. <https://doi.org/10.24198/jmk.v5i2.32746>
- [www.infocovid19.jatimprov.go.id](http://www.infocovid19.jatimprov.go.id). (n.d.). [www.infocovid19.jatimprov.go.id](http://www.infocovid19.jatimprov.go.id).



## State universities' legal entities toward good governance and public trust

G. Irianto\*, K. Shaleh & L.R. Rajafi

*Brawijaya University, Malang, East Java, Indonesia*

**ABSTRACT:** The transformation of public universities into legal entities is hope; the quality of education can improve. The change in status to a legal entity makes the public interest to public universities increasing. This situation makes universities implement good university governance. In line with this explanation, this study seeks to examine the readiness of public universities to transform into legal entities and their strategic role in improving the quality of education through the application of good governance. Research methodology uses a qualitative approach of interpretive type. The study used primary data obtained from in-depth interviews and secondary data derived from the higher education database. This study found that good university governance in public universities legal entities successfully improved the quality of education. There are several public universities of legal entities included in the world ranking; meaning the achievement of educational indicators has met the qualifications of international standards.

### 1 INTRODUCTION

Education is one of the keys to a country's future growth. Recognizing the sector's importance, the government continues to improve the quality of primary as well as higher education. Modernizing infrastructure and educational facilities, improving the quality of educators, and ranking based on educational quality standards are efforts to improve the quality of inputs to produce output quality. Investment in education is expected to bring change in the future of the country. Therefore, the constitution guarantees for every citizen to get educational opportunities. Steps to improve the quality of human resources by increasing the number of school numbers while reducing the potential number of dropouts.

In addition to the health sector, the education sector is a basic need to become priorities in the public budget. The allocation of the education sector budget is a constitutional mandate and investment in human resources. The fundamental law in Indonesia sets the education sector budget at least 20% of the total state budget. Public budget allocation needs good governance to produce educational quality outcomes. Public universities are the institutions under the government that use the allocation of public budgets of the education sector.

Higher education is the last formal institution that produces skilled human resources after primary and secondary education. In Indonesia, education statistics in 2020 ([www.pddikti.kemdikbud.go.id](http://www.pddikti.kemdikbud.go.id)) recorded 122 public universities and 3,403 private universities. In the same year, the number of students enrolled in public universities was as many as 2,994,015 students, and 4,374,994 students were enrolled in private colleges. Although the number of public universities is fewer than the number of private universities, the ratio of student capacity at public universities is much higher than private colleges. This situation shows that public universities have a strategic role in improving the quality of national education. In addition, universities can also deliver the quality of national education to the level of international standards.

---

\*Corresponding Author: [gugusir@ub.ac.id](mailto:gugusir@ub.ac.id)

Government policy emphasizes that public universities can transform institutional status into legal entity universities to improve the quality of international education. Currently, public universities have held the status of legal entities, as many as 12 universities in Indonesia ([www.kompas.com](http://www.kompas.com)). Public universities have already incorporated fewer than the total number of public universities in Indonesia. In other words, most public universities are still working units (Satker) and Public Service Agency (BLU). Therefore, the government encourages public universities to prepare themselves to transform into legal entity institutions. Aspects that need attention before heading to public universities legal entities are how to prepare for the implementation of good university governance to accommodate stakeholder expectations.

## 2 LITERATURE REVIEW

Long before good governance was discussed in the public sector, the private sector had already started first. The concept of good governance begins when the private sector that realizes the importance of considering the efficiency, effectiveness, and economic aspects of an organization's operations. This awareness arises amid the increasingly fast pace competition so that every organizational activity is reviewed, taking into account the three indicators. The concept of good governance guides organizational management schemes by implementing sound organizational governance to achieve efficiency, effectiveness, and economics.

Following practices in private sector organizations, other sectors such as public organizations, follow a similar lead. Good governance that has been applied in the operations of private sector organizations is adopted by public institutions. The private version of good governance is adapted to be in harmony with the characteristics of public sector organizations. When good governance is applied to the public sector, the terminology used changes to good government governance. The beginning of the public sector recognized the concept of good governance, which was also the beginning of the era of new public management.

### 2.1 *Governance and public trust*

In routine activities, stakeholders with diverse backgrounds and interests are united by public policies. Everyone must comply and carry out the provisions to achieve the public interest. Order in public life can be obtained if each party accepts the public's provisions. Nevertheless, on the other hand, people's desire to carry out policies consistently needs to be preceded by creating public confidence. Accountability is part of good governance and is a bridge to public trust (Bird 2013). Good governance practices can lead public organizations to gain public trust (Grimmelikhuijsen & Klijn 2015).

Accountability becomes a tool of control for organizations to achieve shared goals. In addition, accountability is used as a measuring tool to assess the level of achievement of public institutions. Pragmatically, accountability is closely related to openness or transparency. Public performance reports as a form of accountability are public information that stakeholders can access. The openness of information can increase public confidence in public institutions.

In a democratic system, public accountability is a significant part of the modern bureaucratic governance system (Mark 2005). The democratic system is characterized by public participation, both in the supervision and assessment of public institutions. Public policies and decisions, public spending, and public activities are managed in an accountable manner and openly presented to the public as a form of modern democratic governance. The application of accountability to public institutions is an essential part of democratically run public management.

### 2.2 *Governance at state universities*

The basic principles of good governance are accountability and transparency. Accountability is necessary because of its ability to measure the level of performance achieved in public organizations.

Accountability pragmatically goes hand in hand with transparency in providing assessments of public institutions. Public institutions can gain public trust through implementing good governance.

Pragmatically, accountability is one of the crucial issues in public sector organizations. In addition to the practice of public administration, accountability becomes an essential issue in scientific studies (Goedegebuure & Hayden 2007). The public pays excellent attention to the issue of accountability as a consequence of tax contributions or other official deposits given by the public to public institutions (Wicaksono 2015). Therefore, it is reasonable for the public to demand that public institutions be managed transparent and accountable.

Likewise, in college institutions, as a form of public sector organizations, organizers must implement good university governance. Accountability as a form of good governance is expected to bring the quality of education to be better. Implementation of accountability in universities can have a positive impact, although, in other dimensions, there are still limitations (Kai 2009).

Public higher education is an institution under government control, which means it is bound by hierarchical rules and not yet autonomy. In recent years, the government has encouraged public universities to prepare themselves to become institutions with broader autonomy or, in other words, break away from government control. Public universities with the status of independent legal entities aim to cut the bureaucratic flow of administration to become autonomous and more efficient institutions. With the impact of the change in status, public universities must organize the organization in an accountable and transparent manner. Institutions of higher education managed in an accountable and transparent manner is a strategy of public organization management to gain public trust (Leveille 2006; Zhao 2015).

Accountable universities mean that the organizer can provide answers to interested parties' management of education, both academic and non-academic. Accountability is the ability of a public organization to explain the actions it takes for parties in the political system that have the authority to conduct assessments and evaluations (Starling 2008; 169).

### 2.3 *Autonomy of state universities*

In Indonesia, higher education is managed by the central government and private foundations. Public universities have three forms: work units, public service agencies (BLU), and legal entities. Public universities are a form of the work unit entirely within the bureaucracy of the ministry of education. Public universities with the form of Public Service Agency (BLU) have semi-autonomous status, especially in financial management. Finally, public universities are separate educational institutions from the ministry of education. Public universities have a standalone legal status or autonomy. Public universities are legal entities managed separately from the government, although ownership is still by the government. Some previous research explained that the change of public universities into legal entities is an attempt to privatize education (Azra 2008; Daulay 2014; Lee 2008).

## 3 METHODS

This research uses a qualitative descriptive approach, a research method that seeks to present an overview of objective reality that occurs under certain conditions (Patton 2014). This research is naturalistic, aimed at understanding a reality naturally. To obtain a realistic picture of the situation, researchers make observations directly on the research site. Researchers use information obtained from depth interviews to enrich information from field observations. Interview techniques in qualitative research are unstructured so that the questions presented develop dynamically following an increase in flow of information. The informants involved in this study consist, listed in table 1:

Textual documents, otherwise known as secondary data, can be a resource in qualitative research (Ulrich 2020). Likewise, this study used textual documents to complete the source of observation and interview data. Textual documents include the Government Performance Accountability Report, higher education regulations, and internal policies of public universities.

Table 1. List of informants.

No	Informant	Position
1	Informant 1	Team for the Establishment of State Universities legal entities of Brawijaya University
2	Informant 2	Government Performance Accountability Report (LAKIP)

### 3.1 Data analysis

In qualitative research, triangulation is used to test the validity of data (Golafshani 2015). Previous researchers emphasized the need for data validity in qualitative research (Dikko 2016; Hayashi et al. 2019). Unlike quantitative research, the validity of data in qualitative research is contextual and has generalization limitations (Winter 2000). Observational data, scripts, and textual documents are qualitative data that require triangulation tests.

One of the qualitative procedures before conducting data analysis is to test the validity of the data. The next step is the analysis of interview transcript data, field records (observations), and sources of textual documents. In some cases, data analysis is carried out in stages, line by line (Bradley et al. 2007). According to Chenail (2012), qualitative data analysis is not limited to reading qualitative data line by line or word for word. However, researchers are trying to find the meaning element of the available data.

## 4 RESULTS AND DISCUSSION

### 4.1 Indonesian—Overview of state universities of legal entities (PTNBH)

Education statistics in 2020 ([www.pddikti.kemdikbud.go.id](http://www.pddikti.kemdikbud.go.id)) showed the number of public universities as many as 122 (2.66%) and private universities as many as 3,044 (66.27%). According to statistics, active students enrolled in public universities amounted to 2,994,015 (35,293%) and enrolled in private colleges as many as 4,374,994 (51,572%). In terms of educational quality, the top ten universities have study programs with the most A accreditation.

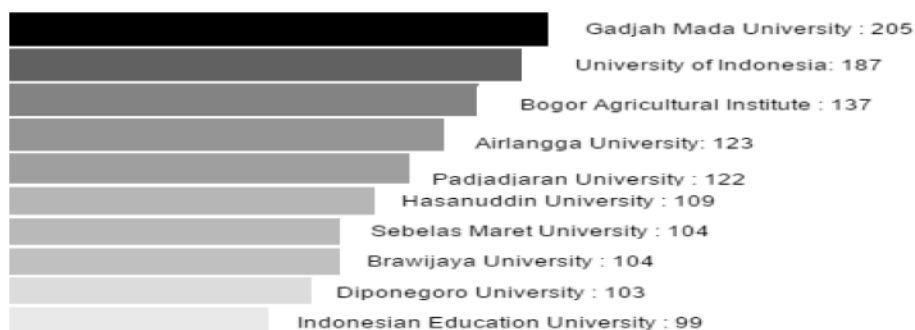


Figure 1. Ten colleges with the most “A” accredited study programs. [www.pddikti.kemdikbud.go.id](http://www.pddikti.kemdikbud.go.id).

Regulation of Law No. 12 of 2012 on Higher Education establishes three forms of college management status. Work Unit (Satker), Public Service Agency (BLU), and finally in the form of legal entities from public universities stipulated following the provisions of the regulations. These three forms, the status of PTN-BH, have broader autonomy authority, both from academic and non-academic aspects.

State universities legal entities manage their internal needs independently. In contrast to public universities with Work Units (Satker) and Public Service Agencies (BLU), public universities' legal entities have autonomy. Nevertheless, state universities are still under the supervision of the Ministry of Education because it is still part of the country's wealth, which is separated.

The organizers of state universities' legal entities are accountable for the performance of the Board of Trustees (Majelis Wali Amanat). The Board of Trustees is the highest forum in public universities of legal entities. The membership of the Board of Trustees consists of elements of the government, college managers, students, and the community. Community participation oversees the process of managing legal entity universities represented through the Board of Trustees.

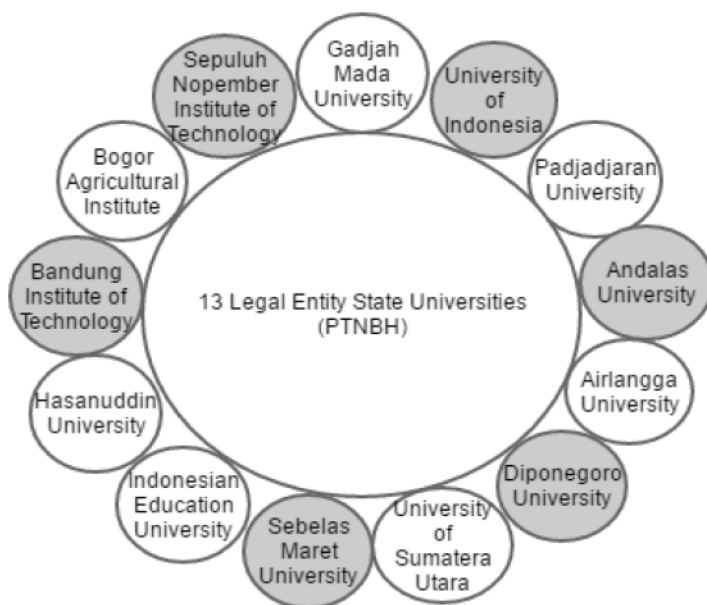


Figure 2. List of state universities of legal entities.

#### 4.2 *Good governance of state universities legal entities*

The autonomy of higher education of legal entities increases the composition of the public interest. Processing academic and non-academic activities independently for public universities requires a balance of public monitoring. Accountability implemented transparently can encourage public participation in monitoring the quality of performance of higher education institutions. Accountability of college performance becomes a bridge between the public interest and public college institutions' legal entities. Mark (2005) views that accountability serves as a social relationship between public institutions and stakeholders in this context.

#### 4.3 *Legal entity state universities: Financial management*

The fundamental difference between state universities with other public universities is in the pattern of financial management. The wealth of the country that is separate from the government makes the pattern of financial management at public universities legal entities different from others. The planning stage to financial accountability is entirely carried out autonomously by legal entity educational institutions. Nevertheless, self-financial management began to be also applied to Public Service Agency (BLU) universities waiting for a change in status to a legal entity. Members of the

preparatory team for the establishment of a State University of Legal Entities, the field of finance said,

*There are several elements of financial management patterns that have followed the State Universities of Legal Entities even though public universities are still public service agencies (BLU).*

#### 4.4 Efforts by state universities to increase public trust

The participation of the community involved in supervising the management process of a legal entity tertiary institution is part of an effort to increase public trust. The Board of Trustees, which includes elements of the government, university administrators, students, and the community, has a role in carrying out the supervisory function of legal entities. Community representatives in the Board of Trustees can be a medium for community participation in supervising the management of legal entity universities.

#### 4.5 Recommendation

The Good Governance system at state tertiary institutions with legal entities can improve performance well if it involves all levels in the bureaucratic environment. Full support and assurance from the highest leadership of the university is the primary indicator of the success of implementing good governance. The role of the community in supervising can be interpreted as an encouragement for legal entity university administrators to improve the performance of good university governance continuously.

## 5 CONCLUSION

Accountability is a bridge for public universities to gain public trust. Good university governance, which is realized in the form of accountability, opens opportunities for the public to provide educational performance assessments organized by public universities' legal entities. Public participation in higher education institutions can encourage better educational performance. The quality of education becomes a shared responsibility to encourage education organizers to implement good university governance.

## REFERENCES

- Azra, A. 2008. Indonesian higher education: From public good to privatization. *Journal of Asian Public Policy*, 1(2), 139–147. <https://doi.org/10.1080/17516230802094411>
- Bird, S. J. 2013. Public trust and institutions of higher learning: Implications for professional responsibility. *c*, 25–39.
- Bradley, E. H., Curry, L. A., & Devers, K. J. 2007. Qualitative data analysis for health services research: Developing taxonomy, themes, and theory. *Health Services Research*, 42(4), 1758–1772. <https://doi.org/10.1111/j.1475-6773.2006.00684.x>
- Chenail, R. J. 2012. Conducting qualitative data analysis: Reading line-by-line but analyzing by meaningful qualitative units. *Qualitative Report*, 17(1), 266–269. <https://doi.org/10.46743/2160-3715/2012.1817>
- Daulay, N. K. 2014. Masalah dan tantangan privatisasi pendidikan tinggi. *Jurnal Tarbiyah*, 21(2), 354–374.
- Dikko, M. 2016. Establishing construct validity and reliability: Pilot testing of a qualitative interview for research in takaful (Islamic insurance). *Qualitative Report*, 21(3), 521–528. <https://doi.org/10.46743/2160-3715/2016.2243>
- Goedegebuure, L., & Hayden, M. 2007. Overview: governance in higher education—concepts and issues. *Higher Education Research and Development*, 26(1), 1–11. <https://doi.org/10.1080/07294360601166778>
- Golafshani, N. 2015. Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4), 597–606. <https://doi.org/10.46743/2160-3715/2003.1870>
- Grimmelikhuisen, S., & Klijn, A. 2015. The effects of judicial transparency on public trust: Evidence from a field experiment. *Public Administration*, 93(4), 995–1011. <https://doi.org/10.1111/padm.12149>

- Hayashi, P., Abib, G., & Hoppen, N. 2019. Validity in qualitative research: A processual approach. *Qualitative Report*, 24(1), 98–112. <https://doi.org/10.46743/2160-3715/2019.3443>
- Kai, J. 2009. A critical analysis of accountability in higher education: Its relevance to the evaluation of higher education. *Chinese Education and Society*, 42(2), 39–51. <https://doi.org/10.2753/CED1061-1932420204>
- Lee, M. N. N. 2008. Restructuring higher education: public-private partnership. *Journal of Asian Public Policy*, 1(2), 188–198. <https://doi.org/10.1080/17516230802094494>
- Leveille, D. E. 2006. Accountability in Higher Education: A public agenda for trust and cultural change. *Research & Occasional Paper Series, December*, 1–201. <http://escholarship.org/uc/item/38x683z5.pdf>
- Mark, B. 2005. Public accountability. In *The Oxford Handbook of Public Management* (p. 182).
- Patton, M. Q. 2014. *Qualitative research & evaluation methods: Integrating Theory & practice* (Fourth). Sage Publication Ltd.
- Starling, G. 2008. *Managing the public sector 8th edition*.
- Ulrich, T. A. 2020. Qualitative studies and textual document research in the United States: Researching national archives. *Qualitative Report*, 25(2), 359–378. <https://doi.org/10.46743/2160-3715/2020.4173>
- Wicaksono, K. W. 2015. Akuntabilitas Organisasi Sektor Publik. *JKAP (Jurnal Kebijakan Dan Administrasi Publik)*, 19(1), 17. <https://doi.org/10.22146/jkap.7523>
- Winter, G. 2000. A Comparative Discussion of the Notion of “validity” in qualitative and quantitative research. *The Qualitative Report*, 4(3), 1–14. <https://doi.org/10.46743/2160-3715/2000.2078>
- Zhao, D. 2015. Determinants of public trust in government: Empirical evidence from urban China. *International Review of Administrative Science*, 1954. <https://doi.org/10.1177/0020852315582136>  
<https://pddikti.kemdikbud.go.id/publikasi>  
<https://www.kompas.com/edu/read/2020/10/22/072623971/berikut-ulasan-singkat-tentang-ptn-bh-dan-jumlahnya?page=all>

## Public sector innovation and Indonesian civil servants: An insider's view

S.E.M. Sibarani\* & K. Pertiwi

*Postgraduate of Management Science, FEB, Universitas Indonesia, Indonesia*

**ABSTRACT:** Mainstream research on public sector innovation in Indonesia shows that innovation is a prerequisite for economic growth and development; however, is constrained by the limited capacity of human resources, namely the State Civil Apparatus (ASN). This study has the main objective: “To problematize the dominant perspective of ASN on public sector innovation in Indonesia.” The study uses an interpretive approach through in-depth interviews with 24 Indonesian civil servants. This study resulted in three themes: (1) Innovation has 1000 meanings, (2) innovation requires ASN’s engagement and care, and (3) innovation is a result of a combination of ASN agencies and the proper structural support. The main contribution is to enrich the literature review on public sector innovation with an exploratory approach toward innovation actors within the government from various institutions and to demonstrate the perspective of Indonesian ASN in understanding certain factors that have a stronger impact on innovative activities.

### 1 INTRODUCTION

Innovation is an issue since 2010 in Indonesia. The 20th anniversary of the Indonesian Academy of Sciences on January 20, 2010, is an important historical event. The commemoration has conveyed the vision of Indonesia as an innovative nation in the 21st century (Chabibah 2012). The Government of the Republic of Indonesia, through the Ministry of State Apparatus Utilization and Bureaucratic Reform, has made extraordinary acceleration and efforts (out of routine, business as usual, and monotonous) to create changes to new traditions, patterns, and ways through the One Agency One Innovation movement (Ministerial Decree of State Apparatus Utilization and Bureaucratic Reform 2021).

The Ministry of State Apparatus Utilization and Bureaucratic Reform has held a Public Service Innovation Competition since 2014. The Public Service Innovation Competition has collected 693 promising public service innovations in the Top 99 Public Service Innovations during the 2014–2020 period (Ministerial Decree of State Apparatus Utilization and Bureaucratic Reform 2021). Through these activities, we see an increase in interest and demand for innovation needs within the Government of the Republic of Indonesia. Each government agency competes to innovate and try to provide better public services. However, the innovation process in the public sector is more complex than in the private sector. It might be that innovations in the public sector usually affect the habits of civil servants or the nature of work and have a significant impact on society (Karlsson et al. 2020; Raipa & Giedraityte 2014).

The main challenges in innovation in the public sector are the lack of potential employee resources (Demircioglu & Audretsch 2017), lack of support from organizations (Cho & Song 2020), incentives for staff (Moussa et al. 2018; Xie et al. 2018), organizational culture (Moussa et al. 2018), and employee resistance (Shahbaz et al. 2019). These challenges are often disruptive and can reduce

---

\*Corresponding Author: [sondang.ervina@ui.ac.id](mailto:sondang.ervina@ui.ac.id)



opportunities for innovation (Mergel 2018) and even hinder the innovation process (Dery et al. 2017; Raipa & Giedraityte 2014).

Based on data from the Global Innovation Index (GII) in 2020, human resource innovation in Indonesia has not shown significant development. Indonesia has been in position 85 out of 131 countries for the past 3 years (Suryanto 2020). In 2020, Indonesia ranked 91st in innovation input, lower than 2019, and lower than 2018. As for innovation output, Indonesia ranks 76th. This position is also higher than in 2019 and lower than in 2018 (Global Innovation Index 2020).

**Rankings of Indonesia (2018–2020)**

	<b>GII</b>	<b>Innovation inputs</b>	<b>Innovation outputs</b>
<b>2020</b>	85	91	76
<b>2019</b>	85	87	78
<b>2018</b>	85	90	73

Figure 1. Ranking of Indonesia's economy by ability to innovate in 2018–2020.

Source: Global Innovation Index, 2020

Following up on this, the Government of the Republic of Indonesia has continued to strive in recent years to build a culture of innovation as a commitment to human resource development. Strengthening the capacity of the human resources of the apparatus is a part of building a culture of innovation in the bureaucratic environment (Suryanto 2020). Moreover, it aligns with the innovation policies carried out by governments worldwide for better public services (Pratama 2019).

The issue of innovation in the public sector has attracted the attention of several existing researchers (Arundel et al. 2019; Arundel & Huber 2013; Bloch & Bugge 2013; Gault 2018; Hijal-Moghrabi et al. 2020; Tate et al. 2018; Windrum 2008). Innovation research in the public sector is significant as public sector organizations are becoming more accountable to principals (i.e., citizens) and agents (i.e., managers) due to the forces of globalization and information technology (Demircioglu & Audretsch 2017). In addition, there has been pressure to save money and reduce budgets since the New Public Management reforms in the 1980s, especially since the 2008 economic crisis, so creating a workplace that encourages innovation is critical. Public sector employees can generate innovation when they can experiment and are motivated to make improvements (Demircioglu & Audretsch 2017).

Until the late 2000s, public administration and management researchers researched innovation in the public sector using case studies, interviews, and data from within public sector institutions. Most of the existing literature focuses on the effect of governance, organizational factors, and managers' characteristics on innovation (Bernier et al. 2015). In addition, management researchers evaluate rewards or other data for individual innovations or ask public sector managers whether their organizations have adopted a predetermined list of innovation practices or technologies (Arundel et al. 2019).

Awareness of the importance of innovation in the public sector has led many researchers to study the relationship between organizational attributes and the tendency of public sector organizations to innovate (Arundel et al. 2019; Bos-Nehles et al. 2017; Demircioglu & Audretsch 2017). A favorable condition for conducting public sector innovation research is the existence of an essential and exciting theme. Demircioglu and Audretsch (2017) suggested that future research can provide a broad perspective on innovation in public sector organizations in different contexts and explain why particular factors have a stronger impact on innovative activity, while budget changes seemingly have no effect on innovation.

In addition, there is still much room for discovering potentially hidden innovation capacities, namely innovative capabilities that have not been well described in the literature or that are difficult

to measure, especially in the absence of an agreed process for measuring public sector innovation (Pandey et al. 2017). Through this study, we conduct more explanation-oriented research, such as a realist review, and are more inclusive in revealing the potential for innovation (Al-Noaimi et al. 2021). Therefore, this study problematizes the perspective of Indonesian ASN in interpreting the meaning of innovation and explores the particulars factors that have a stronger impact on innovative activity.

Research on public sector innovation in Indonesia itself has not explored the perspective of Indonesian ASN across agencies and has not explored the relationships that may arise regarding innovation in the public sector (Adywarman 2021; Lukman 2021; Narsa 2018; Putri & Mutiarin 2018; Pratama 2019; Supratman 2018). In addition, to obtain a comprehensive analysis and representation of public sector innovation in Indonesia, Pratama (2019) suggests that there be further studies by expanding the sample that does not only come from the nominees of the Public Service Innovation Competition. We also fill in the limitations of research from Hijal-Moghrabi, Sabharwal, and Ramanathan (2020), namely by involving participants who occupy professional or managerial positions and participants who occupy lower hierarchical positions. Therefore, we raise two main issues as the focus of this research: (1) To what extent does Indonesian ASN question the dominant perspective on public sector innovation? (2) To what extent does Indonesian ASN understand the particulars factors that have a stronger impact on innovative activity?

In the next section, we review current literature and develop our research problematize. Then we describe our research method, data collection, and data analysis. Next, we present our empirical results, discuss their implications, and provide our conclusions.

## 2 LITERATURE REVIEW

### 2.1 *Public sector innovation: global emergence and local trajectories*

Innovation is traditionally defined as an idea, practice, or object realized and accepted as something new to be adopted by a person or group (Rogers 1983). Some conceptualize it as an idea or behavior that provides new things for the organization (Damanpour & Gopalakrishnan 1998). Some experts explain innovation as success in introducing new things using value, such as new methods, techniques, practices, products, or services (Dasgupta & Gupta 2009). Innovation can also be seen as thinking and implementing the results of thought to produce new things in products, services, business processes, new ways, policies, etc. Furthermore, innovation differs from invention in that it must be applicable and differs from continuous improvement in that it goes beyond small changes and adaptations (Moore & Hartley 2008). However, there is an increasing focus in defining innovation as creating a new product or service, marking a discontinuity with previous products (Osborne & Brown 2005).

Thus, we can see that innovation is a generally positive term, modern, new, changing, and improving. More importantly, however, something is recognized as an innovation when perceived as a successful new idea. It means that mainstream definitions generally do not include “failed innovations” (Albury 2005), where new processes, products, services, and delivery methods do not significantly improve results, efficiency, effectiveness, or quality.

Furthermore, innovation is increasingly dominant in the rhetoric and discourse of improving public services (Albury 2005). Innovation has become central to envisioning effective service delivery to citizens, with public organizations worldwide facing an increasingly volatile operating environment and the challenge of doing more with less (Bernier et al. 2015). However, innovation has been questioned as a legitimate function of public management because risk-taking and bureaucratic discretion run counter to traditional public administration problems with control and accountability and can result in failure, abuse of civil rights, favoritism, or corruption (Terry 1993). Often, more rules, controls, and restrictions limiting the acceptable behavior of civil servants, rather than innovation, are considered the solution in cases of declining performance (Kelman 2008).

Scholars continue to argue that innovation in public sector organizations is like a powerful engine and a key instrument for reforming state-owned bodies and government organizations (Vigoda-Gadot et al. 2008). However, some argue that innovation in the public sector has many core principles that differ from the bureaucracy (Golambiewski & Vigoda 2000). For example, bureaucracies rely on old organizational models (tradition, communication channels, compliance, order, and control) rather than innovative ones (creativity, commitment, diverse communication flows, autonomy, and responsibility). Consequently, successful innovation in the public sector must be based on classical bureaucratic models (Golembiewski & Vigoda 2000).

In European administration, public sector innovation is best explained by citizens' perceptions of responsiveness, leadership, and vision. The more responsive social and community healthcare systems are, and the better the leadership and vision they exhibit, the higher the perceived level of innovation in those systems (Vigoda-Gadot et al. 2008). Public sector innovation has been on the political and administrative agenda in many developed western democracies (Borins 2010; Sørensen & Vabo 2020) and soon spread to developing countries. By implementing innovation, the public sector can improve the quality of public services (Damanpour & Schneider 2009) and improve service performance (Walker et al. 2002).

Public sector organizations can be under pressure to innovate for various reasons, from public demand for new or improved services to budget constraints (Hartley et al. 2018; Walker 2008). In addition, public sector innovation results from elected governance and administrative devices or public services. Therefore, innovations from the selected arm are more likely to define public service tasks and more likely to focus on fulfilling these tasks (Arundel & Huber 2013).

Many studies show that long-term economic growth depends on innovation (Aghion & Akcigit 2017). Indonesia is the most significant economic market in Southeast Asia, attractive for selling technological innovations. To advance the Indonesian economy and consider Indonesia's research budget the lowest among countries, the government needs to encourage innovation-based growth by issuing public policies that encourage the private sector to develop and market innovations. In addition, the government should involve the private sector to invest more in supporting the innovation process. Based on data from the Ministry of Research, Technology, and Higher Education of the Republic of Indonesia, the research contribution of private companies in Indonesia is only IDR 6 billion or equivalent to 0.04% of GDP in 2017 (Akbar & Arisaktiwardhana 2020).

## 2.2 *Encouraging public sector innovation in Indonesia*

As noted, public sector innovation has occupied a central position in Indonesia's policy discourse in the past decade. However, many of these public sector innovations are only implemented in a short period for various reasons, such as weak planning and lack of commitment (Lukman 2021). The dominant form of public sector innovation in Indonesia is adapting information systems/technology into existing services. However, it is unfortunate that it is still not integrated so that it hampers its effectiveness and usefulness (Lukman 2021). Based on the track record of the Public Service Innovation Competition 2014–2019, public sector innovation in Indonesia is still partial. The government must create public sector innovations that are integrated between agencies (The Ministry of State Apparatus Utilization and Bureaucratic Reform 2019).

Awareness about the importance of information technology innovation in implementing public services in Indonesia has been felt since 2010 (Chabibah 2012). Like other countries, public services in Indonesia also have an essential role in economic, political life, and improving the quality of social life (Sancoko 2010). As a result, we can see that more government agencies and public organizations are competing to launch service sites. However, most of these service sites are not interactive (Suwarno 2008). In this regard, the Indonesian government bureaucracy requires a new value system and culture, namely from the closed, single majority, and authoritarian attitudes and behaviors to transparent, accountable, and democratic attitudes and behaviors (Kumolo 2017). This change in bureaucratic culture can be done by freeing ASN from the shackles of the Weberian Plus bureaucracy (Dwiyanto 2016).

Innovation in Indonesia has an inseparable relationship with bureaucratic reform. The most tangible evidence of the Indonesian government's efforts to encourage innovation in the bureaucracy is the One Agency One Innovation policy (Henriyani 2019) and the launch of several contests/awards. It is also in line with the strategy for implementing the knowledge and innovation blueprint through the governance and management of ASN by the Ministry of Research and Technology, the Ministry of National Development Planning Agency, and the LAN mandated by Indonesian President Joko Widodo in 2019 (Pradewo 2021).

Experts point out that instead of increasing the number of innovations, governance innovation is the only type of innovation in the public sector that has decreased, as indicated by the depreciation rate from 25 in 2014 to 13 in 2016 (Pratama 2019). Public sector innovation in Indonesia from 2014 to 2016 was dominated by local government innovation, marked by the merging of technological and administrative innovation dimensions. The innovations produced mainly address social problems in the health and education sectors and mainly occurred on the island of Java. It shows that there is a gap in government capacity between Java and non-Java islands. This fact can inform policymakers to consider increasing the governance capacity of public bureaucracies outside Java and becoming equivalent to bureaucracies in Java (Pratama 2019).

Given the COVID-19 pandemic, the appeal to ASN to innovate and ensure the continuity of public services that can adapt to new habits following health protocols continues. ASN must transform by optimizing the use of technology (Husnayaini 2020). For this reason, the Ministry of State Apparatus Utilization and Bureaucratic Reform will again hold the 8th Public Service Innovation Competition in 2021 with the theme "Acceleration of Public Service Innovation in the Framework of Achieving Sustainable Development Goals through Knowledge Transfer in the New Order Period." Judging from the enthusiasm of the Public Service Innovation Competition in previous periods, many innovations have developed and have brought extraordinary benefits to the community. Through the implementation of Public Service Innovation Competition every year, it is hoped that it will further spur public service providers to produce quality innovations (The Ministry of State Apparatus Utilization and Bureaucratic Reform 2021).

Although the government has an optimistic tone, the innovation process is not free from obstacles. There are many inhibiting factors in giving birth to an innovation. Unfortunately, there are still few types of research with the theme of innovation in the public sector that analyze the factors that hinder and encourage public sector innovation (Narsa 2018). Most research with the theme of innovation in the public sector emphasizes why there should be innovation or change in the public sector and how these changes must be carried out (Moussa, McMurray, & Muenjohn 2018). Therefore, academics must first fill the existing research gaps by analyzing the factors that hinder innovation in the public sector and vice versa, what factors can encourage innovation in the public sector (Demircioglu & Audretsch 2017; Narsa 2018).

Experts have identified the inhibiting factors for the innovation process in the public sector (Mulgan & Albury 2003), namely: (1) Risk Aversion Culture; (2) Reluctance to Close Failing Programs; (3) Overdependence on High Performers; (4) Existing Technology, Cultural Barriers, and Organizational Arrangements; (5) No Rewards or Incentives; (6) Inability to Face Risk and Change; (7) Short Term Budgeting and Planning; (8) Administrative Pressures and Barriers. Of all the inhibiting factors mentioned above, there are several leading causes for the failure of public sector innovation. For example, Vigoda-Gadot (2003) points out an inadequate reward system, unresolved problems in planning and budgeting, cultural shifts, and inadequate competence in risk management and change management by officials in the public sector.

In addition, there is also a discussion about pushing the whole system to have a larger innovation limit of a city. However, practitioners and scholars are not on the same page regarding public sector innovation research. Practitioners focus on developing systems, processes, and climates that encourage and demonstrate innovation and creativity. While scholars conduct public sector, research centered on why the public sector should change and what changes should be made (Moussa et al. 2018). Therefore, Moussa, McMurray, and Muenjohn (2018) suggest that researchers discuss the achievable and indispensable factors to promote or enhance a culture of innovation in the public

sector. Discussions support scholars and practitioners in highlighting the critical issues needed and promote a better understanding of innovation in the public sector. From the literature review, this study addresses the critical issues needed to increase innovation in the public sector and can significantly assist the government.

From the discussion above, we can see that the government of Indonesia is committed to supporting public service innovation through the national regulatory framework. However, many issues still need to be highlighted to encourage increased innovation in the Indonesian public sector. Academics can fill this gap for future studies. Therefore, in this study, we explore the barriers to generating and utilizing innovations from the ASN point of view.

In addition, most of the previous studies were conducted in the West, and there is a lack of studies looking at innovation in the context of global Southern countries such as Indonesia. Experts argue that to understand public sector innovation as a social practice. We need to engage with the contextual complexities that arise from everyday life (Fuglsang et al. 2021). For example, the limited recognition of dubious issues that often arise when talking about innovation in organizational settings must be understood to enrich the discussion of public service innovation in Indonesia (Putra 2017).

### 3 METHODS

This study uses an interpretivism epistemological approach, which assumes that people actively construct and then act on the reality they assign to events, actions, processes, ideologies, and conditions in the world (Patton 2014). Assumptions surrounding interpretivism relate to the notion of multiple realities (Atkinson 2012), which has methodological consequences for the choice of data collection methods and analytical practice. The interpretive tradition assumes that a large part of reality consists of meanings shared by individuals and groups and the patterns of interaction that emerge from these meanings (London et al. 2021).

This study adopts interpretivism to understand the meanings constructed by participants about the phenomena that are the focus of this research. In addition, we do not want to provide objective truth about the research topic but want to understand the phenomenon from the point of view of social actors with their respective contexts. Therefore, an interpretive qualitative research approach was chosen as a methodology that allows us to explore the understanding and interpretation of the meanings and intentions underlying human interactions (Denzin & Lincoln 2008).

#### 3.1 Interview

This study uses in-depth interviews to explore in-depth information on a predetermined topic. According to Milena, Dainora, and Alin (2008), in-depth interviews are designed to get a clear picture of the participants' perspectives on the research topic. The interviewee is considered an expert during the in-depth interview process, and the interviewer is considered a student. The interview technique in this study was motivated by learning everything that participants could share about the research topic.

The interview technique in this study was conducted using a semi-structured method. A semi-structured interview is an interview process that uses an interview guide derived from topic development and asks questions, and is more flexible in use than an interview. In this regard, qualitative studies such as semi-structured interviews and case analysis can explain why particular factors have a stronger impact innovative activity (Demircioglu & Audretsch 2017). In addition, through the interview method, we understand the construction of participants through dialogue and the language they use in constructing different discourses.

Data collection was carried out by in-depth interviews conducted online using Google Meet application for about 45 minutes to almost 2 hours. We conducted interviews by ourselves, and all were conducted in Indonesian. The Indonesian interview allowed the researcher to transcribe the interviews presented by the participants without translating the interviews.

3.2 Population and sample (research participants)

This study took a sample of 24 ASN who were invited as participants through an online form by paying attention to gender balance. The youngest participant was 26, and the oldest was 60. Participants have education levels from associate degree to doctorate, but most have master's degrees. Participants work in Ministries/Institutions/Institutions/Local Governments with a 4 to 35 years working period. The positions of the participants also varied, ranging from the executive level to the Primary High Leaders. The exploratory study built fills the limitations of Hijal-Moghrabi, Sabharwal, and Ramanathan's (2020) research, which only focuses on senior employees, supervisors, and lower-level supervisory managers, the majority of whom are aged 45 and over.

We used a purposive sampling approach to make it easier for us to get direct access to the participants in the sampling. Therefore, our participants were divided into two groups to fill the Pratama's research gap (2019), which only focused on the nomination of a public service innovation award from the Ministry of Administrative Reform and Bureaucratic Reform, as follows: (1) ASN who have received an innovation award from the Ministry of Empowerment of State Apparatus and Bureaucratic Reform; and (2) ASN who have not received an innovation award from the Ministry of Empowerment of State Apparatus and Bureaucratic Reform but are proven to have carried out innovative activities in their work environment.

3.3 Analysis

The data analysis of this research used manual coding, which went through four stages: open coding, axial coding, selective coding, and data display. We begin the coding implementation by ensuring the transcript that includes all conversations that were carried out during the interview, in which the transcript or recording was obtained from the voice recordings of each interview. After confirming that the transcript was good enough for processing, we began to read it in its entirety. Then we eliminate data that are considered less relevant or even unnecessary in this study so that only data considered appropriate to the study remains. In this case, we must ensure that the selected or eliminated data are appropriate and not reversed. Therefore, it is necessary to repeat the reading of the transcript. To explore the data, after we have finished selecting the data relevant to the research, we provide comments on each conversation we feel has a point that can be highlighted. This stage can be seen in the following table:

Table 1. The example of open coding.

Transcript	Commentary
The name of innovation does not only have to be in the form of an application or a sophisticated form. Keeping something good into a habit is also an innovation, for example, arriving on time at 7 o'clock, for example. Or, maybe if we were in the service office, during break time there would still be someone standing guard at the front. That is also true innovation. (Participant 2, Group 2, Male, 37 years old).	The meaning of innovation; habit; form of innovation.
This idea suddenly came about because of an event that really made me very sad. I really cannot help sick people on the highway because I cannot pass so I cannot give any medicine or help. (Participant 23, Group 1, Female, 52 years old)	Innovation driving factors.

After conducting open coding, which selects relevant data and provides comments on the conversations on the transcript, we enter the next stage, namely axial coding. At this stage, the researcher has started to categorize the comments that appeared in the previous stage. The category is created from the points, which are the responses or answers of the participants. Then we do selective coding to compile these patterns, which will be compiled into a theory or the research results into four

main themes. We use the codebook as a tool that can be used to maximize coherence between existing codes. Therefore, the codebook will significantly assist researchers in making research-related categories (Creswell & Poth 2016). The following table is a codebook compiled to support the data analysis:

Table 2. The example for codebook of research.

Themes	Category	Participant Group	Transcript
Innovation has 1000 faces	Renewal	Group 1	Innovation is the <b>renewal</b> or development of existing work programs. (Participant 7, Female, 32 years old)
		Group 2	Innovation is something new for future needs or changes or <b>renewal</b> . (Participant 8, Female, 36 years old)
Innovation Requires ASN's Concern	High awareness	Group 1	I innovate <b>without feeling burdened</b> . I do not think that innovation is a project. So, I don't think about the funds. In my opinion, what matters is the result and the impact. (Participant 22, Male, 26 years old)
		Group 2	<b>I do not want to be a person who surrenders to the situation</b> and just waits for government assistance. (Participant 1, Female, 42 years old)
Innovation results from a combination of ASN agencies and the right support	Good working relationship	Group 1	In my opinion, the new face of my office depends on leadership. <b>If the leadership does not have the enthusiasm to go there</b> , of course we cannot walk alone. (Participant 3, Female, 43 years old)
		Group 2	<b>The leader's experience also influences how the leader encourages his team</b> to innovate. I see not all leaders can do it. (Participant 10, Male, 54 years old)

## 4 RESULTS AND DISCUSSION

Based on the interview data analysis results, the dominant picture from the perspective of the ASN in problematic innovation issues in the public sector is obtained. We develop these findings into three main themes, as mentioned in Table 2.

### 4.1 *Innovation has 1000 faces*

Participants in both group 1 and group 2 gave exciting and varied responses about the meaning of innovation. Not only diverse, but participants also provide more detailed views to describe the ideal form and picture of innovation. However, most of them use similar keywords, such as "update," "not just advanced application or technology," "efficient," "effective," "creativity," etc., to describe what innovation is.

#### 4.1.1 *Innovation is renewal*

The keyword "renewal" becomes the dominant perspective for ASN from each participant group in describing the innovation. Even giving the meaning of innovation as an update has a broad context from various participants. Some see from the context of updating the work program: "Innovation is an update or development of an existing work program" (Participant 7, Group 2, Female, 32 years old). The statement is similar with the other participant from the same group: "Innovation is a new thing for change for the better. Innovation is one small change made to an organization, which may be operational only. For example, the recording is still manual, and then it is used as excel because the data is starting to get a lot" (Participant 17, Group 2, Male, 44 years old).

#### 4.1.2 *Innovation is not just applications or advanced technology*

Technological developments are often associated with innovation. However, it turns out that one participant's view says otherwise: "Innovation does not have to be expensive. It does not have to be in the form of IT, programs, and others. We change the pattern of service from slow to fast, from expensive to cheap, from difficult to easy. That is a form of innovation for me" (Participant 22, Group 2, Male, 26 years old).

In addition, simple things can be interpreted as an innovation, such as "habits": "Innovation does not have to be in the form of applications or sophisticated forms. Keeping something good and making it a habit is also called innovation. For example, come to work on time at 7 am. Alternatively, maybe during breaks, the service office still has officers on duty. It is also called innovation. Innovation does not have to be something sophisticated and various" (Participant 2, Group 2, Male, 37 years old).

Other participants provide a broader view of what innovation is in a complete and meaningful picture. Some say innovation is a "science": "In my opinion, innovation is more about science. I make innovations related to tax financial statements, requiring skills that empower the brain to read tax financial statements carefully, not technology skills" (Participant 4, Group 2, Male, 41 years old). Some say that innovation is "a work of art," where this term is rarely found in the literature related to innovation: "In my opinion, innovation is a piece of art in any form because everyone has their standards" (Participant 9, Group 1, Female, 37 years).

#### 4.1.3 *Innovation is efficiency*

On the other hand, some participants described innovation as something fast and appropriate to solve a challenge or problem, but without high costs: "Innovation is cheaper, more accessible, and faster. I think that is the criteria for innovation. Whatever we do, whatever its form, whether physical or non-physical, if it meets the criteria mentioned above, is called innovation" (Participant 22, Group 1, Male, 26 years old). In other words, the findings illustrate that innovation is efficient, as stated by this participant: "Innovation is related to efficiency. Innovation must use what is following the times, such as technology and others. However, innovation cannot be separated from existing principles" (Participant 12, Group 2, Female, 57 years).

#### 4.1.4 *Innovation is effectiveness*

In addition, to being "efficient," other participants associated innovation as an effort to get the expected goals, results, and targets or called "effective." Some associate it with an action to map a state: "Innovation is an attempt to mitigate problems and make changes" (Participant 18, Group 1, Male, 51 years old). There is also a link with the performance indicators of an ASN: "Innovation in ASN is related to results orientation" (Participant 16, Group 2, Male, 33 years old).

#### 4.1.5 *Innovation is creativity*

Other finding suggests that innovation is something that involves a fantastic way of thinking and is always interesting to discuss, which is commonly referred to as creativity: "Innovation is a way of creative thinking conveyed in a concept idea, and the idea is successfully executed" (Participant 19, Group 2, Male, 39 years old).

Based on the findings of this first theme, we see that the participants understand the issue of innovation in the public sector as something that goes along with its development following the required context. The participants between groups agreed that there was no ideal form and concept of the innovation itself. They understand that innovation cannot be limited or bound in one form and concept. Thus, the participants' interpretation of innovation is not limited to things that can be seen concretely or with the naked eye. This study suggests that ASN understands innovation in a broader context so that it can be said that innovation has 1000 faces.



#### 4.2 *Innovation requires ASN's engagement and care*

This theme shows that the desire to innovate does not just happen without the involvement of ASN. We find several keywords that emerged from the participants when they shared the reasons for innovating, for example, “as the head of the office,” “I must,” “without a sense of burden,” “do not want to be a passive person,” and others. These keywords lead to ASN's concern for innovation, which is characterized by three main characteristics, namely:

##### 4.2.1 *ASN proactive attitude is needed to innovate*

ASN's concern for innovation can be seen in its ability to be responsible for its work. This proactive attitude is related to the daily life of ASNs in carrying out their duties and functions in a responsive manner. ASN's proactive attitude toward the desire to innovate turns out that it is evenly distributed among ASN between levels, both at the leadership, managerial, and implementing levels.

This participant explained that as head of the office, he must have a proactive attitude towards challenging office visions and missions so that then he and his team can make innovations that have a significant impact on the country: “The office's vision and mission are to become a world-class customs equivalent. As Head of Office, of course, the challenge is how to prepare my team to be on par and world-class. Therefore, I encourage my team to continue to make innovations that support the implementation of the office's vision and mission” (Participant 18, Group 1, Male, 51 years old).

In addition to the office leadership level, a proactive attitude toward innovation can also be seen from the participants at the managerial level. For example, this participant revealed that the updates made by his colleagues and his team had not been seen significantly in the public eye. Therefore, he took a proactive stance to propose to his office leadership to participate in the Public Service Innovation Competition organized by the Ministry of Administrative Reform and Bureaucratic Reform. According to him, it is essential to have institutional memory so that the public can see the updates they have made: “At first, we did not realize that all this time, we had made changes. Unfortunately, what we have done, it turns out that so far, it has not been seen significantly in the eyes of the public and netizens, especially in the service and protection of Indonesian citizens. I see the importance of institutional memory. Through this award, we managed to show our new face to the public” (Participant 3, Group 1, Female, 43 years).

The findings also show that participants at the implementing level can be proactive through administrative documents, which may only be seen as work implementation reports. However, he can develop it into something that has an innovative impact: “I made an innovation that started by utilizing office work reports that had only been stored in the corner of the office or published on the website. I compiled a highlight summary of each report. Then, together with my friends, we evaluated the satisfaction of public services based on that summary. Through these simple things, we can collect information for the improvement of public services. In the end, people realize that making a change starts from something that our own eyes may have overlooked and turns it into something beneficial to the organization” (Participant 14, Group 2, Male, 43 years old).

##### 4.2.2 *ASN must have high awareness to innovate*

Another finding suggests that ASN's concern for innovation is built on the high awareness that ASN has. These two participants come from different groups, but both have a high awareness of the importance of innovating: “I innovate without feeling burdened. I do not think that innovation is a project. So, I do not think about the funds. In my opinion, what matters is the result and the impact” (Participant 22, Group 1, Male, 26 years old). “Our laboratory facilities are still inadequate, but we can still do something creative to create and overcome limited circumstances. I do not want to be a person who surrenders to the situation and waits for government assistance” (Participant 1, Group 2, Female, 42 years old).

##### 4.2.3 *ASN empathy has an important role for innovation*

The form of concern can be seen from the emotional involvement of ASN toward the conditions faced in their work environment. For example, participants from group 1 showed empathy in a

sad situation where a tragic incident occurred at the East Brebes (Brexit) toll exit, causing total congestion at this toll exit for more than 20 hours, and it was difficult for the authorities to help: “This idea suddenly came about because of an event that made me very sad. I cannot help sick people on the highway because I cannot pass, so I cannot give any medicine or help” (Participant 23, Group 1, Female, 52 years).

This second theme suggests that the participants in this study are ASN individuals who have demonstrated innovative work behaviour in the public sector. They care about why innovation is essential, even though their innovation has not been captured or documented in the national award event. In other words, ASN’s engagement and care for innovation is the implication of innovative work behavior.

#### *4.3 Innovation results from the combination of ASN agency and the right support*

This theme is formed from findings that show that even if individual ASN is concerned for innovation, without proper support, it will be difficult for the innovation to be successful. The findings reveal that the individual role of ASN will be influential in innovating:

##### *4.3.1 Innovation resulted from good working relationships*

This finding shows the dominant perspective of ASN on its influence in supporting innovation. It is undeniable that good working relationships can support good employee performance as well. A good working relationship can be seen from the working relationship between superiors and subordinates and between colleagues. Some participants stated that although ASN has good innovation ideas if they do not have a good working relationship, the innovation would fail.

Based on the findings, leaders have an essential role in the occurrence of innovation. This participant said that the success of innovation and awards obtained from the PANRB Ministry was due to having the right leader. Furthermore, participants explained that the proper leader is a leader who can listen and explore the potential of the individual ASN he supervises: “When the ASN gets the right leader, the ASN will bring out its abilities well. It is imperative the role of the leader nurture each member of his team. In my opinion, the number one thing is that the leader can listen and let his team speak. In addition, leaders must be willing to learn from the young. Leaders must also be able to place team members according to their respective abilities. I see my leaders can do it so we can generate innovation” (Participant 9, Group 1, Female, 37 years).

Other finding shows that a good working relationship is limited to support from superiors and requires strong support from colleagues. This participant’s statement proves that support from superiors and coworkers can help him to do something innovative: “In 2016, there was a Brexit bottleneck that took the world by storm. At that time, I oversaw health affairs in the Brebes area. Due to the traffic jam, the travelers cannot get out of the car, even though the fuel and food supplies have run out. I cannot use an ambulance to assist. Then the idea emerged, we utilized a motorized vehicle instead of an ambulance. I conveyed the idea to my boss and friends. The idea was immediately accepted, and I got help with a traffic unit motorbike loan which I later converted into a motorbike ambulance so I could break through the traffic jam” (Participant 23, Group 1, Female, 52 years).

Also, a participant revealed that a good working relationship could be seen from the characteristics of the people in it. For example, if the people in it are closed to change, then as an individual ASN, he cannot channel his ideas that lead to innovation: “Some people use the term battering ram in an organization, meaning they want to innovate. Unfortunately, I was not in that battering ram. I was on a team that did not want to be open to innovation. For example, at that time, our Minister asked for ideas on how to protect National MSMEs. Then I presented my idea to the Head of the Sub-directorate that we should limit the practice of vertical integration. My boss felt my idea was too bold and too risky, so he went backward. In the end, the idea was discontinued. If we want to innovate, then we must dare to take risks. Especially if the top leadership (Minister) has allowed receiving ideas from employees” (Participant 19, Group 2, Male, 39 years old).

#### 4.3.2 *Training programs can support ASN to generate innovation*

This finding suggests that the combination of ASN agency and other structural support that can generate innovation is the agency's role in organizing education and training programs that are open to change. The intergroup participants agreed that education and training support should be designed to produce innovative ASNs: "To become innovators, the education and training program should direct the training participants to be active in innovating and make it a habit to be able to create innovations. Institutions must be able to think about how an education and training program can produce innovators" (Participant 3, Group 1, Female, 43 years).

Some state that inter-governmental education and training programs must be organized nationally by the authorized institution. It will have a more robust and broader impact on innovative activities in government agencies. This participant emphasized that if the government wants ASN to produce innovation, it starts with the support of national education and training: "For public sector innovation to spread widely and reach all agencies, it is necessary to support a national ASN training management system. If we only expect support from each agency's leadership, it seems that it will be difficult because the head of the agency will only focus on the substance of the agency. Therefore, LAN has a significant and appropriate role in collaborating on training materials with each agency" (Participant 13, Group 2, Female, 60 years old).

#### 4.3.3 *Trust in ASN can produce innovation*

Based on the results of data analysis, another form of combination is trust that arises from a good relationship with the work environment. Strong trust encourages ASNs to dare to make updates in their workplace, even share their knowledge with their work environment: "Because I have a hobby and design skills, I was entrusted with creating logos for office activities with an interesting artistic touch. My work environment is also encouraged to learn design from me" (Participant 6, Group 2, Male, 35 years old).

Other participant shared her experience of gaining trust from her superior to do innovative things: "I feel like my boss always trusts me to come up with new ideas. Maybe because of that, I felt challenged to plan a work program that was more different than in previous years" (Participant 7, Group 2, Female, 32 years old).

#### 4.3.4 *Collaboration leads to innovation*

This finding explains that working together to generate innovative ideas can be done through collaboration between organizations. Innovative HR demands in the public sector can be resolved together through collaborative discussions, such as workshop activities involving the private sector in it: "In my opinion, so that ASN can understand things related to innovation, there needs to be a means of discussion in the form of an innovation workshop. The workshop contained interesting and innovative themes. It is also not only innovation in the public sector but also innovation in the private sector. It is intended to make ASN as literate as a private employee" (Participant 14, Group 2, Male, 43 years old).

In addition, other participant revealed that to produce widespread public sector innovation, agencies that have prioritized innovation need to collaborate with other ministries and institutions and the competent council. It is intended that the resulting innovations continuously: "In my agency, these innovations have been around for a long time. However, right now, I can say that our leader is a stalemate. It is not a minister, but as a whole. It is our turn now that we dare not innovate. So, innovations that our leaders have carried out in the past are like walking in place. Therefore, I see that as a public sector, we cannot work alone to innovate. We must invite other ministries and institutions, as well as invite the legislature" (Participant 15, Group 2, Female, 39 years old).

#### 4.3.5 *Innovation generated from business, research, and information networks*

In this finding, we see that the ability of ASN agencies will maximize innovation if they get the proper business support. Unfortunately, not all ASN has a business network that suits their needs and can quickly build cooperative relationships. This participant explained that he was able to see opportunities from his business network and find the right internet provider: "When I was still in

charge of the treasury, there were still about six or seven offices that were not covered by the cellular and internet networks. This interferes with the smooth execution of tasks that require internet access. I was thinking hard about how there should be internet access here. On one official occasion to Jakarta and Palembang, I met with several internet providers and submitted a proposal. Finally, there is one provider who agreed to build internet access. Until now, Empat Lawang Regency is the first district in South Sumatra to have zero blank internets” (Participant 22, Group 1, Male, 26 years old).

Another participant stated that she would not be able to do innovative things if not in an environment with the same frequency as herself. It means that she, as someone in the research world, recognizes that the people around her are an asset to his research network: “I admit that the HR in my place is superior to the HR in other majors where I teach. People around me have many patents on products from their research. In addition, their contribution to the surrounding community is very significant. It is one of the triggers for me to keep going, be creative, and be innovative” (Participant 1, Group 2, Female, 42 years old).

Program activities in government agencies usually collaborate with intergovernmental agencies and the private sector, such as technical guidance, webinars, and others. Of course, ASN can take advantage of this to collect information as an asset to support the implementation of other innovative programs. For example, it can be seen from one of the participants. She has innovative ideas and needs the help of others. She realized that she could draw on information from the relationships she got when she attended technical tutoring and webinars from outside her organization: “When we decided to make an electric signature application and track application information, we recognized collaborating with others outside the organization. Fortunately, my friends and I get many networks when we attend technical guidance or webinars from other agencies. We use this network to find the right people who can help us support this innovative program” (Participant 5, Group 2, Female, 33 years).

Based on the third theme findings, innovation requires individuals to act, and the innovation process requires a structure for seamless horizontal and vertical integration (Al-Noaimi et al. 2021). Thus, innovation results from a combination of ASN agency and structural support.



Figure 2. Summary of research findings.  
Source: Researchers, 2021.

## 5 CONCLUSION

This finding reveals the results of exploring the dominant perspective of ASN regarding innovation in the public sector. Participants' diverse perspectives on what innovation is reveal that innovation does not have a single definition. ASN understands innovation as renewal, not just advanced applications, or technologies (science, a piece of art, result orientation), efficiency, effectiveness, and creativity. Meanwhile, the Ministry of Administrative Reform and Bureaucratic Reform is discussing innovation in the public sector as a breakthrough in the type of public service, whether it is an original creative idea/idea and adaptation/modification that benefits the community, either directly or indirectly (the Ministry of Administrative Reform and Bureaucratic Reform 2021).

ASN has its language to explain what innovation is. Their understanding of the meaning of innovation is related to how they deal with innovation in their work environment. Thus, the face of innovation depends on one's point of view in visualizing an innovation, and it cannot be locked in one point of view. Therefore, innovation has 1000 faces, such as understanding creativity as a journey to create a thousand faces from one source to find faces of interest (Biespiel 2019).

We find that there are ASN self-factors that influence the occurrence of innovation. ASN as individuals can act independently and make choices to innovate. This study shows that today's ASN has a concern for innovation. The participants realized that as individual ASN, they are involved in the public sector to carry out their duties and functions, which is no longer business as usual. They have a concern for innovation in their daily work.

Thus, this finding not only illustrates the extent to which ASN understands what innovation is but also shows ASN's concern for the occurrence of innovation. ASN's concern for innovation is evident in each participant. The findings show that ASN, as individuals, has the instinct to innovate. As public servants, they realize that innovation can be done anywhere and anytime. Thus, it is hoped that ASN in the future can do more through innovation and proactively serving the community (Vivona et al. 2020), as seen from the findings of this study.

Stakeholders of government agencies must be able to facilitate ASN's innovative ideas. ASN must feel that its existence is an extension of the government and a resource that contributes to innovation in the public sector. Many innovative ASNs have not been caught and documented in a national award event, and it does not mean that ASN is not innovative. However, the government should take a closer look at the main point of the problem. ASN is the spearhead in spurring economic growth that must be given real support, such as a supportive work environment, more open training programs with change, trust, egalitarian discussion space, opportunities for collaboration, and adequate networks at work.

Suppose a public sector organization wants to build an innovative organizational culture. In that case, the request for support for innovation is addressed to individual ASN, but all elements of the organization have roles that support each other. Innovative organizations must have a set of human resource development, information technology, policy development, and implementation strategies (Cook et al. 2009).

It is also essential for public sector organizations to design innovative activities and not just copy-paste from previous years. For example, benchmarking activities are technically capable of driving the birth of an innovation agenda (Lacity & Willcocks 2014). However, what needs to be emphasized is how public sector organizations can carry out good governance.

This study has three research limitations. First, this study divides participants into two groups: the recipients of the innovation award from the Ministry of Administrative Reform and Bureaucratic Reform and those who have not. The results of the study indicate a gap where more participants have not received the award. Future research is expected to explore further why there are still many innovations in the public sector that have not been captured and documented by the Ministry of Administrative Reform and Bureaucratic Reform, both in the Public Service Innovation Competition (organizational level) and ASN awards (individual level).

Second, this research was conducted during the COVID-19 pandemic so that face-to-face interviews could not carry out the data collection process. However, subsequent research can be carried

out with face-to-face interviews if conditions can expand research participants by categorizing ASN into two large groups: ASN working in central and regional agencies. It is hoped that through this grouping of participants, we can see a more diverse pattern of how ASN in the central and regional agencies complicates innovation in the public sector.

Third, this research focuses on the problematization of individual ASN perspectives on innovation in the public sector. Future studies can explore the extent to which each public sector organization has problematic innovation issues. Thus, a comparison of points of view between individuals and organizations can be reviewed further. In addition, future research also needs to look at the extent to which public sector organizations appreciate ASN who have made innovations in their work environment, both those who have received innovation awards from the Ministry of Administrative Reform and Bureaucratic Reform and those who have not. Finally, this study can provide compensation and benefits for ASN, career development, self-development, and talent management opportunities.

## REFERENCES

- Adyawarman, A. 2021. The challenges of public innovation: Insights from risk governance in Batang Regency. *JKAP (Jurnal Kebijakan dan Administrasi Publik)*, 25(1), 1–24.
- Aghion, P., & Akcigit, U. 2017. *Innovation and growth: The schumpeterian perspective*. In L. Matyas, R. Blundell, E. Cantillon, B. Chizzolini, M. Ivaldi, W. Leininger, et al. (Eds.), *Economics without Borders: Economic Research for European Policy Challenges* (pp. 29–72). Cambridge: Cambridge University Press. doi:10.1017/9781316636404.003.
- Akbar, I., & Arisaktiwardhana, D. 2020, November 20. *Memburu inovasi: Indonesia membutuhkan lebih banyak investasi dari sektor swasta*. Retrieved on June 21, 2021, from <https://theconversation.com/memburu-inovasi-indonesia-membutuhkan-lebih-banyak-investasi-dari-sektor-swasta-119631>.
- Albury, D. 2005. Fostering innovation in public services. *Public money and management* 25(1), 51–56.
- Al-Noaimi, H. A., Durugbo, C. M., & Al-Jayyousi, O. R. 2021. Between dogma and doubt: A meta-synthesis of innovation in the public sector. *Australian Journal of Public Administration*.
- Arundel, A., Bloch, C., & Ferguson, B. 2019. Advancing innovation in the public sector: Aligning innovation measurement with policy goals. *Research Policy*, 48(3), 789–798.
- Arundel, A., & Huber, D. 2013. From too little to too much innovation? Issues in measuring innovation in the public sector. *Structural change and economic dynamics*, 27, 146–159.
- Atkinson, M. 2012. Key concepts in sport and exercise research methods. *SAGE*.
- Bernier, L., Hafsi, T., & Deschamps, C. 2015. Environmental determinants of public sector innovation: A study of innovation awards in Canada. *Public Management Review* 17 (6), 834–856.
- Biespiel, D. 2019. *Every writer has a Thousand faces: For writers, artists, musicians, dancers, and anyone else who leads a creative life* (Tenth). Portland, Oregon: Kelson Books.
- Bloch, C., & Bugge, M. M. 2013. Public sector innovation—From theory to measurement. *Structural Change and Economic Dynamics*, 27, 133–145.
- Borins, S. 2010. *Innovation as narrative*. Ash center for democratic governance and innovation, Harvard Kennedy School, Cambridge.
- Bos-Nehles, A., Bondarouk, T., & Nijenhuis, K. 2017. Innovative work behaviour in knowledge-intensive public sector organizations: the case of supervisors in the Netherlands fire services. *The International Journal of human resource management* 28 (2), 379–398.
- Chabibah, U. (Ed.). 2012. *Indonesia menuju bangsa inovasi 2030: memorandum AIPI*. Akademi Ilmu Pengetahuan Indonesia (AIPI), Indonesian Academy of Science.
- Cho, Y. J., & Song, H. J. 2020. How to facilitate innovative behavior and organizational citizenship behavior: evidence from public employees in korea. *public personnel management*, 009102602097757. doi:10.1177/0091026020977571.
- Cook, G., Matthews, M., & Irwin, S. 2009. *Innovation in the public sector: Enabling better performance, driving new directions*. Australian National Audit Office, Canberra.
- Creswell, J. W., & Poth, C. N. 2016. *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Damanpour, F., & Gopalakrishnan, S. 1998. Theories of organizational structure and innovation adoption: the role of environmental change. *Journal of Engineering and technology management* 15(1), 1–24.

- Damanpour, F., & Schneider, M. 2009. Characteristics of innovation and innovation adoption in public organizations: Assessing the role of managers. *Journal of public administration research and theory* 19 (3), 495–522.
- Dasgupta, M., & Gupta, R. K. 2009. Innovation in organizations: A review of the role of *organizational learning* and knowledge management. *Global Business Review* 10(2), 203–224.
- Decree of Minister of State Apparatus Utilization and Bureaucratic Reform Nomor 161 Tahun 2021 *Petunjuk Pelaksanaan Kompetisi Inovasi Pelayanan Publik di Lingkungan Kementerian/Lembaga, Pemerintah Daerah, Badan Usaha Milik Negara, dan Badan Usaha Milik Daerah Tahun 2021*. March 16, 2021. Jakarta.
- Demircioglu, M. A., & Audretsch, D. B. 2017. Conditions for innovation in public sector *organizations Research policy* 46 (9), 1681–1691.
- Denzin, N. K., & Lincoln, Y. S. 2008. Introduction: The discipline and practice of qualitative *research*.
- Dery, K., Sebastian, I. M., & van der Meulen, N. 2017. The digital workplace is key to digital innovation. *MIS Quarterly Executive* 16(2).
- Dwiyanto, Agus. 2011. *Mengembalikan kepercayaan publik melalui reformasi birokrasi*. Kompas Gramedia: Jakarta.
- Fuglsang, L., Hansen, A. V., Mergel, I., & Røhnebæk, M. T. 2021. Living labs for public sector innovation: An integrative literature review *Administrative Sciences* 11(2), 58.
- Gault, Fred. 2018. Defining and measuring innovation in all sectors of the economy. *Research Policy*, 47: 617–622.
- Golembiewski, R. T., & Vigoda, E. 2000. Organizational innovation and the science/craft of management. *Current Topics in Management* 5, 263–280.
- Hartley, J., Sørensen, E., & Torfing, J. 2013. Collaborative innovation: A viable alternative to market competition and organizational entrepreneurship. *Public administration review* 73(6), 821–830.
- Henriyani, E. 2019. Menumbuhkan budaya birokrasi yang inovatif dan berdaya saing global. *Dinamika: Jurnal Ilmiah Ilmu Administrasi Negara* 6(2).
- Hijal-Moghrabi, I., Sabharwal, M., & Ramanathan, K. 2020. Innovation in public organizations: Do government reforms matter?. *International Journal of Public Sector Management*.
- Karlsson, I. C. M., Mukhtar-Landgren, D., Smith, G., Koglin, T., Kronsell, A., Lund, E., ... & Sochor, J. 2020. Development and implementation of Mobility-as-a-Service—A qualitative study of barriers and enabling factors. *Transportation Research Part A: Policy and Practice* 131, 283–295.
- Kelman, S. 2008. The “Kennedy School School” of research on innovation in government. *Innovations in government: Research, recognition, and replication*, 28–51.
- Kumolo, Tjahyo. 2017. *Nawa cita untuk kesejahteraan rakyat indonesia*. PT Kompas Media Nusantara: Jakarta.
- Lacity, M., & Willcocks, L. 2014. Business process outsourcing and dynamic innovation. *Strategic Outsourcing: An International Journal*.
- Landry, R., Amara, N., & Lamari, M. 2002. Does social capital determine innovation? To what extent?. *Technological forecasting and social change* 69(7), 681–701.
- London, K., Pablo, Z., & Gu, N. 2021. Explanatory defect causation model linking digital innovation, human error, and quality improvement in residential construction. *Automation in Construction* 123, 103505.
- Lukman, I. B. 2021. Rethinking Public Sector Innovation in Indonesia. In *2nd International Conference on Administration Science 2020 (ICAS 2020)*, 59–67.
- Milena, Z. R., Dainora, G., & Alin, S. 2008. Qualitative research methods: A comparison between focus-group and in-depth interview. *Annals of the University of Oradea, Economic Science Series* 17(4), 1279–1283.
- Moore, Mark H., and Jean Hartley. 2008. Innovations in Governance. *Public Management Review*, 10(1), 3–20.
- Moussa, M., McMurray, A., & Muenjohn, N. 2018. A Conceptual framework of the factors influencing innovation in public sector organizations. *The Journal of Developing Areas*, 52 (3): 231–242.
- Moussa, M., McMurray, A., & Muenjohn, N. 2018. Innovation in public sector organisations. *Cogent Business & Management* 5(1), 1475047.
- Mulgan, G., & Albury, D. 2003. Innovation in the public sector. *Strategy Unit, Cabinet Office* 1(1), 40.
- Narsa, N. P. D. R. H. 2018. Inovasi Pelayanan: Telaah Literatur Perbandingan Sektor Privat dan Sektor Publik Berkala Akuntansi dan Keuangan Indonesia 3(2), 46–62.
- Osborne, S. P., & Brown, K. 2005. *Managing change and innovation. in public service organizations*. Routledge: London.
- Pandey, S., Pandey, S. K., & Miller, L. 2017. Measuring innovativeness of public organizations: Using natural language processing techniques in computer-aided textual analysis. *International Public Management Journal* 20(1), 78–107.

- Patton, M. Q. 2014. *Qualitative research & evaluation methods: Integrating theory and practice* (4 th ed.). SAGE.
- Pradewo, B. 2021, April 16. *Pengetahuan dan Inovasi Jabatan Fungsional ASN Penting saat Pandemi*. Retrieved on June 16, 2021, from <https://www.jawapos.com/nasional/16/04/2021/pengetahuan-dan-inovasi-jabatan-fungsional-asn-penting-saat-pandemi/>.
- Pratama, A. B. 2019. The landscape of public service innovation in Indonesia. *Innovation & Management Review*, 17 (1), 25–40.
- Putra, H. S. 2017. Different perspective on public service innovation in Indonesia. In *Proceeding International Seminar: Reconstructing Public Administration Reform to Build World Class Government*. LAN.
- Putri, L. D. M., & Mutiarin, D. D. 2018. Efektifitas inovasi kebijakan publik; Pengaruhnya pada kualitas pelayanan publik di Indonesia. *Prosiding Konferensi Nasional Ke-8 Asosiasi Program Pascasarjana Perguruan Tinggi Muhammadiyah*.
- Raipa, A. & Giedraityte, V. 2014. Innovation process barriers in public sector: a comparative analysis in Lithuania and the European Union. *International Journal of Business and Management*, 9(10), 10–20.
- Rogers, Everett M. 2003. *Diffusion of Innovation*. 5th ed. New York: Free Press.
- Sancoko, B. (2011). Pengaruh remunerasi terhadap kualitas pelayanan publik. *Bisnis & Birokrasi: Jurnal Ilmu Administrasi dan Organisasi* 17(1).
- Shahbaz, M., Gao, C., Zhai, L., Shahzad, F., & Hu, Y. 2019. Investigating the adoption of big data analytics in healthcare: the moderating role of resistance to change. *Journal of Big Data* 6(1), 1–20.
- Sørensen, E., & Vabo, S. I. 2020. A Public Innovation Perspective on Change in Local Democracy. *Innovation Journal*, 25 (1).
- Supratman, D. 2018, January 23. Menumbuhkan budaya inovasi di kalangan aparatur sipil negara – dindin supratman. Retrieved on July 26, 2021, from <https://ppsdmbnn.go.id/menumbuhkan-budaya-inovasi-di-kalangan- aparatur-sipil-negara-dindin-supratman/>.
- Suryanto, A. 2020, November 7. *Penguatan kapasitas SDM sebagai esensi pembangunan inovasi nasional*. Retrieved on March 15, 2021, from <https://lan.go.id/?p=3722>
- Suwarno, Yogi. 2008. *Inovasi di sektor publik*. Jakarta: STIA-LAN Press.
- Tate, M., Bongiovanni, I., Kowalkiewicz, M., & Townson, P. 2018. Managing the “Fuzzy front end” of open digital service innovation in the public sector: A methodology. *International Journal of Information Management* 39, 186–198.
- Terry, L. D. 1993. Why we should abandon the misconceived quest to reconcile public entrepreneurship with democracy: A response to bellone and goerl’s “reconciling public entrepreneurship and democracy”. *Public Administration Review* 53 (4), 393–395.
- The Ministry of State Apparatus Utilization and Bureaucratic Reform. 2019, July 5. *Tak Boleh Parsial, Inovasi Pelayanan Publik harus Terintegrasi*. Retrieved on August 13, 2021, from <https://menpan.go.id/site/berita-terkini/tak-boleh-parsial-inovasi-pelayanan-publik-harus-terintegrasi>.
- Vigoda-Gadot, E. R. A. N., Shoham, A., Schwabsky, N., & Ruvio, A. 2008. Public sector innovation for europe: a multinational eight-country exploration of citizens’ perspectives. *Public Administration* 86(2), 307–329.
- Vivona, R., Demircioglu, M. A., & Raghavan, A. 2020. Innovation and Innovativeness for the Public Servant of the Future: What, Why, How, Where, and When. *The Palgrave Handbook of the Public Servant*, 1–22.
- Walker, R. M. 2008. An empirical evaluation of innovation types and organizational and environmental characteristics: Towards a configuration framework. *Journal of public administration research and theory*, 18 (4), 591–615.
- Walker, R. M., Jeanes, E., & Rowlands, R. 2002. Measuring innovation-applying the literature-based innovation output indicator to public services. *Public Administration*, 80(1), 201–214.
- Windrum, P. 2008. Innovation and entrepreneurship in public services. *Innovation in Public Sector Services: Entrepreneurship, Creativity and Management*, 3–20.
- World Intellectual Property Organization. 2020, September 2. Release of the global innovation index 2020: Who will finance innovation? Retrieved on March 15, 2021, from [https://www.wipo.int/global\\_innovation\\_index/en/2020/](https://www.wipo.int/global_innovation_index/en/2020/).
- Xie, Y., Xue, W., Li, L., Wang, A., Chen, Y., Zheng, Q., ... & Li, X. 2018. Leadership style and innovation atmosphere in enterprises: An empirical study. *Technological Forecasting and Social Change* 135, 257–265.



## The role of affective commitment, competence, and organizational culture on employee performance windows

V.A. Sopiansah\*, D. Riani, L. Maryani & S. Almujaab

*Economics Education, Faculty of Teacher and Educational Sciences, Pasundan University,  
Bandung, Indonesia*

**ABSTRACT:** Professional public service is a responsibility shared between the government and the community. The purpose of this study is to determine the effect of competence and organizational culture on affective commitment and its impact on employee performance. Interviews and questionnaires were shared and conducted with the employees of the Regional Revenue Service Branch of the Province of Bandung 1 Pajajaran. As many as 50 civil servants were included as objectives of the study, i.e., path analysis. The results of path analysis showed that there is an influence of competence and organizational culture on affective commitment. This is because the competencies possessed by a person can easily be adapted to the organizational culture of a company and can make employees feel comfortable at home, tend to increase their affective commitment, as well as affective commitment tends to be directed to employee loyalty and leading to increase in their performance.

### 1 INTRODUCTION

The implementation of public services is one of the important functions of government in addition to distribution, regulation, and protection. The main duty of the government as a public organization is to provide services to the community, so government officials have an obligation and responsibility toward providing public services properly. The implementation of professional public services is a shared responsibility between the government and the community, because receiving satisfactory service is the right of the community that must be fulfilled by the government.

It is a common secret that bureaucracy in Indonesia is often seen as not optimal due to internal and external obstacles. (Martini 2011) There are at least six factors that indicate toward not so optimal roles and functions of bureaucracy in providing services to the community, namely: (1) The absence of competition in the working model of bureaucracy; (2) sources of income that do not come from the efforts of the organization itself; (3) absence of performance measures; (4) absence of incentive; (5) absence of administrative challenges to bureaucratic officials personally; (6) absence of active leadership.

For improving the quality of public services, every public organization must improve the performance of its employees. Improving employee performance will directly improve the performance of the organization, which will ultimately improve the image of the public organization in particular as well as the government in general (Mahmudi 2005). Performance is a multidimensional boarding house that includes many factors affecting it. The factors affecting these are: (1) Personal/individual factors, which include knowledge, skills, abilities, confidence, motivation, and commitment possessed by each individual; (2) leadership factors, including quality in providing encouragement, spirit, direction, and support provided by managers and team leaders; (3) team, including the quality of support and spirit provided by teammates, trust in fellow team members,

---

\*Corresponding Author: [veriaryanto@gmail.com](mailto:veriaryanto@gmail.com)

the competence and closeness of team members; (4) system factors, including work systems, work facilities, or infrastructure provided by organizations, organizational processes, and organizational culture; (5) contextual (situational) factors, including external and internal environmental pressures and changes.

Table 1. Target of service performance indicators and percentage of service performance realization at CPPD Office of Bandung City Area I Pajajaran.

No	Indicators	Respondents	Target	Means	Realization (%)
1	Service Procedures	150	3500	3.253	82.94%
2	Terms of Service	150	3500	3.307	84.49%
3	Clarity	150	3500	3.307	84.49%
4	Discipline	150	3500	3.393	86.94%
5	Responsibility	150	3500	3.320	84.86%
6	Ability	150	3500	3.393	86.94%
7	Service Speed	150	3500	3.413	97.51%
8	Justice	150	3500	3.280	83.71%
9	Courtesy and Hospitality	150	3500	3.327	85.71%
10	Fairness of Service Charges	150	3500	3.273	83.51%
11	Service Fee Certainty	150	3500	3.587	102.48%
12.	Service Schedule Certainty	150	3500	3.500	100%
13	Environmental Comfort	150	3500	3.753	107.23%
14	Service Security	150	3500	3.500	100%

Human resource development is sought to create working conditions that meet the “4 rights”, namely: Right Person, Right Place, Right Place, and On Time (The Right Man on the Right Job, Right Place, and Right Time). Such conditions are only possible when every human being in the organization achieves high quality and competitiveness. In other words, human resources can develop their work productivity to the maximum.

The Regional Revenue Service Branch (CPPD) of Bandung City Region I Pajajaran is part of the Regional Revenue Agency (BAPENDA) of West Java Province, which has the main task of carrying out some of the functions of the agency in the field of regional income as well as other functions carried out, including: (1) Organizing the preparation of the work program of the Regional Revenue Office of Bandung City I Pajajaran; (2) conducting the assessment of technical instructions for regional income; (3) conducting public services in the field of regional income.

A person's performance can be seen from the competency he possesses; therefore, every employee is expected to have competencies related to tasks and responsibilities to produce maximum performance (Sutrisno 2010). Competence is knowledge, skills, and abilities mastered by a person who has become a part of him, to best perform cognitive, affective, and psychomotor behaviors. If competence is defined same as ability, then it can be interpreted as understanding the purpose of work, knowledge in carrying out tips in carrying out the right, and good work, and understanding how important discipline in the organization is for all the rules to run properly.

Employee performance has not reached the target, possibly due to the culture of the organization. Because of the culture in CPPP Bandung City Area I Pajajaran not only from the Provincial Government apparatus but some partners are side by side, namely from the Police (POLRI), Jasa Raharja (Insurance), and Bank (BJB), so that the culture that previously came from the previous institution or organization is carried at the CPPD office of Bandung City Area I Pajajaran to enhance employee unity with respect to the culture in one organization, that is, in one neighborhood CPPD office Bandung City Area I Pajajaran.

The achievement of the organization's objectives to have a positive impact on the taxpayer community, in addition to qualified competencies, a strong and good organizational culture must also be supported by employees/apparatuses who have commitments bound by the organization (Angelo 2014). To commit is an agreement to do something for yourself, others, groups, or organizations. Commitment here means that the commitment toward the target and entity. For example, someone can commit to a job, company, career, or various associations professionally.

Affective commitment means the emotionality of employees, employee identification, and employee involvement in the company (Meyer 1993). Employees who have a strong affective commitment continue to work for the company because they want to. Affective commitment has a close emotional attachment to the organization. This means that the individual has the motivation and desire to contribute meaningfully to the organization. The usual affective commitment is closely related to how often members are absent/present in the organization. Concerning the CPPD Pajajaran service office, if one of the service members is not present it will hinder the activities that take place if no one replaces him.

The problem that exists in CPPD Bandung City Area 1 Pajajaran is an organizational problem that cannot be solved by the employee/employees who have proven that there are still problems such as lack of understanding and repeating same mistakes. So, this is a reference that the organization in CPPD Bandung City Area 1 Pajajaran still has problems. The lack of service still persists because the employees in CPPD Bandung City Area I Pajajaran are not maximal in achieving performance with good results; therefore, this study explores the competency factor in less-qualified individual, the culture of the organization that cannot be understood by every partner, or lack of affective commitment in every individual. Moreover, the author is interested to do more research on competence, Organizational Culture, Affective Commitment, and Employee Performance in the CPPD Office of Bandung City Region I Pajajaran.

## 2 METHOD

A quantitative approach was adopted for this research. Descriptive analysis using the analysis of the lines was used to examine the employees of the Regional Revenue Service Branch (CPPD) of Bandung 1 Pajajaran, with as many as 50 civil service servants and administrative civil servants, as many as 40 employees as the main milestone of service that always serve the taxpayer community, and 10 employees as administrative personnel reported from the results of the service. To uncover the problems of research conducted, interview studies with parties directly related to the problem were studied. Whereas the discussion of the results of the study make use of the data from the questionnaire.

### 2.1 *Variables*

Competence is an ability to carry out or perform a job or task based on skills and knowledge, supported by the attitude of work demanded by the work. Questionnaires of competency dimensions include: (1) Knowledge; (2) skills; (3) individual concepts and values; (4) personal characteristics; (5) motive (Wibowo 2001).

Organizational culture is a unique system owned by an organization that sets it apart from other organizations. The questionnaire dimensions of organizational culture include: (1) Involvement; (2) consistency; (3) adaptability; (4) mission (Robbins 2008).

Affective commitment is a commitment that is closely related to the emotions, identification, and involvement of employees in a company. The questionnaire dimensions of affective commitment include: (1) Attachment; (2) emotions; (3) identification; (4) participation (Dunham 1994).

Employee performance is the result of production at specific work functions or activities over a certain period. The questionnaire dimensions of employee performance include: (1) SKP and (2) work behavior (Andi 2003).

## 2.2 Data analysis

The analysis of the data in this study is taken from the results of questionnaires distributed with reference to the theory that has been put forward. Testing of the instrument has been conducted on these research questionnaires, which concludes with all variables declared valid and reliable. The data from the poll will be analyzed using path analysis. The results of the path analysis are illustrated in Figure 1.

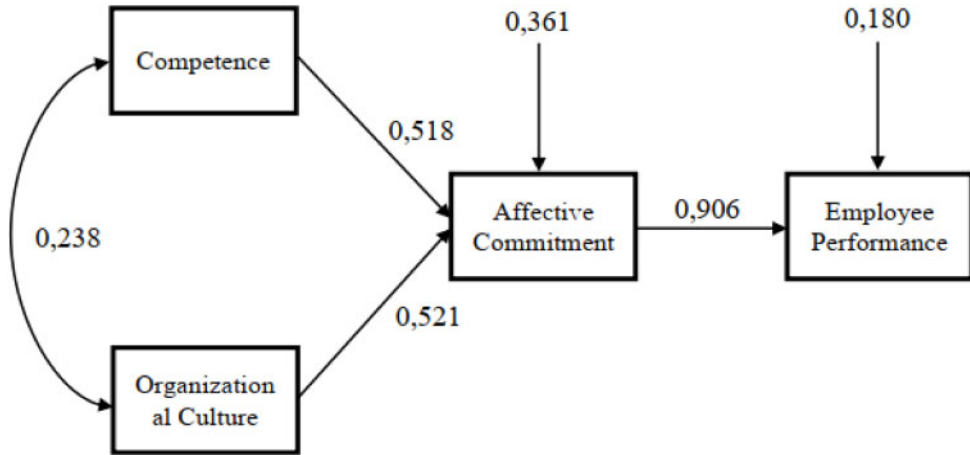


Figure 1. Research design.

## 3 RESULTS AND DISCUSSION

Based on Figure 1, it can be said that each variable that is the competence and culture of the organization affects affective commitment both partially and simultaneously and affective competency affects the performance of employees in the CPPD Office of Bandung City Province I Pajajaran. The coefficient of correlation between free variables is 0.238. The competency coefficient standard of affective commitment is 0.518. The organization's cultural coefficient standard of affective commitment is 0.521. The effect of another variable (e1) is 0.361. Value R affective commitment to employee performance is 0.906. The effect of another variable (e2) is 0.180.

Based on the calculation of regression, it can be seen that the value of the significance of the influence of competence and culture of the organization on affective commitment is 0.001. The effect of competence and organizational culture on affective commitment, from the above analysis, obtained a significance value of  $0.001 < 0.05$ . Hence, it can be concluded that there is significant influence of competence and organizational culture on affective commitment. Therefore, the alternative hypothesis is accepted.

The effect of affective commitment on employee performance, from the above analysis obtained the value of affective commitment significance of  $0.000 < 0.05$ . Hence, it can be concluded that there is no significant effect of affective commitment on employee performance. Therefore, hypothesis zero is accepted.

Based on the regression calculation, it is known that the influence of competence and culture of the organization on affective commitment is 0.638, or in the percentage of 63.8%. The percentage of competence and culture of the organization is large enough to influence the affective commitment of this because both will create a balance that can create a person's affective commitment, and the competence that one has will more easily adapt to the organizational culture of a company

and can make its employees feel comfortable or at home likely to increase their affective commitment (Nickels 2009). The relationship between competence and organizational is that “Workers (employees) who have competencies will be more adaptable to the culture of the organization will then be able to influence its effect commitments.”

Based on the regression calculation, it is known that the effect of affective commitment on employee performance is 0.820, or 82%. The percentage of affective commitments has a significant influence on employee performance; affective commitment tends to be directed toward employee loyalty and enhances his/her performance. Employees who have an affective commitment to the organization of course the employee have a sense of responsibility and awareness of the performance that he or she is doing but the thing is if the employee does not have an affective commitment and awareness then the result of achieving performance not necessarily will be good and fit for purpose.

The behavior of employees following the good work culture in the organization will have an impact on the increasing performance of employees and make employees feel at home in the organization and can optimize their performance with the results expected by the organization. Thus, the work culture becomes one of the important criteria in determining the growth and success of an organization. A strategic (central) plan that has been successfully drawn up by a special team and directed by the leadership will not be smooth in its implementation if it is not supported by a commitment to basic values and beliefs. As for building a high commitment, it is necessary to support a positive culture or work culture.

#### 4 CONCLUSION

The effect of competence and organizational culture on affective commitment is a significant influence on competence and organizational culture on affective commitment. The effect of affective commitment on employee performance is significant. Affective commitment gives an intervening effect on the influence of competence and culture of the organization on employee performance. Therefore, a highly affective commitment affects performance and work culture in return for being able to change and maintain a good culture and to maintain a relationship of affective commitment and performance whose results are partially and simultaneously influential.

#### REFERENCES

- Andi Offset. 2003. *Manajemen sumber daya manusia. edisi kedua*. Yogyakarta: Andi Offset.
- Angelo. 2014. *Organizational behavior*. Edisi 9, Jakarta: Salemba Empat.
- B. Dunham. 1994. Organizational comitment: The utility of an integrative definition, *Journal of Applied Psychology*. Vol. 79: 370, 1994.
- E. Sutrisno. 2010. *Manajemen sumber daya manusia*, Jakarta: Kencana Prenada Media Group.
- M.d.M. Nickels. 2009. *Introduction to Business. Issue 8 Book 1*, Jakarta: Salemba Empat.
- Mahmudi. 2005. *Manajemen kinerja sektor publik*, Yogyakarta: UPP AMP YKPN.
- Meyer J.P. 1993. Commitment to organizations and occupation: extension and test of three component conceptualization, *Journal of Applied Psychology*, Vol.78, No.4, p:538–551.
- Wibowo. 2001. *Manajemen kinerja*, Jakarta: PT. Raja Grafindo Parsada.
- Robbins. 2008. *Organizational behaviour*. Jakarta: Salemba Empat.
- R. Martini. 2011. *remunerasi dan rasa keadilan masyarakat,*” *majalah forum pengembangan ilmu sosial, fakultas ilmu sosial dan ilmu politik universitas diponegoro*. hlm. Volume 39, Nomor 2.
- T. Achmad. 2015. *Konsep dasar manajemen personalia*, Bandung: Refika Aditama.

## Accounting students: Our learning style for disruption era

P.M. Nagari\*, U. Nuraini & D.M. Nuris

*Faculty of Economics, Universitas Negeri Malang, Malang, Indonesia*

C.G.K. Han

*Universiti Malaysia Sabah, Kinabalu, Malaysia*

**ABSTRACT:** This study aims to determine the learning style of accounting students in the disruption era viewed from two perspectives, the meaning of the era of disruption and revealing that meaning to the learning style of accounting students. Using phenomenology, the meaning of the era is revealed. The subjects in this study are four students majoring in accounting at one of the state universities in Indonesia (University A). The data was collected using interviews, documentation, and observation. The results of this study conclude that the meaning of the era of disruption for accounting students is the time when all information can be easily obtained without any space and time limits. According to accounting students, the disruption era significantly affected their learning style, because with the era of disruption, the way to get the latest material and information about the courses can be done very easily anywhere and anytime.

### 1 INTRODUCTION

In 2011, in Germany, to be precise in Hanovver, the term Industrial Revolution 4.0 was born. Industrial Revolution Era 4.0 has led the world to experience massive changes in four sequenced ways (Kagermann et al. 2011). The first Industrial Revolution occurred in the 18th century when the machine was invented and goods were mass-produced (Schwab 2017). Further Schwab (2017) added the phase as the second Industrial Revolution in the early 18th century. During this phase, particularly in the 19th century, electricity was utilized to optimize the production process. Following two more eras, the third Industrial Revolution was in the 1970s when computers were being used and the Industrial Revolution 4.0 in around 2010 when artificial intelligence and the internet, have become the beginning of the activation and development of the internet, human-machine relationship.

Many aspects have been influenced, namely in the fields of economy, politics, culture, art, and education. Many ways of life and ways of thinking have changed because of the Industrial 4.0 revolution. In the sector of economics, it is witnessed that the transportation service area starts with online transportation. It is the same in politics and culture. But behind the conveniences offered, apart from the changes that have occurred, it also has bad impacts, for example, hoaxes because of fast easy to share information. In facing the Industrial Revolution 4.0, in addition to preparing for technological advances and human resources are also needed that are humane to reduce the negative impact.

Accounting students at University A as one of the subjects of education need to know how they should behave in the era of the Industrial Revolution 4.0. Why are accounting students? Because accounting is one of the broad sciences, it requires a lot of the latest knowledge

---

\*Corresponding Author: [primasa.minerva.fe@um.ac.id](mailto:primasa.minerva.fe@um.ac.id)

and information related to the latest regulations, so accounting students use a variety of learning styles to study it. As (Riyana 2018) that one of the challenges in the era of Industrial Revolution 4.0 was in learning changes, patterns of thinking, and students acted in creative innovations development in many fields. As it has been observed that accounting students at University A are active users of the influence of the Industrial Revolution 4.0, namely the use of technology where they can obtain any information from gadgets or technological devices they have to support their learning style. According to (Pashler et al. 2008) the learning styles show that acquired wonderful influence within the education fields, ranging from the first school to graduate school. There is a pledge industry dedicated to education and organizations.

Therefore the purpose of this research is to describe the learning style of accounting in the disruption era which is seen from the meaning of the disruption era and reveals meaning to the learning style of accounting students. By uncovering this phenomenon, we can see how accounting students interpret the Industrial Revolution 4.0 and also know their opinions about the Era of Industrial Revolution 4.0, influencing their learning styles based on their perspectives without any influence from others.

## 2 LITERATURE REVIEW

### 2.1 4.0 Industrial revolution

(Lee *et al.* 2013) explain that the Industrial Revolution 4.0 usually starts with the increasing digitization of manufacturing which is by four factors: 1) rising data volume, computer capability, and connectivity; 2) existence of analysis, power, and business intelligence; 3) the existence of fresh interactions between people and machines; and 4) digital transfer instructions (Liffler and Tschiesner 2013) added, the basic principle of industry 4.0 is to combine machines, flows of work, and systems, by implementing smart networks during the production chain and processes to control each other independently.

(Hermann *et al.* 2016) added there are four design principles for the Industrial Revolution 4.0, there are (1) interconnection, namely the capabilities of machines, devices, sensors, and humans so that they get in touch and communicate with each other using the internet. (2) information transparency is the ability of information systems to create virtual copies of the real world by enriching digital models with sensor data including data analysis and information provision, (3) technical assistance which includes; (a) the capability of the assistance system to support people by aggregating and evaluating information to make informed decisions and solve short-term problems; (b) the capability of the system to support people by performing tasks that are less enjoyable, highly strenuous, or less safe; (c) includes visual and physical assistance. Fourth, decentralized decisions are the ability of virtual physical systems to make their own decisions and carry out tasks effectively. Another term for industry 4.0 is the digital revolution and the era of technological disruption. it is called the digital revolution because of the number of computers and automatic recording in all fields. The Industrial Revolution 4.0 is called the era of technological disruption because automation and connectivity in a field can make changes in the industrial world and work competition is not linear. One of the characteristics of industry 4.0 is the application of artificial intelligence (Tjandrawinata 2016).

The industrial revolution will also leave problems related to the loss of social humanities values. Millennials, the generation born around 1980-2000s, have shown symptoms of mental degradation. The lifestyle of consumerism, unlimited freedom, and the loss of ethical behavior on social media are examples of degradation (Kasali 2018) refers to millennials as a strawberry generation, which is described as an interesting generation, but fragile. The statement is consistent with industry 4.0, the same as information technology in general, for example, smart systems can be reproduced in a simple form and digital mass production, and cyber-physical systems can rebuild flexible, innovative, and completely new H2M fluid networks with very new forms of cooperation and collaboration. smart and innovative.

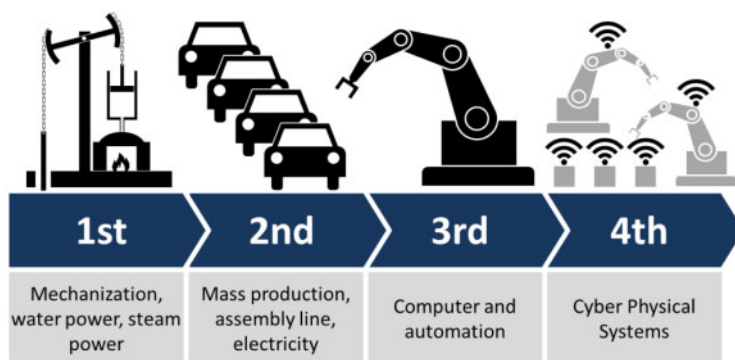


Figure 1. Industrial revolutions and key concepts.  
Source: Kumparan.com.

Conceptual modeling is the basis for the existence of Industry 4.0 (Schuh *et al.* 2014) (Kolberg & Zühlke 2015). The basic concept of Industry 4.0 was created as a smart factory, CPS, self-organization, a new distribution system and procurement tailored to corporate social responsibility and human needs.

## 2.2 Education in disruption era

According to the data, 42,352 villages in Indonesia have not been touched by electricity from a total of 82,195 villages in Indonesia (Sulastini & Fitria 2016). The implication of this is equal education distribution in Indonesia. One form is electricity which is a progress symbol, so it can be called a negative area because it does not have electricity (Sulastini & Fitria 2016). From this data, it can be seen that not all regions are ready for all the changes that occur during this Industrial Revolution 4.0. Internet network connectivity is one of the requirements if we want to carry out education in the era of the Industrial Revolution 4.0. Currently, not all parts of Indonesia can connect to the internet, particularly schools.

According to the Minister of Research, Technology and Higher Education (Menristekdikti) Mohammad Nasir, the industrial revolution challenge must be responded to quickly and appropriately by all stakeholders. Because of to be able to increase the competitiveness of the Indonesian nation amid competition. Menristekdikti explained that five important elements must be considered and will be carried out by the Ministry of Research, Technology and Higher Education to encourage economic growth and national competitiveness in the era of Industrial Revolution 4.0, namely: (1) Preparation for innovative learning system in higher education in Information and Technology data terms, Operational Technology (OT), Internet of Things (IoT), and Big Data Analytics, physical objects which integrated, human and digital to competitive producing. and skilled higher education graduates, particularly in the aspects of data literacy, literacy of technologies, and human literacy. (2) Institutional reconstruction policies for higher education that are adaptive and responsive to the Industrial Revolution 4.0 in developing the required transdisciplinary and study programs. In addition, Cyber University programs are being pursued, for example, distance learning lecture systems, thereby reducing lecturer intensity and student meetings. (3) Preparation of human resources, particularly lecturers and researchers as well as responsive, adaptive, and engineers who are reliable to deal with the Industrial Revolution 4.0. In addition, the rejuvenation of infrastructure and the construction of education, research, and innovation infrastructure also need to be carried out to support the quality of innovation, education, and research. (4) Improve the quality and quantity of research and development in Universities, R & D Institutions, LPNK, Industry, and Society. (5) Improve technology-based startup companies.



### 2.3 Learning style

Every human being has characters and traits that are different from one another. For example, physical form, nature, behavior, and habits. Humans also absorb and process the information they receive in different ways from one another. According to (Nasution 2000) learning style is a consistent way done by a student in capturing stimulus or information, how to remember, think, and solve problems.

According to (Deporter & Hernacki 2011), learning style is a combination of how it absorbs, and then organizes and processes information. According to (Fleming & Mills 2001) learning style is the tendency of students to adopt certain learning strategies as a form of responsibility to get a learning approach that is as per the subject demands of learning in class or school and demands (Keefe 1987) views learning styles as a way for someone to receive, interact and view their environment.

According to (Deporter & Hernacki 2011) a person's learning style is the key to developing work performance, at school, and in interpersonal situations (Dunn & Griggs 1988) argue that many variables influence how people learn. This includes physical, emotional, sociological, and environmental factors. Some people, for example, can learn best with bright light, while others with gloomy lighting. Some people learn best in groups, while others choose authoritarian figures such as parents or teachers, and others feel that working alone is the most effective for them. Some people need music as a background, while others cannot concentrate except in a quiet room. Some people need a neat and organized work environment, but others prefer to lay out everything so that everything can be seen. Learning styles are also a tendency to adopt a particular learning strategy by actively seeking and trying so that eventually, individuals get a learning approach that is as per the demands of learning (Wright 2018).

Although each researcher uses different terms and finds various ways to overcome one's learning style, it has generally been agreed that there are two main categories of how we learn. First, how do we absorb information easily (modality) not secondly, the way we manage and process that information (brain dominance). Furthermore, if someone is familiar with his learning style, he can help himself in learning faster and easier.

Every level of education, from kindergarten to graduate school, has a different perspective on learning styles. Industry dedicated to developing learning models and books for teachers, and many organizations is growing. It offers professional development training for teachers and educators on learning (Pashler *et al.* 2008). Basically, every student has a learning style but everything that develops is not naturally balanced, but someone dominates it with their learning style. This causes students to love varied learning that suits the learning style. Diversity in learning styles of students needs suitable teaching strategies so that students develop good learning styles. By involving the visual aspect, auditory, and kinesthetic are expected to be able to improve learning activities. Learning style visual is more learning style take advantage of sight. People with visual learning style will see or imagine what is going on or discussed.

All definitions of learning styles above do not appear to be contradictory but have similarities between one another. The definitions of learning styles are substantially complementary.

## 3 METHODS

This study is qualitative research. This study also uses the interpretive paradigm in its implementation. The method in this study uses phenomenology. Phenomenology is known as an educational qualitative research design (Creswell 2014). Creswell (2016) reveals that by using a qualitative approach, researchers can find out about the problems under study, can empower informants so that researchers get answers to problems from data analysis to interpretation, can know about the context of information, and can capture the complexity of the problem under study. Husserl (2012) argues that understanding transcendental phenomenology is a descriptive and introspective analysis of the depths of all forms of consciousness and experiences experienced directly through religious,

moral, aesthetic, conceptual, and sensory. Patton (2002) reveals that the use of phenomenology as a research approach requires the phenomenologists to capture and describe the human experience with phenomena.

Creswell (2010) states that phenomenology aims to understand the world from the point of view of people who experience it directly or the natural characteristics of human experience and the meanings attached to it. Informants involved in research must have experience with related phenomena. Phenomenology is used because this study wants to understand how accounting students interpret the Industrial Revolution 4.0 and also know their opinions about the era of Industrial Revolution 4.0 to influence their learning styles based on their own perspective without any influence from others.

The main data source in this study came from the informants, namely four accounting students at University A who observed and used a lot of technology for their life, especially for learning. As the observation, the four students are the informants in this study were informants who, according to the researchers, were the generation who felt the immediate impact and role in the Industrial Revolution 4.0 and were also someone who were actively studying accounting science. The researcher actually wanted to gather information from the informants about how they felt the impact of the Industrial Revolution 4.0 on their learning styles.

The steps of data analysis in this study use the phenomenology method that refers to (Sanders 1982). Sanders (1982) said that phenomenological research is divided in four stages of data analysis. The first stage is to of the phenomena description from the interviews that have been recorded by identifying interview transcripts and explaining the quality of the informants' experience and awareness. The second stage is to identify the theme that emerges from the description in the first stage. The third stage is to develop the noema and noesis. The last stage is abstracting the relationship essence between noema and noesis commonly referred to as eidetic reduction.

#### 4 RESULTS AND DISCUSSION

The disruption era in the Industrial Revolution 4.0 was signed by the presence of four matters, which named supercomputers, artificial intelligence (cyber intelligence), cyber systems (cyber systems), and collaboration in manufacturing. These competencies are needed, as they can compensate for the attendance of four things in the education of fourth era. Accounting students at university A are a generation that plays an active role from the development of the disruption era in Industrial Revolution 4.0. This can be proven that almost all students have various kinds of gadgets for their lives.

Accounting students are required to have various types of competencies because later on, they will become accountants who must respond to problems that occur in the world of work. Various kinds of problems must be solved in various ways and it also must be ascertained about the source of the problem through information from anywhere, one of them from cyberspace or cyber information.

From the results of interviews with the four accounting students, they have apparently understood the importance of following developments in the disruption era of the Industrial 4.0 revolution. The researcher then asked questions related to how accounting students interpret the Era of Industrial Revolution 4.0. The following is an answer from several accounting students regarding the questions raised by researcher.

##### Answer 1

Student A 2017: "Lately there have been lots of people talking about disruption era in industrial revolution 4.0, Mam. No national figure, no international figure, has repeatedly said about 'Get ready to meet industry 4.0' or 'We must not be crushed by industry 4.0' or 'We must be able to take advantage of the phenomenon of Industry 4.0.' So, what actually industrial revolution 4.0 is? Yes, in my opinion, this is the time that makes everything easier, Mom. Yes, eating, learning is easier because of technological sophistication."

#### Answer 2

Student B 2017: "If I think of it, the fourth industrial revolution is disruption era that we need to be anxious about everything. Where everything is sophisticated and easy, it is precisely there that we need to anticipate everything that will happen."

#### Answer 3

Student A 2018: "I think at this time the era has changed. The fourth industrial revolution was an era which everything was easier, Mom. With everything as sophisticated as that, it was very helpful for my activities, ma'am. Not like it used to. In the past when I just wanted to read a book, I had to go to the library, now I just have to open the gadget and get all the information. So, disruption era is why it's easy to find everything."

#### Answer 4

Student B 2018: "The Industrial Revolution 4.0 is all so sophisticated. Everything is there, whatever we want is easy to get. Yes, that's the point, ma'am. More details we have to see in every industrial revolution, but the roughness is, some cases that were originally so hard, so takes time, so expensive in any steps suddenly became easy, fast, and cheap."

The statement (noema) above shows that some accounting students have begun to know the principles of the Industrial Revolution 4.0. One student showed noesis by saying that everything was more sophisticated and easier to find anything. The eidetic reduction that researchers can abstract from the statement of accounting students is that although everything becomes easier and easier to get all the information, we must be more careful and smarter in anticipating something that will happen. And also, we have to be able to sort out the information we get from all these conveniences. Learning is a change in a long-lasting ability and is not derived from the growth process. So, it can be concluded that the learning activities carried out by a person refer to changes in the person's behavior as a result of experience.

Accounting students at University A are students who are known to be active in learning from the observed by the researcher. Because they are required to know the latest kinds of information from accounting science. With this Industrial Revolution 4.0, they have become easier to carry out the demands of their lectures. The researchers also asked several questions about the extent of their knowledge of this industrial 4.0 revolution. The answers of several accounting students conclude that Indonesia is pretty slow in responding to the Industrial Revolution 4.0, if compared with other neighbor countries, for example, Malaysia and Singapore. The education program in the new Industrial Revolution 4.0 is quite fast in this 2017-2019 year. The government has to provide sufficient facilities to meet education in the era of the Industrial Revolution 4.0. Given these big challenges, students as millennial generalities must continue to learn how to improve competencies, so they can face different kind of challenges. Don't get the term, the era of fourth industrial revolution, but the students are 2.0 students.

The following is a snapshot of the answers from one of the accounting students.

Student B 2017: "In my opinion, the government must also take part in this era. We students also need good education facilities. Don't let everything be sophisticated, uh, it turns out we are still left behind, still generation 2.0."

Accounting students at University A are students who are actively learning, and each has a different learning style. This is in line with the statement that each individual has a different learning style. Not everyone follows the same way. Each shows a difference, but researchers can classify it. Learning style is closely related to someone's personality, which is influenced by the nature, experience, education, and history of its development (Mulyono, 2012).

In this study, the researcher explored how the learning style of accounting students was in Industrial Revolution 4.0 era. The researcher asked many questions related to this. The following are some excerpts of answers from accounting students at University A.

#### Answer 1

Student A 2017: "I like to use what I have to study. Yes, not only gadgets or technology but I also need manuals. Given that on the internet not everything is credible. It's easy and easy. As soon as we type in information related to accounting all of them appear. In fact, sometimes the answer keys from supporting books already exist on the internet."

#### Answer 2

Student B 2017: "I like to learn by listening to music. So, usually I typed my papers and listened to songs from YouTube. It makes it easy to learn and I get more excited. Particularly now that any song can be easily searched. When I started, I was automatically encouraged to carry out tasks and find sources of information related to the accounting material I was studying."

#### Answer 3

Student A 2018: "I like to study directly in the surrounding environment. So, I really like that all lecturers give the project directly to the field. I can find something that I can't get in the book. Particularly in this era of Industrial Revolution 4.0, we must have competence later when working. So, you have to know the real situation in the field."

#### Answer 4

Student B 2018: "I like learning in various ways. Read books, search the internet, or practice directly. Depends on what I want to find accounting material. The project was also given because it was able to know what the real estate was like in the field. So, I like to combine learning styles in ancient times and nowadays Mom."

From the interview footage (noema) above, it presented that one of the accounting students has different learning styles even though they live in the same era, namely the era of the Industrial Revolution 4.0. The noesis was showed by one of the students said that she prefers to project in the field and keep reading books. The statements are related with the statement of (Harahap & Rezeki 2019) that every medium has characteristics, so it must be considered in its use. Media selection must be based on a clear concept. It means the selection of certain media is not based on the interests of the teacher or just a distraction, but must be an integral part in the whole learning process in efforts to increase effectiveness and efficiency student learning: (2) media selection must be adapted to the characteristics of students. There are media that are suitable for groups of students, but not suitable for other students; and (3) the selection of media must be in accordance with environmental conditions, facilities, and time available for learning needs. The eidetic reduction that researchers can abstraction from the statement of accounting students is that even though everything can be searched on the internet, they still need direct learning in real world, so they know first-hand what is happening about accounting. Besides that, repo also still needs manuals for learning to facilitate the accounting material they are studying.

## 5 CONCLUSION

At present, the community, especially accounting students, faces the new industrial revolution known as the Industrial Revolution 4.0. This is a time of disruptive innovation, where this innovation is growing so fast, so it should be makes new markets. This situation is also capable of disrupting or breaking existing markets and is even more powerful in make it replaces existing technology.

Fourth era of education is an education specialized by the use of digital technology in the learning as e-learning. This system will make the learning process can take place detailed without all of limits. The disruption era was a very hard challenge seen by accounting students. Education and learning are loaded with override content knowledge of attitudes and capabilities as now has been implemented will produce prospective graduates who lack competency if not accompanied by project-based learning.

Despite growing in the disruption era accounting students still need other things that are not only related to the internet to study. They still need credible books to study them. They still need projects or assignments in the field so they can find out what is happening in the field. Accounting students living in the disruption era of Industrial Revolution 4.0 not only need theory. What they need is the competence that they will use to prepare themselves for the future in the world of work.

## REFERENCES

- Deporter, B. and Hernacki, M. 2011. *Quantum learning*. Jakarta: KAIFA.
- Dunn, R. and Griggs, S. 1988 *Learning styles: Quiet revolution in American secondary schools*.
- Fleming, N. and Mills, C. 2001 '*VARK: A guide to learning styles*'.
- Harahap, S. Z. and Rezeki, U. S. 2019. Pengaruh penggunaan media pembelajaran berbasis ict dan gaya belajar terhadap hasil belajar ipa dan keterampilan bertanya siswa SD negeri 060798 Medan Area, *Jurnal Curere*, 3(2), pp. 26–32. doi: 10.36764/jc.v3i2.245.
- Hermann, M., Pentek, T. and ...B. O. 2016 'Design principles for industrie 4.0 scenarios', in *System Sciences (HICSS), 49th Hawaii International Conference*, pp. 3928–3937.
- Kasali, R. 2018. *Strawberry Generation*.
- Keefe, J. 1987. *Learning Style Theory and Practice*.
- Kolberg, D. and Zühlke, D. 2015. Lean Automation enabled by Industry 4.0 Technologies, *IFAC-Papers OnLine*, 48(3), pp. 1870–1875. doi: 10.1016/j.ifacol.2015.06.359.
- Lee, J. *et al.* 2013. Recent advances and trends in predictive manufacturing systems in big data environment', *Manuf. Lett*, 1(1), pp. 38–41.
- Liffler, M. and Tschiesner, A. 2013. *The Internet of Things and the Future of Manufacturing*. McKinsey & Company.
- Nasution, S. 2000. *Berbagai pendekatan dalam proses belajar dan mengajar*.
- Pashler, H. *et al.* 2008. Learning styles, *Psychological Science in the Public Interest*, 9(3), pp. 105–119. doi: 10.1111/j.1539-6053.2009.01038.x.
- Schuh, G. *et al.* 2014. Collaboration mechanisms to increase productivity in the context of industrie 4.0, *Procedia CIRP*. Elsevier B.V., 19(C), pp. 51–56. doi: 10.1016/j.procir.2014.05.016.
- Sulastini, S. and Fitria, N. 2016. 'Hubungan karakteristik pasien dengan kecemasan pada pasien gagal jantung kongestif di ruang rawat inap RSUD Dr. Slamet Garut', *Jurnal Medika Cendikia*, 3(01).
- Tjandrawinata, R. R. 2016. Industri 4.0: Revolusi industri abad ini dan pengaruhnya pada bidang kesehatan dan bioteknologi, *Medicinus*, 29 No 1(February). Available at: <https://fk.unbrah.ac.id/wp-content/uploads/2018/09/Revolusi-Industri-Abad-Ini-dan-Pengaruhnya-Pada-Bidang-Kesehatan-dan-Bioteknologi.pdf>.
- Wright, J. 2018. *Learning to learn in higher education*.

## Entrepreneurship of Bugis ethnic group: A case study of Bugis nomads in Malang, Indonesia

Y. Agustina\*, A. Winarno, B.S. Narmaditya & A. Hermawan

*Universitas Negeri Malang, Java, Indonesia*

N. Omar

*Universiti Utara Malaysia, Malaysia*

**ABSTRACT:** The purpose of this study is to determine the factors that contribute to the Bugis tribe's entrepreneurial spirit. The Bugis tribe was chosen based on the number of immigrants from Bugis, who pursue entrepreneurial endeavors outside their area of origin. This quantitative research was conducted by surveys and in-depth interviews of 35 Bugis immigrants in Malang City. Immigrants who are members of the South Sulawesi Family Association (KKSS) Malang Raya were randomly selected. The findings of this study, with the existence of a culture that Bugis nomads believe, is one of the motivators for entrepreneurial success. Another finding indicated that education, economy, heredity, and independence had no discernible effect on entrepreneurship. The strength of the nomads' principle is their capital for success in migrating to new areas, allowing them to successfully adapt to entrepreneurialism wherever they are.

### 1 INTRODUCTION

South Sulawesi Province is one of Indonesia's largest provinces, home to several ethnic groups, including the Bugis, Makassar, and Toraja, as well as a variety of languages including Bugis, Makassarese, Toraja, Konjo, and Enrekang. Only the Bugis and Makassar ethnic groups share the same type of traditional clothing among the various tribes and languages. Additionally, many Bugis ethnic groups migrate to pursue entrepreneurial endeavors. Entrepreneurship can develop because of several factors, one of which is the group's culture. This is consistent with Watson et al. (2019) assertion that entrepreneurship develops in response to the cultural factors that emerge in a society. Entrepreneurship is the capacity and courage to confront the problems that arise in daily life and to do so proactively and creatively, to find solutions and overcome them. Life skills education is extremely beneficial to an individual, both personally and socially. Obviously, the development of an entrepreneurial spirit is a very positive change in social life, particularly in terms of the nation's and state's welfare development. Both men and women can contribute significantly to the economic growth of the family in particular and the nation and state in general. There are two intriguing aspects to investigate further regarding the two cultural entities: (1) the pattern of cultural inheritance through the process of exchanging experiences within the community of lontar fiber woven craftsmen and Phinisi ship builders, which has enabled the entrepreneurial culture of the two communities to survive to the present day, and (2) the capacity to develop the outcomes of cultural transformation to adapt to the changing needs of contemporary society without sacrificing the culture's authenticity or distinctive characteristics.

According to Rusdiana (2014), entrepreneurship is a soft skill that underpins every entrepreneur's ability to conduct entrepreneurial activities effectively and sustainably in the face of changing social

---

\*Corresponding Author: yuli.agustina.fe@um.ac.id

challenges in the economic, political, and cultural spheres. Entrepreneurs are not born; they are created. They created themselves. It was their choice to become entrepreneurs. Entrepreneurial personality and character traits that must be developed in everyone are honesty, independence, hard work, leadership, self-confidence, responsibility, risk-taking capacity, creativity, and innovation. While not all cultures affect entrepreneurial orientation, certain cultures have a significant impact on the entrepreneurial orientation of a community. Additionally, Qosja & Druga (2015) assert that entrepreneurship is possessed by someone who possesses an innovative spirit. Entrepreneurs' income growth is influenced by culture. As Wessler, C. et al. note in Koentjaraningrat (2009), culture is the result of human effort and can be passed down through a learning process. Culture is the total of human behavior and the result of regular behavior acquired through learning, all of which is a part of community life, and culture is not inherited generatively (biologically), but must be acquired through learning. Sutrisno. et al. (2016) argue that the role of human consciousness can change during a social transformation as long as the communication process is conducted openly and continuously by self-aware actors, by sharpening dialogues and bringing disparate interests together. -personal interests with an emphasis on active communication to reach consensus on areas of shared interest.

Based on preceding statement, it can be concluded that cultural transformation can occur only through a continuous learning process. Culture is a collection of shared beliefs, values, behaviors, customs, and attitudes that define an individual. Sagy. et al. (2018) These cultural values affect culture that develops within a society; thus, if you want to determine a culture's identity, you can do so by examining its cultural values. Certain cultures will demonstrate their character if they attract the attention of non-members (Fitriyani. et al. (2019). Cultural transformation can be interpreted in two ways: (1) as the existence of cultural transfer efforts or as the process of cultural transformation from generation to generation and (2) cultural transfer is the process of passing on culture from one generation to the next without altering the essence of the culture, but rather as a means of preserving it, whereas cultural transformation is the process of passing on culture from one generation to the next by altering, reducing, or adding to the values of the community's culture based on it. It is self-evident that education is a civilizing process and that education is an integral part of the community's culture.

Sadulloh (2003) suggests that in this case, "education in a broad sense" refers to the process of "developing all facets of the human personality, values and attitudes, and skills." This means that the educational process that occurs throughout a person's life is a process of sustaining life, self-existence, and society. The educational process will continue to run parallel to human life in society. Human education is impossible without interaction within the community, both with the social environment and with the surrounding natural environment. Education is a component of human life in society in this case, as it is an effort to maintain and preserve the society's habits, values, and norms. The desire to continue living encourages humans to continue learning throughout their lives. Humans use learning in community life to solve a variety of problems.

The Bugis are one of the tribes in Indonesia that are well-known for their entrepreneurial spirit and abilities. There are Bugis people in almost every region of Indonesia, and the average occupation is that of a trader. There are also Bugis traders in several other countries. Numerous values exist in Bugis society that can foster numerous positive outcomes in entrepreneurial endeavors. Regrettably, research and studies on entrepreneurial life among certain ethnic groups in Indonesia, including the Bugis, remain scarce. Numerous provinces in Indonesia are inhabited by wandering Bugis tribespeople, and the majority of Bugis nomads work as businessmen, primarily in the food trade. This raises the question of why many Bugis immigrants work as traders and what factors contribute to their decision to become entrepreneurs. Immigrants from Bugis in Malang City are one of the areas where nomads still adhere to the Bugis culture. This is why the researcher is interested in determining the factors that influence the soul of a Bugis entrepreneur who decides to move to Malang City. The purpose of this study is to determine the factors that contribute to the Bugis tribe's entrepreneurship. The Bugis tribe was chosen based on the number of immigrants from Bugis who pursue entrepreneurial endeavors outside their area of origin. The purpose of this study

is to examine how the influence of immigrants’ culture, economy, education, and independence on their entrepreneurial success is reflected in their entrepreneurship.

2 METHODS

This is a quantitative study. Quantitative research methodology is the process of formulating research problems, developing research models, searching for data, obtaining solutions, testing solutions, analyzing research findings, and applying research findings Kuncoro (2011). The population studied in this study was Bugis nomads who work as traders and the number was approximately 250 people in Malang. The sample selection method used in this study was purposive random sampling, which is a technique for determining the sample based on the competencies the sample possesses concerning the research theme Martono (2012). Thus, while this method of purposive random sampling is a random sampling method, it still considers the competence of the sample selected following the study’s topic, or by selecting the sample based on the study’s specific objectives Arikunto (2018). The data collection instrument in this study was a questionnaire with a Likert scale. All statements in the questionnaire were scored on a 5-point scale, with 5 indicating strongly agree, 4 indicating agree, 3 indicating neutral, 2 indicating disagree, and 1 indicating strongly disagree. In Malang City, questionnaires were distributed to merchants of Padang restaurants owned by Bugis ethnic entrepreneurs. Multiple regression or Ordinary Least Squares (OLS) is used to analyze the data in this study. The regression model used in this study is as follows:

$$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \varepsilon$$

- Annotation:  
Y = entrepreneurship endeavor  
 $\alpha$  = constant  
b1–b5 = coefficient of determination  
X1 = economy  
X2 = culture  
X3 = heredity  
X4 = education  
X5 = independence  
 $\varepsilon$  = distraction variable

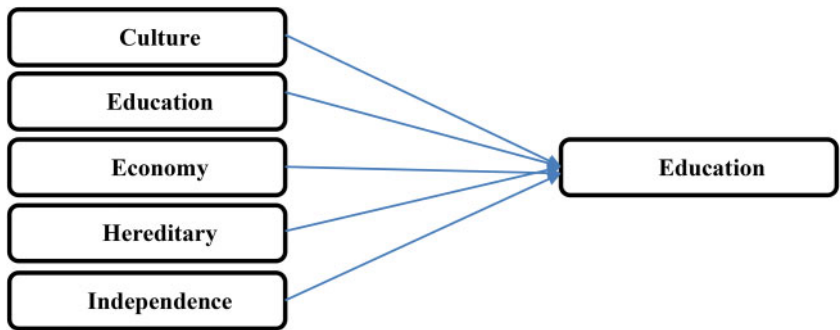


Figure 1. Research framework.

The research data collected through the questionnaire instrument was checked for classical assumptions to ensure validity, reliability, and the absence of bias, and then a hypothesis test consisting of the F test, T test, and R2 test is conducted (coefficient of determination). EVIEWS version 9 was used to process the data in this study. The following is the framework for this research:



### 3 RESULTS AND DISCUSSION

The research was conducted using questionnaires distributed to the research sample. We distributed questionnaires to 35 entrepreneurs operating in the typical food business of Padang City in Malang Raya. The following describes the condition of the research sample in this study:

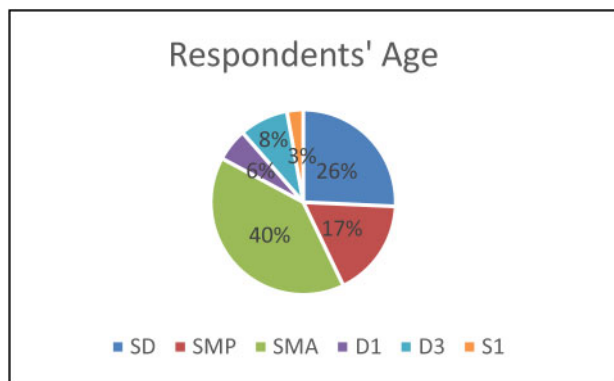


Figure 2. Research respondent age.  
Source: (Processed data, 2021).

According to the diagram above, the majority of respondents in this study were in the age range of 31–40 years, accounting for 40% or 14 people. While the age group of 61–70 years submitted the fewest responses (1 person), the age group of 61–70 years submitted the most. Meanwhile, the following information is based on the respondents' level of education:

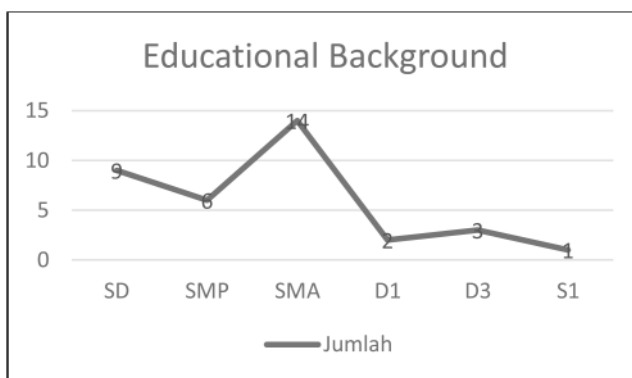


Figure 3. Respondents' education background.  
Source: (Processed data, 2021).

The majority of respondents with a high school education level (SMA) completed this questionnaire, followed by nine respondents with the second highest elementary school education level. While the F test is used to determine the results of hypothesis testing, the T-test and the resulting determinant coefficients are as follows:

The F test results in Table 1 above indicate that the probability value of F is 0.000001 0.05, indicating that all independent variables in this study (economics, culture, heredity, education, and independence) affect the dependent variable (entrepreneurship) simultaneously. When compared to the calculated F value of  $7.897993 > 2.28$  ( $F_{\text{table}}$  value), it is clear that all of the independent

Table 1. F test results, T test and coefficient of determination.

Dependent Variable: Entrepreneurship

Method: Least Square

Date: 10/01/21

Time: 02.35

Sample: 1 35

Include Observations: 35

Variable	Coefficient	St. Error	t-Statistic	Prob.
Culture	-0.028979	0.081176	-0.358941	0.7297
Education	0.3478510	0.074890	4.3839474	0.0000
Economy	0.0967721	0.073900	1.3283648	0.1934
Hereditary	0.0354483	0.073494	0.6839136	0.5123
Independence	-0.123259	0.058933	-1.482974	0.1524
C	20.219389	2.437494	8.1329403	0.0000
R-squared	0.273893	Mean dependent var		29.382938
Adjusted R-squares	0.163864	S.D. dependent var		3.3834921
S.E. of regression	3.0763473	Akaike info criterion		5.0628729
Sum squared resid	1324.221	Schwarz criterion		5.2876487
Log-likelihood	-368.0561	Hannan-Quinn criter.		5.0748642
F-statistic	7.897993	Durbin-Watson stat		1.7537642
Prob (F-statistic)	0.000001			

Source: (Processed data, 2021).

variables in this study have an effect on the dependent variable concurrently. Additionally, the T-test results in the table above indicate that:

1. Economic variables have no statistically significant negative effect on entrepreneurial spirit, as the probability  $T > 0.05$  and the calculated T value are  $-0.358941$   $1.97658$ . (T table). As a result, it was determined that the findings of this study invalidated Ha1.
2. Because the probability T is  $0.000001$  and the calculated T value is  $4.3839474 > 1.97658$ , the cultural variable has a significant positive effect on the entrepreneurial spirit variable (T table). As a result, the findings of this study were accepted as valid.
3. Because the probability T is  $0.1934 > 0.05$  and the calculated T value is  $1.3283648$   $1.97658$ , the heredity variable has no significant positive effect on the entrepreneurial spirit variable (T table). As a result, it was determined that the findings of this study invalidated Ha3.
4. Because the probability T is  $0.5123 > 0.05$  and the calculated T value is  $0.6839136$   $1.97658$ , the education variable has no significant positive effect on the entrepreneurial spirit variable (T table). As a result, it was determined that the findings of this study invalidated Ha4.
5. Because the probability T is greater than  $0.05$  and the calculated T value is  $-1.482974$   $1.97658$ , the independent variable has no negative effect on the entrepreneurial spirit variable (T table). As a result, it was also determined that the findings of this study invalidated Ha5.

Five independent variables were examined for their relationship to the entrepreneurship variable; only the cultural variable had a statistically significant positive effect on the entrepreneurship variable. That is, as more Bugis businessmen migrate in seeking a better life, the entrepreneurship of Bugis nomads' traders will grow. The regression results in this study contradict Purwanto & Ramadhan's (2016) assertion that the variables of heredity, independence, culture, and economy affect many Minang people who decided to open their business. Additionally, the findings of this study contradict Heryanto's (2011) research, which concluded that the reasons for Minang people to migrate and trade were ecological pressures, economic pressures, geographical pressures, low income from agriculture, and educational factors. However, the findings of this study corroborate

those of Effendi's (2019) research, which identified cultural factors as the most influential factors on traders' market behavior.

The findings of this study also corroborate those of Qosja & Druga (2015) who discovered that social and cultural factors are the most influential in the formation of entrepreneurial attitudes. The magnitude of culture's influence on the Bugis people's concept of life, including, in this case, the spirit of trading, cannot be denied, because the Bugis people are individuals with a personal figure who uphold customs and culture wherever they go. The Bugis people, who are well known for their business and trade abilities, have always upheld their customs and religion. The ability of the Bugis to trade is influenced by their ingrained tradition of wandering. The majority of the Bugis people's commerce is in the culinary arts (restaurants). The Bugis tribe's lineage is matrilineal, which means that women play a significant role in Bugis culture. Because of this condition, migrants who migrate to other areas gain experience that helps them mature and migrate to succeed. Even migrating to other places becomes a source of pride for the Bugis and boosts one's self-esteem. Typically, this migrating tradition is carried out in large cities throughout Indonesia, most notably on the island of Java Hastuti et al. (2015). One of the most important factors is a tribe's cultural and traditional factors. The Bugis are one of the tribes whose dominant cultural role is carried out in daily life.

The study's findings indicate that matrilineal culture affects the Bugis people's desire for entrepreneurship. Migrating through making trades is a method of acquiring knowledge and experience that will prove useful in more traditional structures. Additionally, matrilineal cultures have been shown to increase the number of female entrepreneurs. The Bugis' entrepreneurial abilities and skills are shaped by their culture. As the T-test results in Table 1 indicate, the level of education does not affect entrepreneurship of Minang businessmen, entrepreneurs from Bugis are similarly unaffected. This is in contrast to the findings of Brixiová et al. (2019), who assert that higher education, entrepreneurial training, and non-cognitive skills all contribute significantly to the performance of female entrepreneurs.

The desire to migrate and trade was believed to arise because of tribal culture. Bugis people are known for their adherence to religion and tradition regardless of where they live. Due to the insignificant influence of education, economy, heredity, and independence, becoming an entrepreneur does not require a higher education background, entrepreneurial parents, or entrepreneurial desires. The advancement of technology during the current industrial revolution era 4.0 enables anyone to become an entrepreneur without requiring a college education. Financial technologies (fintech) enable the execution of all business transactions Manta (2018). The existence of this fintech facilitates financial transactions Ritter & Pedersen (2019). As illustrated in Figure 3, the respondents to this questionnaire had a high school or elementary school education. Although the majority of Bugis businessmen in Malang Raya lack higher education, traders follow technological sophistication in terms of merchandise marketing by utilizing fintech and social media. Business digitization is a topic of public debate at the moment, although it is not a new concept Ritter & Pedersen (2019). The presence of digitalization, in this case, information technology, enables increased service flexibility and facilitates business collaboration synergies. This existence, it is undeniable, affects economic development Khuntia et al. (2019).

As shown in Table 1, heredity has no significant effect on the entrepreneurship of Minang businessmen. However, what the Bugis people have accomplished by migrating to gain life experience is critical to their success. Because experience is necessary for success, experienced individuals can enhance their skills and expertise Koster & Andersson (2018). Along with experience, psychological capital is the most critical factor in determining the sustainability of entrepreneurship Wang et al. (2018). Economic factors are also not a factor in the export of Bugis goods. Additionally, entrepreneurship motivation is influenced by a variety of factors, one of which is welfare. Increasing the economic welfare of the family is one of the motivations for someone to enter the business world directly. Without motivation, a business will be unable to progress. As Alma (2016) states, motivation is an encouragement or enthusiasm for action. Entrepreneurs use motivation to encourage creative and innovative efforts. This can be beneficial by developing existing ideas and resources to identify opportunities to enter the business competition, as well as a means of improving life. An

entrepreneur or business owner is extremely reliant on motivation, particularly to organize, operate, and manage business risks to earn a profit; motivation for them is physical and mental activity (Nitisusastro 2012; Pintrich & Groot 2012). According to Saiman (2009), several factors can motivate an entrepreneur, including profit, freedom, the pursuit of a dream, and independence. A person is said to be motivated to become an entrepreneur if they have the opportunity to control their own destiny and provide for their needs. Entrepreneurial motivation is critical in meeting the needs of an entrepreneur or businessperson, as defined by Maslow's hierarchy of needs theory, which includes the following: (1) physiological or basic needs (basic based), for which an entrepreneur can earn money independently to meet physical needs such as clothing, food, and shelter; (2) the need for safety (safety need), for which an entrepreneur can earn money independently to meet physical needs such as clothing, food, and shelter; and (3) the need for security (safety need). Each need will not be met perfectly; according to the article, each human need has a level and each fulfillment requires a process; consequently, the need will always arise even if the previous needs were not met optimally. In terms of entrepreneurship, factors affecting entrepreneurial motivation include self-confidence, innovation implementation, a sense of leadership, being effective and efficient, and being future-oriented by recognizing opportunities.

#### 4 CONCLUSION

The purpose of this study is to determine the factors that contribute to the Bugis group's entrepreneurship. The Bugis ethnic group was chosen based on the number of immigrants from Bugis who pursue entrepreneurial endeavors outside their area of origin. The purpose of this study is to examine how the influence of immigrants' culture, economy, education, and independence on their entrepreneurial success is reflected in their entrepreneurial spirit. This quantitative research was conducted by conducting surveys and in-depth interviews with 35 Bugis immigrants in Malang City. Immigrants who are members of the South Sulawesi Family Harmony (KKSS) Malang Raya were randomly selected. The finding of this study, with the existence of a culture that Bugis nomads believe, is one of the motivators for entrepreneurial success. This is because nomads adhere to certain principles to run their businesses and achieve success. The Bugis tribe's entrepreneurship is formed because it is inextricably linked to Sharia, which is upheld by nomads wherever they roam. Another finding indicated that education, economy, heredity, and independence had no discernible effect on entrepreneurship. As can be seen, an entrepreneur does not need a college education, entrepreneurship is not a genetic trait, and economic pressures do not require someone to be an entrepreneur. The strength of the nomads' principle is their capital for success in migrating to new areas, allowing them to successfully adapt to entrepreneurialism wherever they are. Additional research should incorporate additional variables that influence the formation of an entrepreneurial spirit, particularly among respondents who are nomads from specific ethnic groups, to accelerate knowledge development.

#### REFERENCES

- Al, R. 2014. *Kewirausahaan Teori dan Praktek. Cetakan ke 1*. CV. Pustaka Setia:  
Alma, B. 2016. *Kewirausahaan*. Alfabeta.  
Arikunto, S. 2018. *Prosedur Penelitian: Suatu Pendekatan Praktek*. PT. Rineka Cipta.  
Brixiová, Z., Kangoyec, T., & Saidd, M. 2019. Training, human capital, and gender gaps in entrepreneurial performance. *Economic Modelling*.  
Córcoles-Muñoz, M. M., Parra-Requena, G., & Ruiz-Ortega, Manta, O. 2018. Financial technologies (FinTech) instruments, mechanisms, and financial products. *Internal Auditing and Risk Management*, 4(52), 78–103.  
Effendi, N. 1999. *Minangkabau rural markets: their system, roles and functions in the market community of West Sumatra*. Universität Bielefeld.  
Fitriyani, D., Hendarso, Y., & Yunindyawati, Y. 2019. Adaptation of migrating Betawi People: Existences, forms, and developments. *Society*, 7(1), 45–48.

- Hastuti, P. C., Thoyib, A., Troena, E. A., & Setiawan, M. 2015. The Minang entrepreneur characteristic. *Procedia-Social and Behavioral Sciences*, 211, 819–826.
- Heryanto, H. 2011. The overview of cultural background of Minangkabau and Chinese customers in Padang, West Sumatra. *International Journal of Lean Thinking*, 2(1), 88–103.
- Koentjaraningrat. 2009. *Pengantar Ilmu Antropologi*. Rineka Cipta.
- Koster, S., & Andersson, M. 2018. When is your experience valuable? Occupation-industry transitions and self-employment success. *Journal of Evolutionary Economics*, 28(2), 265–286.
- Kuncoro, M. 2011. *Metode kuantitatif: Teori dan aplikasi untuk bisnis dan ekonomi*. UPP STIM YKPN.
- Martono, N. 2012. *Metode penelitian kuantitatif: Analisis isi dan analisis data sekunder*. Rajawali Pers.
- Nitisusastro, M. 2012. *Perilaku konsumen dalam perspektif kewirausahaan*. Alfabeta.
- Purwanto, & Ramadhan, A. N. 2016. Pengembangan software kearsipan elektronik berbasis web sebagai bahan ajar mata kuliah simulasi perkantoran. *Penguatan Hubungan Antara Pengembangan Keterampilan, Pendidikan Dan Ketenagakerjaan Generasi Muda*, 155–180. <http://eprints.uny.ac.id/41248/1/14Purwanto.pdf>.
- Qosja, E., & Druga, E. 2015. Entrepreneurial spirit and factors affecting it: Case study based on the students of the European university of Tirana. *International Journal of Social Sciences and Education Research*, 1(3), 820–834.
- Ritter, T., & Pedersen, C. L. 2019. Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management*.
- Sagy, O., Kali, Y., Tsaushu, M., & Tal, T. 2018. The culture of learning continuum: Promoting internal values in higher education. *Studies in Higher Education*, 43(3), 416–436.
- Saiman, L. 2009. *Kewirausahaan, teori, praktik, dan kasus-kasus*. CV. Salemba Empat.
- Supangkat Samidjo, G., Wibowo, S., & Sutrisno, S. 2016. Pengembangan desa wisata belajar berbasis potensi alam dan pertanian di Polengan, Srumbung, Magelang. *Berdikari: Jurnal Inovasi Dan Penerapan Ipteks*, 4(1), 10. <https://doi.org/10.18196/Bdr.415>
- Uyoh, S. 2003. *Pengantar Filsafat Pendidikan*. Alfabeta.
- Wang, Y., Tsai, C. H., Tsai, F. S., Huang, W., & de la Cruz, S. 2018. Antecedent and consequences of psychological capital of entrepreneurs. *Sustainability*, 10(10), 3–17.
- Watson, A., Dada, O., Wright, O., & Perrigot, R. 2019. Entrepreneurial orientation rhetoric in franchise organizations: The impact of national culture. *Entrepreneurship Theory and Practice*, 43(4), 751–772.

## Developing Android media for evaluating learning process of accounting in trading company and manufacture

Z. Bismihayati & D.M. Nuris\*

*Universitas Negeri Malang, Indonesia*

**ABSTRACT:** The research aims to develop an Android medium for evaluating the learning process on practice of accounting in trading companies and manufacturers, to test the appropriate media from the expert of instructional media, material, and users of the application, and to investigate the effectiveness of the media. The appropriateness of the media is taken from the total percentage of the questionnaire, and the effectiveness of the media is measured from the experiment in the classroom that uses one group sample pre-test and post-test. Experts' validations and users show that the media is appropriate to aid the learning process. The results show improvement in students' learning. Android media for evaluating the learning process effectively improves students' scores and is appropriate for teaching.

### 1 INTRODUCTION

Assessment activities in the 2013 curriculum on student behavior or performance changes are based on a scientific approach to the learning process and a critical need to improve student performance. Meanwhile, an authentic assessment recommended in learning activities is the ability of students to demonstrate their knowledge. Mastur (2017) argues that the assessment in the 2013 curriculum is carried out in the form of authentic and non-authentic assessments. Some characteristics are learner-centered and are an integrated part of learning, are contextual and rely on learning content, and use a variety of methods/procedures. An authentic assessment carried out must be comprehensive and can measure learning objectives. Arikunto (2013) states that authentic assessment is a significantly meaningful measurement of student learning outcomes for attitudes, skills, and knowledge. Authentic assessment is carried out on a class-based assessment consisting of tests and non-tests. Test assessments, also called paper and assessments, are generally used for cognitive assessments based on short descriptions, multiple-choice, true-false, and other assessments. Meanwhile, non-test assessments can be test performance, product assessment, project, and portfolio assessment. As planners and implementers of learning, teachers must choose and plan various research instruments and methods to measure students' abilities appropriately.

The fact that was obtained during the initial observation at SMK Negeri 1 Malang was that the school had implemented the 2013 curriculum by conducting an authentic assessment, which included an assessment of the domains of attitudes, knowledge, and skills, although not completely. One of them is on the subject of practical accounting for service, trade, and manufacturing companies. This subject is included in the main subjects that must take in class XI and as a provision before continuing the accounting practicum material for manufacturing companies in class XII. The formative assessment of the skills aspect (practice) is carried out by giving questions in the form of the company's financial transaction data, which students must then process into a complete company cycle. As for the formative assessment of the knowledge aspect because the criteria for

---

\*Corresponding Author: [dudung.ma'ruf.fe@um.ac.id](mailto:dudung.ma'ruf.fe@um.ac.id)

passing this subject are seen from knowledge assessment and skills assessment problems arise in the formative assessment because students' average daily test score is lower than the daily practice test. It can be seen from the list of daily test scores for the knowledge domain that there are 10 to 12 students in each class, who score below KKM (Minimum Completeness Criteria). The impact of these problems is that the teacher must do remedial tests until all students score good. The lesson hours that should be used to discuss the following material are often cut off for remedial. While in class XI, there are also four months of practical work activities that cut the effective hours. Therefore, the teacher must complete all the material for class XI before the students leave for internships. Some materials have not been delivered because some of the time is wasted on remedial activities.

Based on interviews conducted with several students, information was obtained that the cause of the low value of the knowledge domain test (theory) was the lack of practice in working on knowledge questions in the form of theory. Thus, students experienced difficulties in learning the material and mastering the concept of the material. In accounting practicum subjects, students are accustomed to doing practice questions in the form of working on the company's accounting cycle to feel unfamiliar while doing daily tests in the form of multiple-choice. Students feel lazy when asked to do exercises—questions to hone their knowledge. In addition, the evaluation method used by the teacher is still conventional by doing the questions in the textbook, and students are asked to answer on the worksheets that have been provided (paper-based), which makes students feel bored. To overcome the constraints of the lack of value aspects of knowledge, learning difficulties, and mastery of material concepts, continuous practice questions are needed, which are carried out during learning and can be used wherever students are located. Thorndike's learning theory states that learning is essentially a process of forming stimulus and response. According to the theory in this study, the bond between the stimulus (practice questions) and the response (answer) can be achieved by students if it is carried out continuously so that it can support students in understanding the concept of material in accounting subjects for service, trading, and manufacturing companies.

The implementation of continuous practice questions must be interesting and balanced with the use of technology by students, for example, in the form of an Android-based evaluation media. Excellent and exciting media is expected to make students enthusiastic to carry out the process of practicing questions independently. It can be packaged in an attractive, open-source, and can provide a new atmosphere that is not monotonous in learning to do practice questions, provide exciting learning ideas, and indirectly increase the motivation of participants. In addition, based on research by Foti & Jomayra (2014), it is stated that 45 out of 46 students use their smartphones for academic purposes. About 91% of students feel very comfortable using their smartphones, and 97% use their smartphones several times a week. The final product of using Android in this study is called AKSi "Asah Accounting," which has features of various types of practice questions such as multiple-choice, true or false, matching, and short essays and discussion of several questions.

Result of researchers' observations while at SMK Negeri 1 Malang, this school supports the application of Android-based learning evaluation media as a complement to the learning process because of the availability of a Wi-fi network that can be accessed quite smoothly by teachers and students. All students are also allowed to bring their smartphones during learning to do the practice questions available in the AKSi application wherever they are. Meanwhile, what hinders the application of this Android-based learning evaluation media is that students' smartphones have different specifications, so application errors may occur. The characteristic that distinguishes this application from others is that the questions provided are more varied and the questions presented follow the trading company's accounting syllabus. In addition, this application has the advantage of a test feature that can be used for daily tests and can only be opened by students if they have received a barcode from the teacher. After that, a student logs in to the application to work on the automatically randomized questions. Students can use this learning evaluation media to work on practice questions independently wherever they are and make it easier for teachers to evaluate aspects of knowledge.

## 2 METHODS

The method used is a research and development method (Research & Development). This is an industry-based development model. The findings of this research are used to design new products, and new procedures, which will then be systematically field-tested, evaluated, and refined until the research findings meet specific criteria of effectiveness, quality, or standards. Research and development will produce the product that is most suitable for use. It is more likely to be applied as a learning medium during the learning process if it has validated the material expert and media expert. They do evaluate the effectiveness and efficiency of the product to be developed. Research and development in this study are developing an Android-based learning evaluation application in the accounting practicum subjects of service, trade, and manufacturing companies.

The research and development method used in this study was adapted from Borg and Gall, consisting of 10 steps. Steps consist of information collecting, planning, developing preliminary from product, preliminary field testing, primary product revision, main field testing, operational product revision, operating field testing, final product revision, and dissemination and implementation. According to Borg and Gall (1983), pictures of research and development steps can be seen in Figure 1.

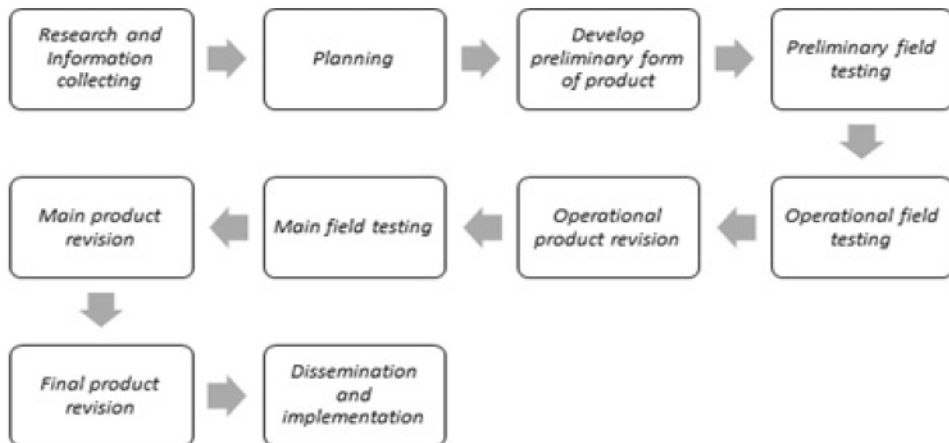


Figure 1. Borg and gall design.

## 3 RESULTS AND DISCUSSION

In this stage, the researcher has designed a product design intended to achieve the goals that have been formulated previously. There are several things that researchers do before designing the features available in the learning evaluation media. Researchers follow the steps of preparing questions, which include preparing a syllabus for accounting practicum subjects for service, trade, and manufacturing companies, formulating material summaries, compiling grids, compiling a collection of practice questions, making storyboards, and developing the media itself. A collection of practice questions is arranged based on the syllabus and grid made and adapted to achieve the essential competencies. Some practice questions are distinguished based on the essential competencies to be achieved, and others are distinguished based on the types of questions. Each group of questions is arranged according to the types of questions made with the Android Studio software while still considering the characteristics of the accounting practicum subjects of service, trade, and manufacturing companies. The types of questions used in the AKSi application include multiple-choice questions, true or false, matching, and short essays. In addition, the questions are arranged based



on the cognitive domain in Bloom's taxonomy, namely the difficulty level of C1 knowledge, C2 understanding, C3 application, C4 analysis, C5 synthesis, and C6 evaluation. The total number of questions in the AKSi application is 283, consisting of 163 multiple choice questions, 40 matching questions, 40 true or false questions, and 40 short essay questions. In addition to the syllabus, the researcher also uses several accounting textbooks as a guide for preparing questions, namely, service, trade, and manufacturing accounting practicum books and several online modules obtained from the internet.

The storyboard is a series of stages made by researchers to overview the elements used to make products. This storyboard acts as a basic description of a product that researchers have developed. The following is a storyboard view of the AKSi application.

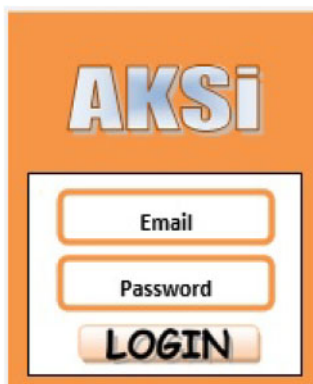


Figure 2. Login page.



Figure 3. Main page.

At this stage, evaluation media is developed according to the results of field studies that have been carried out by previous researchers so that they can produce viable products and meet the needs of students. The features contained evaluation media and adapted to the needs of students who have been known from the field study process. After producing a finished product in AKSi (Asah Accounting), a researcher will focus on material validation and evaluation. At this stage, the researcher collects quantitative and qualitative data from material experts and media experts as input and improvements to the developed AKSi application. Expert validation consists of three experts, two for material experts and one for media experts.

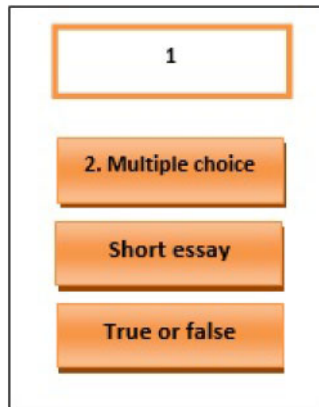


Figure 4. Questions group.

The average material validation results show that the material expert validation has an average value of 91.50%. It means that all evaluation materials and questions contained or presented in the AKSi “Accounting Asah” application can be used as an Android-based learning evaluation medium for accounting practicum subjects for service, trade, and manufacturing companies. The results from media experts stated that the validation results obtained a value of 87.50% in the learning design aspect. It shows that the evaluation questions contained in the AKSi application follow the essential competencies, learning objectives, and material for the accounting cycle of trading companies. As for the visual communication aspect, the results obtained are 92.50%, which means that the text, layout, background, type, and font size are well organized and attractive, and the design of the AKSi application does not interfere with application users. In the feedback aspect, the validation results obtained 96% results, which means that the feedback given by the AKSi application is straightforward to understand and can be directly accepted by students. The feedback obtained can provide reinforcement and motivate students to work on the questions contained in the application. Meanwhile, the last aspect, namely, others, obtained a value of 90%, indicating that the AKSi “Asah Accounting” application can benefit users, facilitate the learning evaluation process, and be used as a complement to learning. Results of calculating the average percentage score of quantitative data derived from material expert validation. The results obtained are 91.50%, so it can be concluded that AKSi “Asah Accounting” is appropriate as an Android-based learning evaluation medium for accounting practicum subjects for service companies, trade, and manufacturing.

Learning evaluation media consist of conventional media (paper-based) and information technology-based media such as Android. The AKSi “Asah Accounting” media developed as an evaluation media for Android-based learning is included in information technology-based multimedia. In this learning evaluation media, students can learn independently by reading the summary of the material and working on the questions that have been provided. In its Development, this research is based on behavioristic theory, where students are led to make positive changes by the interaction between stimulus and repeated response. Schunk (2012) states that learning is essentially a process of establishing a relationship between stimulus and response. In this study, the stimulus is the practice questions contained in the application. The responses are answers that students can answer by working on practice questions on an ongoing basis. The principle of the law of practice shows that the main principle in learning is repetition. The more often students repeat the practice questions, the better their understanding of the concept of the material will be, which is the goal of expected behavior change. This Android-based learning evaluation media is online and offline, operated on each student’s smartphone. Making learning evaluation media is adjusted to the needs of students where whether or not learning evaluation media is needed for students can be known by conducting interviews and observations about the knowledge, skills, or attitudes desired by students (Sadiman et al. 2010). Making learning evaluation media tailored to

the needs of students by looking at the target users of learning evaluation media. Media “Asah Accounting” provides features that make learning evaluation more exciting and interactive. These features include the availability of material summaries, various types of practice questions, online formative tests, backgrounds, colors, font types and sizes that can be adjusted as desired, scoring systems, and automatic examinations.

Based on students’ perceptions in the limited field test questionnaire, the “Asah Accounting” learning evaluation media is exciting and valuable for accounting learning evaluation activities. Besides, students can practice working on the provided questions, which are also equipped with material summaries so that understanding the concept is stronger student material. This is supported by the results of research conducted by Rahayu and Listiyadi (2014) which shows that learning evaluation media helps students to study hard and try to answer tests correctly, and reduce cheating during exams in class X Accounting at SMK Negeri 2 Kediri. Interesting and useful learning evaluation media can encourage students to use learning evaluation media on an ongoing basis, in addition to the features contained in the AKSi “Asah Accounting” media. It can help students learn independently through the material summary feature and a collection of practice questions to increase students’ knowledge and improve student learning outcomes.

According to Pramono (1996), the aspects contained in technology, information, and communication (ICT)-based learning media include aspects of software engineering, learning design, visual communication, interactivity, feedback, and others. Other. The aspect of software engineering shows that the media is efficient and effective for users, makes it easier for application users, is free from errors, and the reliability for learning evaluation media. The learning design aspect shows that the learning evaluation media has clear learning objectives according to essential competencies, and is easy to understand, systematic, and coherent. In visual communication, several indicators show that the media is communicative, straightforward, and the visual appearance of the learning evaluation media. The interactive aspect has indicators that show that the learning evaluation media can respond to the wishes of students, can increase students’ motivation, activeness, and involve them in the learning process. In the feedback aspect, the indicators they have show that the media can provide feedback in the form of the desire of students to learn and work on the questions contained in the application. Students can find out their abilities through the number of questions that have been answered.

Besides being seen from the theoretical aspects above, this study also pays attention to practical aspects, including studies from previous research and validation from experts. The results of previous research by Rolisca & Achadiyah (2014) stated that the learning evaluation media was feasible to use. According to student needs and suitable for daily tests and other conventional tasks to eliminate student boredom, can develop Android-based learning evaluation media, can be developed in accounting learning in secondary schools. The Development of Android-based learning evaluation media, which developed, is in line with the learning evaluation function as a formative assessment or formative evaluation. The evaluation carried out is used to monitor or monitor students’ learning progress to provide feedback, both to students and teachers, so that formative evaluation can be carried out to determine the level of achievement of the learning objectives of each basic competency.

The Development of Android-based learning evaluation is also based on the principles of learning evaluation by Sudaryono (2012) which consists of; (1) the continuous principle means that by using the AKSi evaluation media formative evaluation can be carried out routinely and continuously so that it can provide an overview of the progress of students within a certain period of time and can see the extent to which students achieve learning objectives; (2) the overall principle, which means that the AKSi evaluation media can be used to fully evaluate the attributes that must be measured; (3) the principle of objectivity, which means that the AKSi evaluation media must have a degree of freedom from teacher bias personally, this is evidenced in the assessment system contained in the AKSi media which is already automatically from the Android system so that it is free from all kinds of assessment bias; (4) The principle of validity and reliability which means that the AKSi evaluation media used actually measures what it is supposed to measure and the extent to which the

measurement is without bias and therefore guarantees a measurement that is cross-time and across various items in the instrument; (5) the principle of using criteria, which means that teachers also need to set benchmarks or criteria that will be used as material for comparison of measurement results, where teachers can compare measurement results from Android-based evaluations with conventional evaluations; (6) the principle of usefulness which means that the AKSi evaluation media must be helpful for students and teachers and have use values both directly and indirectly.

#### 4 CONCLUSION

The Development of Android-based learning evaluation media uses the Borg and Gall learning model because the development model is simpler without reducing the quality of the media produced. The Borg and Gall development model has several steps: preliminary studies, planning, product design, expert validation, revision of expert validation, limited product trials, product revisions, and final products. In the preliminary study, two stages were carried out, namely, literature study, and field study. During the field study, the researcher collected information through observation and interviews. It was found that there was a problem in the formative assessment evaluation activities for the knowledge aspect that must be overcome. Apart from field studies, the researchers also conducted a literature study by reviewing the scope of a product, the extent of use, conditions support so that the product can be used or implemented optimally, and its advantages and limitations. The results of the preliminary study are the basis for the next stage, namely the planning stage. One of the activities carried out by researchers in planning is the formulation of the objectives of developing this learning evaluation media. The next step is product design, which is carried out by designing product designs intended to achieve the goals formulated previously. Product design is carried out by compiling a syllabus for service, trading, and manufacturing accounting practicum subjects, formulating material summaries, compiling a collection of practice questions, making storyboards, and developing the media itself. This step produces Android-based learning evaluation media products for practical accounting subjects for service, trade, and manufacturing companies.

#### REFERENCES

- Arikunto, S. 2013. *Dasar-dasar evaluasi pendidikan*, Edisi 2. Jakarta: Bumi Aksara.
- Borg, W.R. & Gall, M.D. Gall. 1983. *Educational research: An introduction*, Fifth Edition. New York: Longman.
- Foti, M.K. & Jomayra, M. 2014. Mobile learning: How students use mobile devices to support learning. *Journal of Literacy and Technology*, 15(3), 58–78. [www.literacyandtechnology.org/uploads/1/3/6/8/136889/jlt\\_v15\\_foti.pdf](http://www.literacyandtechnology.org/uploads/1/3/6/8/136889/jlt_v15_foti.pdf).
- Mastur, M. 2017. Implementasi Kurikulum 2013 dalam Pembelajaran di SMP. *Jurnal Inovasi Teknologi dan Pendidikan*, 4(1), 50–64. Dari <https://journal.uny.ac.id/index.php/jitp/article/view/10131/9313>.
- Pramono, Y.G. 1996. *pengembangan pembelajaran berbantuan komputer dalam pokok bahasan "present perfect tenses" mata kuliah struktur II Widya Mandala studi pendidikan bahasa inggris*. Tesis tidak diterbitkan. Malang: Pascasarjana Universitas Negeri Malang.
- Rahayu, E.E. & Listiyadi, A. 2014. Pengembangan Alat Evaluasi Pembelajaran Berbasis Information and Communication Technologies (ICT) pada Materi Mengelola Dokumen Transaksi. *Jurnal Pendidikan Akuntansi*. 2(2), 1–7. Dari <http://id.portalgaruda.org/index.php?ref=browse&mod=viewarticle&article=179624>.
- Rolisca, R.U.C & Achadiyah, B.N. 2014. Pengembangan media evaluasi pembelajaran dalam bentuk online berbasis e-learning menggunakan software wondershare quiz creator dalam mata pelajaran akuntansi SMA. Brawijaya Smart School (BSS). *Jurnal Pendidikan Akuntansi Indonesia*, 7(1), 41–48. <https://journal.uny.ac.id/index.php/jpakun/article/view/2706/2264>.
- Sadiman, A.S., dkk. 2010. *Media pendidikan: Pengertian, pengembangan, dan pemanfaatannya*. Jakarta: PT Raja Grafindo Persada.
- Schunk, D.H. 2012. *Learning theories: An educational perspectives*, 6th Edition. New York: Pearson Education Inc.
- Sudaryono. 2012. *Dasar dasar evaluasi pembelajaran*. Yogyakarta: Graha Ilmu.

## Are masks against COVID-19 only for lecturer workers?

H.E. Bagijo

*Wisnuwardhana University of Malang, Indonesia*

*Department of Manpower and Transmigration of East Java Province, Indonesia*

H.D. Santoso\*, S. Suseno, I.S. Wahyuni & L. Tianto

*Department of Manpower and Transmigration of East Java Province, Indonesia*

B.C. Putro

*State University of Malang, Indonesia*

L.U. Sadieda

*State Islamic University Sunan Ampel of Surabaya, Indonesia*

**ABSTRACT:** The government has formulated various policies and made labor laws and regulations related to efforts to overcome COVID-19. The novelty of this research is the discussion of the stages of protection for workers, which is carried out continuously by various parties related to the COVID-19 pandemic in the educational environment. The campus is a place to work for a lecturer. Therefore, it is necessary to control the danger of COVID-19 by implementing this system. The purpose of writing is how the educational process can move from normality by implementing a blended learning system. The success of efforts to prevent the spread of COVID-19 is the government's goal in creating a harmonious and productive work atmosphere in Indonesia.

### 1 INTRODUCTION

Currently, the COVID-19 pandemic's end cannot be ascertained. The pandemic has had a major negative impact on all fields such as development, economy, sports, education, transportation, social, and culture. The COVID-19 pandemic has had an impact on changing the normal habits of society that have been formed previously so new habits have been started as an effort to prevent the spread of the COVID-19 virus in Indonesia. As the COVID-19 pandemic progresses, not all levels of society can accept new habits that must be implemented, this creates gaps in various spheres of society with different main professions as an income capital. Not only does it cause disparities in society, which mainly leads to the economy, but education and health are two fields that must work under any conditions. Complying with the established regulations, individual self-awareness is an important effort to fight and survive in the conditions of the COVID-19 pandemic.

The government is trying its best to establish new regulations related to current conditions due to the COVID-19 pandemic and encourage the public to try to prevent the spread of COVID-19. The forms of efforts that have been implemented in the form of Large-Scale Social Restrictions, lockdowns, social distancing, physical distancing, and simultaneous vaccinations, the implementation of 5 actions include; wearing masks, washing hands, keeping distance, staying away from crowds, and reduce mobility. Based on the research from 130 participants, it was found that some people have implemented several health protocols such as wearing masks, implementing social distancing, physical distancing, and applying to coughing and sneezing etiquette. The application

---

\*Corresponding Author: [hendrawandendy@gmail.com](mailto:hendrawandendy@gmail.com)

of the health protocol in the form of hand washing has not been carried out properly. A total of 52.3% and 56.9% did not wash their hands and carry hand sanitizers respectively (Pinasti 2020). Research on 50 respondents showed that the level of knowledge of COVID-19. 23% of respondents were in fairly good behavior, there was no relationship between age, gender, and the type of work for the prevention of COVID-19.

Until now, the government has tried various engineering policies to fight and control COVID-19, but it is still contrary to the real behavior of the people who still do not comply with the policies implemented. The disorganized behavior of the community has an impact on the difficulty of controlling COVID-19 in various spheres including education. Education currently still applies online learning with all the difficulties for both educators and students. Models and strategies are adapted to the characteristics of students and the conditions of the COVID-19 pandemic. Online learning, certainly provides advantages and disadvantages. The main thing is that it affects the psychology of students. It is without a direct social process between the educational environment, mental suppression, and motivation to learn between the two components. The Learning Management System is a strategy for the continuity of education during the COVID-19 pandemic. Various models can be run with the availability of sufficient facilities and adequate competence. So, the online and face-to-face learning process can go hand in hand with adjusting government policies during the COVID-19 pandemic.

## 2 LITERATURE REVIEW

### 2.1 *Hazard control hierarchy*

The level of spread of COVID-19 in conditions like this needs to be watched out for considering the dangers caused by covid-19. A workplace is a crucial place where many workers are on location to work for several hours and have the potential to spread COVID-19. This pandemic is still the main topic to be discussed and find solutions for the continuity of direct activities considering its impact on the psychology of workers. The danger of COVID-19 can threaten if health protocols are not implemented properly. The conditions like this can be addressed with preventive measures against the dangers of the spread of COVID-19 that are pursued by individuals, agencies, and the community. Preventive measures as a form of hazard control can be described in the concept of hazard control.

There is also the concept of safety in Human Factors and Ergonomics, engineering, and other disciplines known as the hierarchy of hazard control. It guides on a range of strategies to reduce harm and prevent or limit injury. Strategies are ordered from top to bottom. The best strategy for controlling hazards is to design, eliminate, and reduce, them as a form of avoiding injury. This method was successfully implemented so that the hazard could be substantially eliminated or reduced.

Next, is the safety decision hierarchy (Manuele 2006).

1. Problem Identification
  - a) Identifying and analyzing hazards
  - b) Assessing risk
2. Considering the action
  - a) Eliminating hazards and risks through system design and redesign
  - b) Reducing risk by setting
  - c) Incorporating safety devices
  - d) Providing a warning system
  - e) Using administrative controls
  - f) Providing personal protective equipment
3. Making decisions and taking action
4. Measuring Effectiveness

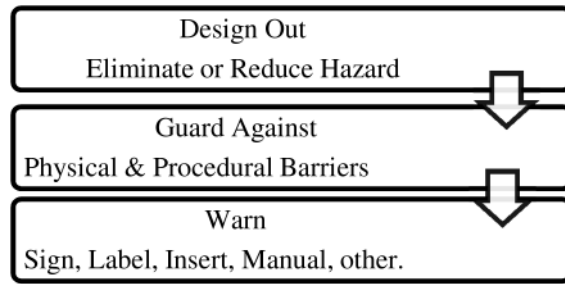


Figure 1. Basic hazard control hierarchy.  
(Wogalter & Regulations 2019).

Furthermore, the table below shows arrangements that can be considered for implementing learning with direct learning by complying with government regulations related to the COVID-19 pandemic condition as a COVID-19 control measure.

Table 1. Components of the hierarchy for blended learning.

Components of the Hierarchy				
Elimination	Substitution	Engineering Controls	Control Administrative	Personal Protective
Track and confirm student's vaccination history	Gradual vaccination at the relevant agencies	Ensure the availability of blended learning facilities (Student and lecturer side)	Games for short physical activity	Mandatory 3 actions; wear masks, wash hands, keep your distance
Survey history and disease risk	Learning rules based on health protocol	Gradual, thorough socialization	Applying blended learning	
	Form a special task force	The special task force controls the constraints	Regular the change of participants in live sessions	

### 3 RESULTS AND DISCUSSION

#### 3.1 *Blended Learning (BL)*

Technology has reached many advances that can be used according to user needs. In particular, e-learning has gone through a long history of being able to transform education and training. Previously, education and training were carried out traditionally or full face-to-face, but in recent years the internet and online teaching methods have become options and solutions ranging from synchronous and asynchronous training, online classrooms, online certifications, online meetings, and unconsciously effective for personalizing the experience learning for participants.

The use of e-learning to participants indirectly teaches the development of technology in outline, the use of applications, technical stages, and resolves small obstacles. The use of e-learning offers

advantages in the form of allowing participants to study independently if there is a lack of interest in a particular class, without time restrictions, reducing the cost of accommodation for training, and allowing access to material forever online. The proper use of e-learning affects the initial goal so that it can be achieved from the cognitive and practical side. Through e-learning by packaging, the e-learning system properly will facilitate various activities that can be done; online discussion, online test, online evaluation, and online practice basis (early practical experience).

Blended learning is part of e-learning that combines online, offline, and face-to-face teaching methods carried out by educators such as lecturers on campus. The need to recognize blended learning is not too complex. Blended learning is a combination of hands-on learning and online learning. The basic principle is face-to-face verbal communication and online written communication that is maximally integrated in such a way. Dwiyogo (2018) blended learning combines face-to-face and computer-based learning, meaning that learning carried out with a technological approach is combined from face-to-face learning resources between students and teachers, including things that are loaded on media such as computers, smartphones, channels of television, video conferencing, and other possible electronic media. Macdonald (2008) classifies several components of blended learning, starting from the tools and materials needed including (1) Asynchronous forums, (2) Face-to-face interaction, (3) Course websites, (4) Online quizzes or assessments, (5) Email (6) Synchronous conferencing, (7) PowerPoint slides, (8) Phone support (9) Digital sound and movie (10) Print materials, (11) Digital lecture delivery, (12) Video conferencing (13) Audio conferencing.

Garrison & Vaughan (2008) classifies the dominant types of communication-related to face-to-face and online learning. This helps to understand which types of communication predominate under different cognitive activities. The inquiry approach through blended learning can be used to integrate interconnected forms of communication (1) Before direct learning, (2) Direct learning session, (3) After the direct learning session, (4) Preparation for the next direct learning session. The learning component in many cases can support the delivery of knowledge and skills needed to improve performance in learning that illustrates the information and knowledge that can be conveyed to students. Blended learning covers a basic knowledge solution component that influences attitudes, concepts, process skills, and procedures (Bielawski & Metcalf 2006). The solutions are (1) Attitudes, developed to help understand or interpret other parts of context knowledge, (2) Concepts, including generalizations and structures into more detailed pieces of knowledge that can be formed or placed to convey the context as a whole, (3) Skills, explicit capabilities that must be possessed by individuals to support the implementation of complex tasks, (4) Process, inter-linking tasks that lead to certain achievements, (5) Procedures, elements that become the reference for work stages which can be completed.

The implementation of blended learning can be done effectively. There are several keys, namely formalized, systematic, repeatable, scalable, manageable, adaptable, standardized, integrative, and synergistic (Bielawski & Metcalf 2006). Formalized, is based on good research and development in the field of advanced learning. Repeatable is the solution that can be widely applied. Scalable is the solution that is not a prototype but scalable to implement. Manageable, is easy to manage as internal training. Adaptable, can accommodate a variety of learning styles. Standardized, is standardized stages. Integrative involves training or collaborating models. Synergistic is combining complementary elements of online learning.

### 3.2 *The effectiveness of BL implementation*

Effectiveness is something that shows the level of success, for example in a study, the achievement of goals is measured by the quality that has been previously planned. It can be said that the more goals are achieved, the more effective they can be. This section will describe several research articles that contain physical education learning that uses blended learning models that provide effectiveness in learning. The use of blended learning has reached various subjects. Physical education is taken as the material for this writing because in practice it always involves the cognitive and practical aspects directly so that it can be a source of reference.



The first research was conducted on 40 students for one semester or 16 meetings with a quasi-experimental research method which showed that there were differences in the improvement in learning outcomes of test subjects and exercise measurements between students who were taught using traditional learning and students who were taught by blended learning. It can be concluded that blended learning is more effective than traditional learning (Kastrena et al. 2020).

Second, research on 68 students using an experimental method exhibited the results of this study showed a clear difference in supporting blended learning in the cognitive field, in athletic subjects. These results are consistent with other studies which also concluded that the application of blended learning provides better results than traditional teaching (George & Spyros 2016).

Third, research of 61 respondents using the pre-experimental static-group comparison method showed that the results of the study in the form of blended learning were needed to improve the cognitive side and understanding of skills in the game of handball. Students have achieved improvements in strategy and tactics to solve problems and make decisions during the games (Jani et al. 2018).

Fourth, research on 30 to 40 students shows that design approach and delivery methods facilitate students. The survey results show student satisfaction with new methods, teaching, and learning, it is believed that such an approach improves the quality of learning including interaction and physical learning outcomes (Zhang et al. 2018).

Finally, research on 133 respondents showed the effectiveness of blended learning was 86.09%. There are still certain obstacles experienced by many students regarding internet access. It is very important to facilitate and prepare for learning that will be carried out online and offline so that the blended learning method can be applied (Hendriansyah et al. 2020).

### 3.3 *Effect of physical activity*

Physical activity is an important part of the pattern to maintain body fitness. Physical activity that leads to sports is an activity that is of interest to many people by involving games and teamwork. Indirectly, the body has gone through a period of good development for internal organs, including cognitive has a role. Physical activity has many benefits, especially for maintaining a healthy body, mental health, and social well-being. The three aspects can be obtained only by physical activity through games in sports. Physical activity acts as a treatment or prevention of disease risk factors due to lifestyle, decreased organ function, or genetics, even decreased quality of life and premature death (Rueggsegger & Booth 2018). Regular physical activity can improve various risk factors for cardiovascular disease such as dyslipidemia or hypertension (Nystoriak & Bhatnagar 2018). Physical activity modulates the immune system so that susceptibility to viral infections depends on the volume and intensity of physical activity, increasing immune capacity and inflammation, while exhausting physical activity further suppresses immune function (Nieman & Wentz 2019). Physical activity and good physical fitness are also considered preventive measures against COVID-19 (Burtscher et al. 2021).

The current condition of the COVID-19 pandemic has caused a decrease in the level of physical activity in the community due to regulations and policies to suppress the spread of the COVID-19 virus in the community. Other efforts from the government are recommended and need to be adhered to. Self-awareness is still needed to apply a lifestyle and be active as an independent effort to maintain the immune system through physical activity. Routine physical activity has the effect of controlled disease activity, controlling cardiovascular risk history, physically trained and functionally maintained people witness reduced mental stress and improved quality of life (Pinto et al. 2020). The lockdown period reduced the US population's Physical Activity Metabolic Equivalent of Task (PA MET) level by 18.2%, it was highly rated that the use of fitness apps helped buffer the decline, and further research is needed on actual app usage (Yang & Koenigstorfer 2020). Physical activity has a positive impact on psychological health, which increases self-esteem and resistance to stress and depression as well as anxiety (Maugeri et al. 2020).

The condition of easing of the lockdown in certain countries was found to be in a negative mood, there was a rapid increase in incidence after the easing. No difference was found two weeks later,

but likely reflects the relatively small difference in the survivor's lockdown restrictions (Ingram et al. 2020). Resilience is an important part that affects changes in physical activity. High levels of resilience were associated with lower symptoms of anxiety and depression in the group with less PA, which did not change, and increased with lockdown (Anyan et al. 2020). Promoting CL for increasing resilience factors such as self-confidence and social support can protect against mental health problems. Resilience in question can be defined as context, population, risk, promotion, and outcome factors (Fergus & Zimmerman 2005). Resilience is not a quality of someone who is always present in various situations. Before an individual change's behavior for mental health, he must first know the conditions of the COVID-19 pandemic, the dangers of which are greater than the potential loss of the benefits of exercise for a short time (Morrey et al. 2020). Given the spread of COVID-19, staying at home is a fundamental step to stop the current pandemic. Maintaining physical regularly is a strategy by individuals as a preventive measure against the COVID-19 emergency.

The best decision for education with the current conditions is prioritizing the aspects and risk factors of various components of education to get the right path. During the COVID-19 pandemic teachers experienced a high degree of difficulty due to workloads during restrictions, health issues among teachers were important to facilitate physical activity while at home, and training in mixed or online education was important for job development (Aperribai et al. 2020).

#### 4 CONCLUSION

The COVID-19 pandemic has had a major impact on education and health. The two fields under all conditions must keep running. Various efforts have been put in place by the government to control the COVID-19 pandemic so far. 'What if a blended learning system is implemented?' in the condition of the COVID-19 pandemic that has been running for more than a year. Of course, adjusting the rules of health protocols and limiting the number of learning participants while learning directly by implementing a systematic turnover system. This step helps control the COVID-19 pandemic in addition to the health protocols that have been implemented so far. This step takes into account the psychological side of learning participants considering that learning is only applied online, it affects the mentality between the two learning components.

Blended learning is conducted with online, offline, and direct meeting. Next, 'what if the learning in the previous direct stage did little physical activity?'. Outdoor physical activity is highly recommended because air circulation is not hampered; direct contact with sunlight, and areas can be considered for physical distancing. The design of various physical activities triggers participants' interest in following directions, which can be implemented in the form of small games. The positive effect of small activities provides psychological freshness and is physically active, although it does not have a big effect.

#### REFERENCES

- Anyan, F., Hjemdal, O., Ernsten, L., & Havnen, A. 2020. Change in physical activity during the coronavirus disease 2019 lockdown in Norway: The buffering effect of resilience on mental health. *Frontiers in Psychology*, 11(December), 1–8. <https://doi.org/10.3389/fpsyg.2020.598481>
- Aperribai, L., Cortabarría, L., Aguirre, T., Verche, E., & Borges, A. 2020. Teacher's Physical activity and mental health during lockdown due to the COVID-2019 pandemic. *Frontiers in Psychology*, 11(November), 1–14. <https://doi.org/10.3389/fpsyg.2020.577886>
- Bielawski, L., & Metcalf, D. 2006. Blended eLearning: Integrating knowledge, performance support, and online learning. In *Academy of Management Learning & Education* (First Edit, Vol. 5, Issue 2). HRD Press, Inc. <https://doi.org/10.5465/amle.2006.21253793>
- Burtscher, J., Millet, G. P., & Burtscher, M. 2021. Low cardiorespiratory and mitochondrial fitness as risk factors in viral infections: Implications for COVID-19. *British Journal of Sports Medicine*, 55(8), 414–415. <https://doi.org/10.1136/bjsports-2020-103572>

- Dwiyojo, W. D. 2018. *Pembelajaran Berbasis Blended Learning*. Wineka Media. <https://doi.org/10.4324/9780203462515-10>
- Fergus, S., & Zimmerman, M. A. 2005. Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health*, 26, 399–419. <https://doi.org/10.1146/annurev.publhealth.26.021304.144357>
- Garrison, D. R., & Vaughan, N. D. 2008. *Blended learning in higher education: Framework, principles, and guidelines*. Jossey-Bass.
- George, K., & Spyros, P. 2016. Blended Learning in K-12 Education: A Case Study for Teaching Athletics in Physical Education. *The 1st International Association for Blended Learning Conference: Blended Learning for the 21st Century Learner*, 36–43.
- Hendriansyah, D., Castyana, B., Rahayu, T., Ali, M., & Anggita, G. 2020. *How Difficult Google Classroom Is? A Case Study of Blended Learning Method in Physical Education*. <https://doi.org/10.4108/eai.22-7-2020.2300267>
- Ingram, J., Maciejewski, G., & Hand, C. J. 2020. Changes in diet, sleep, and physical activity are associated with differences in negative mood during COVID-19 lockdown. *Frontiers in Psychology*, 11(May). <https://doi.org/10.3389/fpsyg.2020.588604>
- Jani, J., Muszali, R., Nathan, S., Abdullah, M. S., Pendidikan, U., Idris, S., Menengah, S., Bukit, K., Education, V., Pendidikan, U., & Idris, S. 2018. *Blended Learning Approach Using Frog Vle Platform Towards*. August.
- Kastrena, E., Setiawan, E., & Adawiyah, A. 2020. Moving from traditional teaching to blended learning in the teaching and learning of sports test and measurement course to improve students' learning outcomes. *The 2nd International Conference and Innovation Exhibiti on Global Education, September*, 146–151.
- Macdonald, J. 2008. *Blended learning and online tutoring: planning learner support and activity design*. Gower Publishing Limited.
- Manuele, F. A. 2006. Achieving risk reduction, effectively. *Process Safety and Environmental Protection*, 84(3 B), 184–190. <https://doi.org/10.1205/psep.05083>
- Maugeri, G., Castrogiovanni, P., Battaglia, G., Pippi, R., D'Agata, V., Palma, A., Di Rosa, M., & Musumeci, G. 2020. The impact of physical activity on psychological health during covid-19 pandemic in Italy. *Heliyon*, 6(6), e04315. <https://doi.org/10.1016/j.heliyon.2020.e04315>
- Morrey, L. B., Roberts, W. O., & Wichser, L. 2020. Exercise-related mental health problems and solutions during the COVID-19 pandemic. *Current Sports Medicine Reports*, 19(6), 194–195. <https://doi.org/10.1249/JSR.0000000000000725>
- Nieman, D. C., & Wentz, L. M. 2019. The compelling link between physical activity and the body's defense system. *Journal of Sport and Health Science*, 8(3), 201–217. <https://doi.org/10.1016/j.jshs.2018.09.009>
- Nystoriak, M. A., & Bhatnagar, A. 2018. Cardiovascular effects and benefits of exercise. *Frontiers in Cardiovascular Medicine*, 5(September), 1–11. <https://doi.org/10.3389/fcvm.2018.00135>
- Pinasti, F. D. A. 2020. Analisis dampak pandemi corona virus terhadap tingkat kesadaran masyarakat dalam penerapan protokol kesehatan. *Wellness And Healthy Magazine*, 2(2), 237–249. <https://doi.org/10.30604/well.022.82000107>
- Pinto, A. J., Dunstan, D. W., Owen, N., Bonfá, E., & Gualano, B. 2020. Combating physical inactivity during the COVID-19 Pandemic. *Nature Reviews Rheumatology*, 16(7), 347–348. <https://doi.org/10.1038/s41584-020-0427-z>
- Rueggsegger, G. N., & Booth, F. W. 2018. Health benefits of exercise. *Kuwait Medical Journal*, 50(2), 143–145. <https://doi.org/10.5152/tftrd.2014.33716>
- Wogalter, M. S., & Regulations, G. 2019. *Hazard Analysis and Hazard-Control Hierarchy*. 17–32.
- Yang, Y., & Koenigstorfer, J. 2020. Determinants of physical activity maintenance during the covid-19 pandemic: a focus on fitness apps. *Translational Behavioral Medicine*, 10(4), 835–842. <https://doi.org/10.1093/tbm/ibaa086>
- Zhang, Y., Cheng, J., & Wang, Y. 2018. The design and evaluation of mobile app-supported basketball teaching: a blended learning approach. *Proceedings - 2018 7th International Conference of Educational Innovation through Technology, EITT 2018*, 162–165. <https://doi.org/10.1109/EITT.2018.00039>

## Job satisfaction as the mediating variable in the correlation between quality of work life and work engagement

E.K. Novianti, Sopiah\* & O. Bernardes

*Faculty of Economics and Business, Universitas Negeri Malang, Java, Indonesia*

**ABSTRACT:** This research aims to explain: 1) the influence of the quality of work life on work engagement of the civil servants in BBPPMPV BOE Malang Indonesia; 2) the role of job satisfaction in the correlation between quality of work life and work engagement of employee. This research is a quantitative study with descriptive and explanatory research design. The number of research samples is 154 people selected through proportionate stratified random sampling. The data analysis technique used in this research is Partial Least Square (PLS). The results of the research showed that: (1) quality of work life has positive and significant influence on the work management of employees; (2) job satisfaction acts as a partial mediating variable in the correlation between quality of work life and work engagement. Managerial implication is also presented in this research.

### 1 INTRODUCTION

An organization is founded because there are targets and objectives to be achieved. In achieving those targets and objectives, supporting resources are required. Human resources are the main resource necessary in an organization. It is the key element of an organization because the success or failure of an organization depends on the performance of individual employee influencing the performance of the organization positively or negatively in general (Wambugu 2014). Human resource plays an important role as the planner and executor of all activities in achieving the objectives of the organization. It is supported by Yuniarsih and Suwatno (in Irmawati 2017) stating that the human resource in an organization is a crucial factor to achieve an objective instead of a mere tool of product creation.

Center for the Development of Quality Assurance for Vocational Education in the Automotive and Electronics Sector, Malang (BBPPMPV BOE Malang) is a Technical Implementation Unit (UPT) in the domain of Directorate General of Vocational School Education under the management of Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia. According to paragraph 11 of Permendikbud RI No. 26 of 2020, this organization is founded by the government in order to be in charge of the development of quality assurance of vocational education according to its sector (automotive and electronics).

The employees of BBPPMPV BOE Malang are State Civil Apparatus (ASN). In the Law no. 5 of 2014 about State Civil Apparatus, it is stated that ASN consists of Civil Servants (PNS) and Government Employees with Employment Contract (PPPK).

A PNS is demanded to have high level of professionalism in the workplace, responsibility, and discipline. Those demands can indirectly turn into burden if they are not balanced with the welfare received in the workplace. The quality of work life and job satisfaction of employees need to be maximized by organizations. Employees with good quality of work life and high level of job satisfaction will make them have high level of work engagement.

---

\*Corresponding Author: [sopiah.fe@um.ac.id](mailto:sopiah.fe@um.ac.id)

Work engagement is defined by Schaufeli & Bakker (in Alqarni 2016) as the positive and satisfied psychological condition of employees on their job which can be observed from their vigor, dedication, and absorption. Bakker & Leiter (in Rahmayuni & Ratnaningsih 2018) state that an employee has work engagement if they have: (1) vigor on working which can be observed from the high energy, endurance in facing difficult times, maximum effort in carrying out duties, and perseverance in facing difficulties; (2) high dedication which can be reflected in the high participation and the sense of meaning, inspiration, enthusiasm, pride, and challenge in carrying out duties; (3) absorption in work which can be shown from the high concentration and happiness in carrying out duties, making time passes quickly and growing sense of attachment at work. Therefore, bonded employees will have productive traits and optimize their collective effort in synergy to achieve the objectives of the organization which will lead on the improvement of employee performance (Bakker 2008).

Based on the pre-interview conducted by the researcher, it is revealed that the enthusiasm and integrity of the employees of BBPPMPV BOE Malang is categorized as high. It is shown by the high level of discipline in the form of presence, low level of late coming, and high achievement of v (SKP). Moreover, the teamwork of the employees is quite strong even though they have different main duties based on their own function. Afterwards, based on the output and targeted time of each employee, the level of enthusiasm and convenience of the employees in carrying out their duties is still quite high.

The quality of work life can be defined as a judgement about psychological and physical welfare of employees at work place (Cascio 2010). It is a combination of situation, strategy, and procedure related to the work place wholly in order improve and maintain the employees' satisfaction (Nazir et al. 2011). Walton (in Fernandes et al. 2017) states that there are 8 categories in the evaluation of quality of work life, namely: (1) adequate and fair compensation; (2) safe and healthy working conditions; (3) opportunity to use and develop human capacities; (4) opportunity to growth and security; (5) social integration in the work organization; (6) constitution in the work organization; (7) work and total life span; and (8) social relevance of work life.

Based on the result of the pre-research interview, the employees of BBPPMPV BOE Malang have quite high level of work engagement with a satisfying quality of work life. In this research, the subjects were grouped based on their class or status. Therefore, it is concluded that the condition of the PNS in BBPPMPV BOE Malang is actually based on the whole group.

Job satisfaction is defined as the psychological state of employees who feel content in a work condition because their needs have been fulfilled in a satisfactory level (Alfani 2018). The quality of work life is closely related to job satisfaction, yet it does not have any influence on job satisfaction (Wirawan 2015). Job satisfaction is perceived as a comparison between what is expected and what is actually received. According to Kotler and Keller (2009) the higher the capacity of needs that can be fulfilled is, the greater the job satisfaction will be. Hence, job satisfaction is considered as the most suitable variable to assess the satisfaction of employees on the quality of work life which will influence their work engagement. Based on the previous explanation, there are four hypotheses proposed in this research:

- H1: Quality of work life has positive and significant influence on the work engagement of civil servants (PNS) in BBPPMPV BOE Malang.
- H2: Quality of work life has positive and significant influence on the job satisfaction of civil servants (PNS) in BBPPMPV BOE Malang.
- H3: Job satisfaction has positive and significant influence on the work engagement of Civil Servants (PNS) in BBPPMPV BOE Malang.
- H4: Quality of work life is indirectly influential on the work engagement through the job satisfaction of Civil Servants (PNS) in BBPPMPV BOE Malang.

The analysis model of the correlation between the variables of quality of life, work engagement, and job satisfaction is illustrated in Figure 1.

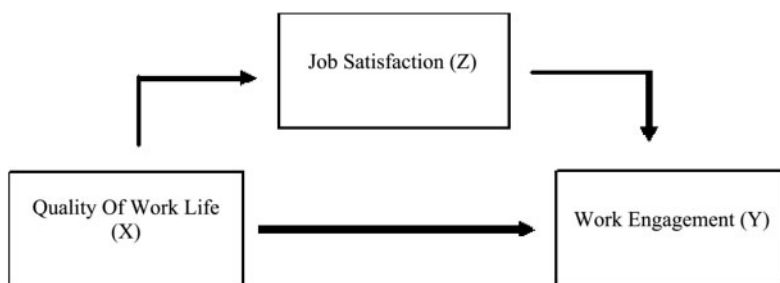


Figure 1. Research framework.

## 2 METHODS

This research is a descriptive and explanatory study with quantitative approach. The independent variable in this research is quality of work life (X) with work engagement (Y) as the dependent variable and job satisfaction (Z) as the intervening variable.

The respondents in this research are all 252 civil servants (PNS) working in BBPPMPV BOE Malang. There are 154 people serving as the samples through proportionate stratified random sampling.

The instrument in this research is in the form of 29 items of statements consisting of 14 items about the variable of quality of work life based on 8 indicators of measurement by Walton (in Fernandes et al. 2017), 9 items about the variable of work engagement based on Utrecht Work Engagement Scale (UWES) by Schaufeli & Baker (2006), and 6 items about the variable of job satisfaction based on The Minnesota Satisfaction Statementnaire (MSQ) by Weiss et al. (in Abugree 2014). The research instrument was measured by using Likert scale from the score of 5 meaning highly agree to the score of 1 meaning highly disagree.

The data analysis technique used in this research is descriptive analysis and the analysis of Partial Least Square (PLS) was conducted by using the software of Warp PLS 3.0. The evaluation of the Partial Least Square (PLS) model was conducted by evaluating the outer model and inner model.

The evaluation of outer model was conducted by analyzing the confirmatory factor (CFA) through validity test and item reliability test forming each latent construct or latent variable. The evaluation of validity was conducted through the score of loading factor, average variance extracted (AVE), and cross loading. Furthermore, the reliability test was conducted through composite reliability or Cronbach's alpha. Afterwards, in order to examine the influence between latent constructs or latent variables, the inner model and its significance were evaluated. The evaluation of inner model can be concluded from the result of goodness of fit (GoF), which comes from the score of determination coefficient ( $R^2$ ) and predictive relevance ( $Q^2$ ), and the hypothesis testing can be concluded from the score of path coefficient and probability (p-value).

## 3 RESULTS AND DISCUSSION

The result of descriptive statistical analysis showed that the grand mean of the variable of quality of work is 4.29 with the category of very high, the grand mean of the variable of work engagement is 4.23 with the category of very high, and the grand mean of the variable of job satisfaction is 4.14 with the category of high. Those data imply that the employees perceive their life quality as high, work engagement as high, and job satisfaction as high. Afterwards, the highest mean of the variable of quality of life is obtained in the statement item of remuneration of both compensation and bonus given has been fair and balanced. On the other hand, the lowest mean of that variable is obtained in the statement item about the sense of safety due to the elusion from termination of

employment (PHK). Therefore, it is concluded that all statement items of the variable of quality of work life are perceived as good/high, meaning that the work life of the employees is high/good.

The highest mean of the variable of work engagement is obtained in the sixth statement item (Y6) with the score of 4.43 and the category of very high which is about the pride of doing their duties. Conversely, the lowest mean of the variable of work engagement is obtained in the ninth statement item (Y9) with the score of 4.08 and the category of high which is about the difficulty in quitting the job. Hence, the gap between the highest mean and the lowest mean of the variable of work engagement is not too far, showing that all statement items in the variable of work engagement are perceived as high by the research subjects.

The highest mean of the variable of job satisfaction is obtained in the fourth statement item (Z4) with the score of 4.29 and the category of very high which is about the satisfaction with the work condition at the work place. Meanwhile, the lowest mean of the variable of job satisfaction is obtained in the third statement item (Z3) with the score of 4.00 and the category of very high which is about the practice of policy at the work place. Thus, the difference between the highest mean and the lowest mean of the variable of job satisfaction is not too far, showing that all statement items of the variable of job satisfaction are perceived as high/satisfied by the research subjects.

Table 1. Grand mean score.

Variable	N	Grand Mean	Std. Deviation
Quality of Work Life (X)	113	4.29	0.695
Work Engagement (Y)	113	4.23	0.757
Job Satisfaction (Z)	113	4.14	0.775

(Source: Data analysis result, 2021)

The evaluation result of the outer model in this research showed that all statement items of each latent variable of quality of work life, work engagement, and job satisfaction, have fulfilled the validity criteria with the score of loading factor  $> 0.70$ , score of AVE of each latent variable  $> 0.50$ , and cross loading score showing that the greatest loading factor score is generated by its own latent variable and not by the others. Moreover, each latent variable of quality of work life, work engagement, and job satisfaction has fulfilled the reliability criteria with the score of composite reliability or Cronbach's alpha  $> 0.50$ .

Table 2. Score of loading factor and cross loading.

Statement Item	Quality of Work Life (X)	Work Engagement (Y)	Job Satisfaction (Z)
The remuneration (compensation and bonus) provided by BBPPMPV BOE Malang is fair and balanced. (X1)	0.766	0.551	0.421
I think that my salary is fair compared to that of my colleagues. (X2)	0.727	0.507	0.410
I am not pressured with my workload. (X3)	0.745	0.478	0.409
The equipment of safety, individual, and collective protection provided by BBPPMPV BOE Malang have met the standard. (X4)	0.783	0.526	0.497
The autonomy that I have at my work place is excellent. (X5)	0.794	0.602	0.498
The performance evaluation and/or feedback I received is excellent. (X6)	0.817	0.564	0.480

(continued)

Table 2. Continued.

Statement Item	Quality of Work Life (X)	Work Engagement (Y)	Job Satisfaction (Z)
The trainings provided by BBPPMPV BOE Malang are excellent. (X7)	0.754	0.488	0.471
I feel safe at my work place because I am eluded from termination of employment. (X8)	0.740	0.630	0.539
My relationship between my colleagues and my supervisor is great. (X9)	0.766	0.528	0.472
BBPPMPV BOE Malang has paid great respect on the rights of its employees. (X10)	0.800	0.589	0.518
I have freedom of expression (opportunities to share my opinion) at work. (X11)	0.795	0.517	0.551
My job does not influence my personal life/family routine that much. (X12)	0.736	0.613	0.523
The image built by BBPPMPV BOE Malang to the society is excellent. (X13)	0.818	0.651	0.613
The service provided and product quality offered by BBPPMPV BOE Malang are excellent. (X14)	0.765	0.617	0.541
I am always full of energy at my work place. (Y1)	0.507	0.763	0.575
I am capable and enthusiastic in doing my duties. (Y2)	0.575	0.799	0.564
I am mentally strong in finishing my work. (Y3)	0.617	0.811	0.537
I consider that my work is meaningful and purposeful. (Y4)	0.508	0.764	0.471
I am enthusiastic about my work. (Y5)	0.571	0.753	0.475
I am proud with the work that I have done. (Y6)	0.591	0.769	0.607
Time flies when I am working. (Y7)	0.634	0.767	0.617
I ignore everything else around me when I am working. (Y8)	0.532	0.737	0.629
I have difficulty to quit from my job. (Y9)	0.496	0.756	0.643
I am satisfied with the opportunities to do something related to my capability. (Z1)	0.410	0.485	0.745
I am satisfied with the opportunities to try my own method when I am working. (Z2)	0.519	0.562	0.796
I am satisfied with the policy practice of BBPPMPV BOE Malang. (Z3)	0.355	0.486	0.783
I am satisfied with the work condition at BBPPMPV BOE Malang. (Z4)	0.588	0.605	0.746
I am satisfied with the opportunities to improve at the work I am doing. (Z5)	0.454	0.542	0.719
I am satisfied with the compliments I received for doing my work well. (Z6)	0.588	0.665	0.729

(Source: Data analysis result, 2021)

Table 3. Score of composite reliability and cronbach alpha.

Variable	Composite Reliability	Cronbach Alpha
Quality of Work Life (X)	0.954	0.948
Work Engagement (Y)	0.929	0.914
Job Satisfaction (Z)	0.887	0.847

(Source: Data processing result, 2021)



The evaluation result of the inner model in this research showed that the  $R^2$  score of the variable of quality of work life on work management is 0.679 and the  $R^2$  score of the variable of quality of work life on job satisfaction is 0.441. Therefore, the  $Q^2$  score is 0.821 ( $Q^2 = 1 - (1 - R^2_1)(1 - R^2_2)$ ).

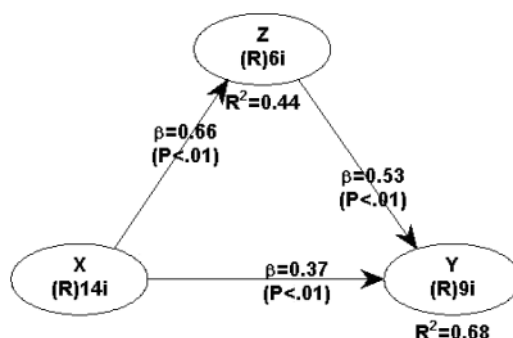


Figure 2. Model construct.

(Source: Data processing result using Warp PLS 3.0 software 2021).

Afterwards, the result of the research hypothesis testing on the quality of work life on work engagement produced the path coefficient score of 0.366 ( $\beta = 0.37$ ) with the probability  $< 0.001$  ( $p < 0.05$ ), hence  $H_1$  is accepted. The influence of quality of work on job satisfaction produced the path coefficient score of 0.664 ( $\beta = 0.66$ ) with the probability  $< 0.001$  ( $p < 0.05$ ), hence  $H_2$  is accepted. The influence of job satisfaction on work engagement produced the path coefficient score of 0.527 ( $\beta = 0.53$ ) with the probability  $< 0.001$  ( $p < 0.05$ ), hence  $H_3$  is accepted. Lastly, the influence of quality of work life on work management through job satisfaction produced the score of 0.350 with the probability  $< 0.001$  ( $p < 0.05$ ), hence  $H_4$  is accepted.

Table 4. Result of research hypothesis testing.

Variable Correlation	Path Coefficient ( $\beta$ )	Probability (p)
QWL (X) $\rightarrow$ WE (Y)	0.366	$<0.001$
QWL (X) $\rightarrow$ JS (Z)	0.664	$<0.001$
JS (Z) $\rightarrow$ WE (Y)	0.527	$<0.001$
QWL (X) $\rightarrow$ JS (Z) $\rightarrow$ WE (Y)	0.350	$<0.001$

(Source: Data analysis result, 2021)

### 3.1 Description of quality of work life

Quality of work life is defined as the assessment of employees related to the needs fulfillment and welfare provided by BBPPMPB BOE Malang.

Based on the result of descriptive statistical analysis, it is concluded that the quality of work life in BBPPMPV BOE Malang is considered as high by the PNS in BBPPMPV BOE Malang. Therefore, the result is in line with the statement of the personnel manager of BBPPMPV BOE Malang, stating that BBPPMPV BOE Malang has fulfilled all needs of the PNS related to their welfare at the work place.

### 3.2 Description of work engagement

Work engagement is defined as the sense of bonding of the employees of BBPPMPV BOE Malang on their job or organization.

Based on the result of descriptive statistic analysis, it is concluded that the work engagement in BBPPMPV BOE Malang is considered as very high by the PNS in BBPPMPV BOE Malang. Thus, it is concluded that the PNS in BBPPMPV BOE Malang have strong work engagement to their job and organization. It is in line with the result of the interview with the personnel manager of BBPPMPV BOE Malang, stating that the enthusiasm and integrity of the PNS in BBPPMPV BOE Malang are high.

### *3.3 Description of job satisfaction*

Job satisfaction is defined as the satisfaction level of the employees of BBPPMPV BOE Malang on their job and work environment.

Based on the result of descriptive statistic analysis, it is concluded that the job satisfaction in BBPPMPV BOE Malang is considered as high by the PNS in BBPPMPV BOE Malang. Therefore, it is concluded that the PNS in BBPPMPV BOE Malang have high satisfaction level on their job and work environment.

### *3.4 Influence quality of work life on work engagement*

Based on the result of hypothesis testing, it is concluded that quality of work life has positive and significant influence on work engagement of the PNS in BBPPMPV BOE Malang. It implies that the better the quality of work life provided by BBPPMPV BOE Malang is, the greater the work engagement of the PNS in BBPPMPV BOE Malang will be.

This finding is not in line with that of the research conducted by Aprilina (2019), concluding that work engagement is not indirectly influenced by quality of work life. However, this research finding is in line with that of the research conducted by Rahmayuni & Ratnaningsih (2018) and Irmawati (2017), revealing that there is a positive and significant correlation between quality of work life and work engagement. Kanten & Sadullah (2012) also conclude in their research that there is a significant influence of the dimension of quality of work life on work engagement. It is also supported by the research conducted by Nurendra & Purnamasari (2017), stating that work engagement is one of the aspects influenced by the quality of work life. Alqarni (2016) states that work engagement level can be increased through the development of human skill and social relevance. This statement is in line with the result of PLS analysis in this research where the highest loading factor score of the variable of quality of work life is obtained by item X13 with the statement "the image built by BBPPMPV BOE Malang to the society is excellent". That item has the indicator of social relevance of work life, meaning that social relevance plays an important role in developing the quality of work life of the PNS in BBPPMPV BOE Malang so that it will be able to influence work engagement.

### *3.5 Influence of quality of work life on job satisfaction*

Based on the result of hypothesis testing through path analysis, it is concluded that the quality of work life has positive and significant influence on job satisfaction of PNS in BBPPMPV BOE Malang. It implies that the better the quality of work life provided by BBPPMPV BOE Malang is, the higher the level of job satisfaction of the PNS in BBPPMPV BOE Malang will be.

This research finding is supported by the research conducted by Alfani (2018), proving that there is a positive and significant influence of quality of work life on job satisfaction and quality of work life is directly influential on job satisfaction. Kermansaravi et al. (2015) and Bekti (2018) also have similar findings, showing that there is positive and significant influence of quality of work life on job satisfaction which illustrates that the improvement of quality of work life will be followed by work satisfaction of the employees. According to Ace (2017), a good quality of work life will be followed by improved job satisfaction. It is also supported by Setiyadi & Wartini (2016), stating that if all aspects in the quality of work life are improved, job satisfaction will also improve and vice versa.

### 3.6 Influence of job satisfaction on work engagement

Based on the result of hypothesis testing through path analysis, it is concluded that job satisfaction has positive and significant influence on work engagement of PNS in BBPPMPV BOE Malang. It is concluded that the better the job satisfaction of the PNS in BBPPMPV BOE Malang is, the greater their work engagement will be.

This finding is in line with the finding of the research conducted by Tepayakul & Rinthaisong (2018), stating that there is a direct and positive influence of job satisfaction on work engagement of employees. Lintang Sari (2013) also supports this finding through her research, stating that there is positive correlation between job satisfaction and work engagement. It implies that the higher the job satisfaction of an employee is, the higher his/her work engagement will be. According to Harter et al. (in Kari 2014), work engagement of an employee is formed from his/her job satisfaction.

Yalabik et al. (2017) argue that job satisfaction is the main motivating factor from all dimensions of work engagement, namely vigor, dedication, and absorption. This statement is in line with the result of PLS analysis in this research where the highest loading factor score of the variable of job satisfaction is obtained in item Z2 with the statement "I am satisfied on the opportunities to try my own method in doing my job". This item has the indicator of intrinsic satisfaction, meaning that the job satisfaction of the PNS in BBPPMPV BOE Malang plays so important role in building the job satisfaction that it is able to influence work engagement.

### 3.7 Influence of quality of work life on work engagement through job satisfaction

Based on the result of the research, it is concluded that job satisfaction acts as a mediating variable in the correlation between quality of work life and work engagement of the PNS in BBPPMPV BOE Malang. It means that the higher the quality of work life of an employee is, the higher his/her satisfaction which influences on his/her work engagement. This finding is in line with the result of the research conducted by Endayani et al. (2018), proving that there an indirect correlation between quality of work life and work engagement which is mediated by job satisfaction.

Based on the grand mean scores of the variable of quality of work life and job satisfaction are high. This finding is supported by Wirawan (2015), stating that quality of work life is correlated with job satisfaction and work engagement. It implies that the higher the quality of work life of an employee is, the higher his/her job satisfaction and work engagement will be.

## 4 CONCLUSION

Based on the results and discussion of this research, it is concluded that the PNS in BBPPMPV BOE Malang have high quality of work life, work engagement, and job satisfaction. This finding also concludes that quality of work life influences work engagement and job satisfaction acts as the partial mediating variable in the correlation between quality of work life and work engagement. It is highly recommended to future researchers to identify the specific characteristics of the respondents, i.e. categorizing them based on their employment status, work experience, age, types of employee, class, and etc. Therefore, it is expected that a more realistic conclusion/finding will be obtained.

## REFERENCES

- Abugre, J. B. 2014. *Job satisfaction of public sector employees in sub-saharan Africa: Testing the minnesota satisfaction questionnaire in ghana*. *International Journal of Public Administration*. <https://doi.org/10.1080/01900692.2014.903268>
- Ace, A. 2017. *Pengaruh Kualitas Kehidupan Kerja Dan Partisipasi Terhadap Kepuasan Kerja Perawat Rsud Bangkinang*. *JOM Fisip*.
- Adkins, A. 2016. *Employee engagement in U.S. stagnant in 2015*. *Gallup Management Journal Online*.
- Alfani, M. H. 2018. *Analisis Pengaruh Quality Of Work Life (QWL) terhadap Kinerja dan Kepuasan Kerja Karyawan PT. Bank BRI Syariah Cabang Pekanbaru*. *Jurnal Tabarru': Islamic Banking and Finance*, 1(1), 1–13. [https://doi.org/10.25299/jtb.2018.vol1\(1\).2039](https://doi.org/10.25299/jtb.2018.vol1(1).2039)

- Alqarni, S. A. Y. 2016. *Quality of Work Life as a Predictor of Work Engagement among the Teaching Faculty at King Abdulaziz University. International Journal of Humanities and Social Science.*
- Aprilina, A., Matulessey, A., & Rini, R. A. P. 2019. *Kualitas Kehidupan Kerja Dan Harga Diri Berbasis Organisasi Dengan Keterikatan Kerja PNS Pemerintah Kota Palangka Raya. Jurnal Insight Fakultas Psikologi Universitas Muhammadiyah Jember.*
- Bakker, A. B. 2008. *Building engagement in the workplace. In The Peak Performing Organization.* <https://doi.org/10.4324/9780203971611>
- Bakker, A. B. 2011. *An evidence-based model of work engagement. In Current Directions in Psychological Science.* <https://doi.org/10.1177/0963721411414534>
- Bekti, R. R. 2018. *Pengaruh Kualitas Kehidupan Kerja Terhadap Kepuasan Kerja Karyawan Rumah Sakit Ibu dan Anak X Surabaya. Jurnal Administrasi Kesehatan Indonesia.* <https://doi.org/10.20473/jaki.v6i2.2018.156-163>
- Busro, M. D. 2018. *Teori-teori Manajemen Sumber Daya Manusia. In Teori-teori Manajemen Sumber Daya Manusia.* Prenadamedia Group.
- Cascio, W. F. 2010. *Managing Human Resources: Productivity, Quality of Work Life, Profits.* New York: McGraw-Hill.
- Endayani, F., Musadieg, M. A., & Afrianty, T. W. 2018. *The Effect of Quality Of Work-Life and Motivation on Employee Engagement With Job Satisfaction As An Intervening Variable.* <https://doi.org/10.18551/rjoas.2018-02.12>
- Fernandes, R. B., Martins, B. S., Caixeta, R. P., Da Costa Filho, C. G., Braga, G. A., & Antonialli, L. M. 2017. *Quality of work life: An evaluation of Walton model with analysis of structural equations.* Espacios.
- Fitria, N. 2019. *Pengaruh Komponen Quality Of Work Life dan Motivasi Kerja terhadap Employee Engagement Pegawai Non Medis Rumah Sakit Umum Daerah Dr. H. Abdul Moeloek Bandar Lampung.*
- Ghozali, I., & Latan, H. 2014. *Partial Least Squares Konsep, Metode dan Aplikasi Menggunakan program WarpPLS 4.0.* Semarang: Badan Penerbit Universitas Diponegoro.
- Irmawati, I. 2017. *Pengaruh quality of work life, self determination, dan job performance terhadap work engagement karyawan. Seminar Nasional Riset Manajemen & Bisnis.*
- Kanten, S., & Sadullah, O. 2012. *An Empirical Research on Relationship Quality of Work Life and Work Engagement. Procedia – Social and Behavioral Sciences.* <https://doi.org/10.1016/j.sbspro.2012.09.057>
- Kari, A. 2014. *The Effect of Job Satisfaction and Motivation on Employee Engagement of Administrative Staff of Bandung State Polytechnic. Jurnal Ilmu Manajemen Dan Bisnis.* <https://doi.org/10.17509/jimb.v5i1.1013>
- Kermansaravi, F., Navidian, A., Navabi Rigi, S., & Yaghoubinia, F. 2015. *The relationship between quality of work life and job satisfaction of faculty members in Zahedan University of Medical Sciences. Global Journal of Health Science.* <https://doi.org/10.5539/gjhs.v7n2p228>
- Kotler, P., & Keller, K. L. 2009. *Manajemen pemasaran jilid 1, edisi Ketiga belas, Terjemahan Bob Sabran.* Jakarta: Erlangga.
- Lintangsari, A. A., Yusuf, M., & Priyatama, A. N. 2013. *Hubungan antara Employee Satisfaction dan Budaya Organisasi dengan Employee Engagement pada Karyawan Tetap PT . BPD Jawa Tengah Cabang Utama Semarang. Jurnal Ilmiah Psikologi Candradiwa.*
- Muller, M., Bezuidenhout, M., & Jooste, K. 2008. *Health Care Service Management.* Juta and Company Ltd.
- Nazir, U., Qureshi, T., Shafaat, T., & Ilyas, A. 2011. *Office harassment: A negative influence on quality of work life. African Journal of Business Management.*
- Nurendra, A. M., & Purnamasari, W. 2017. *Hubungan antara Kualitas Kehidupan Kerja dan Keterikatan Kerja pada Pekerja Wanita. Indigenous: Jurnal Ilmiah Psikologi.* <https://doi.org/10.23917/indigenous.v2i2.5649>
- Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia No. 26 Tahun 2020 tentang Organisasi dan Tata Kerja Unit Pelaksana Teknis Kementerian Pendidikan dan Kebudayaan. Jaringan Dokumentasi dan Informasi Hukum Kementerian Pendidikan dan Kebudayaan. (Online), (<http://www.jdih.kemdikbud.go.id>), diakses 27 November 2020.
- Rahmayuni, T. D., & Ratnaningsih, I. Z. 2018. *Hubungan antara kualitas kehidupan kerja dengan keterikatan kerja pada wartawan TV X jakarta. Empati, 7(1), 373–380.*
- Riggio, R. E. 2015. *Introduction to Industrial and Organizational Psychology. In Introduction to Industrial and Organizational Psychology.* <https://doi.org/10.4324/9781315665139>
- Schaufeli, W B, & Bakker, A. B. 2003. *Test manual for the Utrecht work engagement scale. Unpublished Manuscript, Utrecht University, the Netherlands. Retrieved from Http://Www. Schaufeli. Com, 3, 44–52.*
- Schaufeli, Wilmar B., Bakker, A. B., & Salanova, M. 2006. *The measurement of work engagement with a short questionnaire: A cross-national study. Educational and Psychological Measurement.* <https://doi.org/10.1177/0013164405282471>

- Schaufeli, Wilmar B., Bakker, A. B., & van Rhenen, W. 2009. *How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. Journal of Organizational Behavior.* <https://doi.org/10.1002/job.595>
- Setiyadi, Y. W., & Wartini, S. 2016. *Pengaruh Kualitas Kehidupan Kerja terhadap Kinerja Karyawan dengan Kepuasan Kerja sebagai Variabel Intervening. Management Analysis Journal.* <https://doi.org/10.15294/maj.v5i4.12306>
- Sirgy, M. J., Efraty, D., Siegel, P., & Lee, D. J. 2001. *A new measure of quality of work life (QWL) based on need satisfaction and spillover theories. Social Indicators Research.* <https://doi.org/10.1023/A:1010986923468>
- Sudjana, N. 2012. *Dasar-Dasar Proses Mengajar.* Bandung: Sinar Baru Algensindo.
- Sugiyono. 2016. *Penelitian Kuantitatif, Kualitatif dan R&D.* Bandung: PT Alfabet.
- Sugiyono, P. D. 2010. *Metode Penelitian Bisnis. Pendekatan Kuantitatif, kualitatif dan R & D.* Bandung: Alfabeta.
- Sunyoto, D. 2015. *Penelitian Sumber Daya Manusia.* Yogyakarta: CAPS (Center of Academic Publishing Service).
- Tepayakul, R., & Rinthaisong, I. 2018. *Job satisfaction and employee engagement among human resources staff of Thai Private Higher Education Institutions. Journal of Behavioral Science.*
- Undang-Undang Republik Indonesia No. 5 Tahun 2014 tentang Aparatur Sipil Negara. Jaringan Dokumentasi dan Informasi Hukum Badan Pemeriksa Keuangan Republik Indonesia. (Online), (<http://www.jdih.bpk.go.id>), diakses 27 November 2020.
- Universitas Negeri Malang. 2017. *Pedoman Penulisan Karya Ilmiah: Tugas Akhir, Skripsi, Tesis, Disertasi, Artikel, Makalah, Laporan Penelitian.* Edisi Keenam. Malang: Universitas Negeri Malang.
- Wambugu, L. W. 2014. *Effects of Organizational Culture on Employee Performance (Case Study of Wartsila-Kipevu Ii Power Plant). European Journal of Business and Management Online.*
- Weiss, D. J., Dawis, R., England, G., & Lofquist, L. 1967. *Manual for the Minnesota Satisfaction Questionnaire.* In *Manual for the Minnesota Satisfaction Survey.*
- Wirawan, W. 2015. *Manajemen Sumber Daya Manusia Indonesia: Teori, Psikologi, Hukum Ketenagakerjaan, Aplikasi dan Penelitian: Aplikasi dalam Organisasi Bisnis, Pemerintahan dan Pendidikan.* Jakarta: Rajawali Pers.
- Yalabik, Z. Y., Rayton, B. A., & Rapti, A. 2017. *Facets of job satisfaction and work engagement. Evidence-Based HRM.* <https://doi.org/10.1108/EBHRM-08-2015-0036>

## Factors influencing intention to use in implementing accounting standards for Islamic boarding school in East Java: Application of the UTAUT model

M. Ghofirin\* & N.S. Primasari

*Universitas Nahdlatul Ulama, Surabaya, East Java, Indonesia*

**ABSTRACT:** Most of the Islamic Boarding Schools (IBS) have not implemented the Accounting Standard from Bank Indonesia and the Indonesian Accounting Association. The Unified Theory of Acceptance and Use of Technology (UTAUT) is one of the appropriate theoretical models to explain the adaptation of science. This study employs the UTAUT model to determine factors influencing the intention to use (IU) IBS's accounting standards in East Java. This study is an explanatory quantitative study with the SEM technique to analyze the data obtained from 104 respondents selected through selective sampling. The results show that of the variables used in the analysis, facilitating condition is proved to have a significant influence on the IU accounting standards for IBS, while other variables show different results. It proves that by creating a supportive condition, the urge to implement accounting standards for IBS will certainly encourage good governance in this institution.

### 1 INTRODUCTION

Pesantren (IBS) is an Islamic educational institution with a dormitory system led by a kyai (who acts as the main character), has a mosque as a center of activity, and has an Islamic-based curriculum. In Indonesia, Islamic boarding schools have enormous development potential. Unfortunately, this potential is hampered by various problems, both micro and macro challenges. Therefore, to maintain its existence, Islamic Boarding Schools (IBS) must carry out reforms and improvements both in terms of institutions and the quality of education.

As one of the educational and economic assets, pesantren is also a concern of the government. Various policies and regulations are formulated to develop the potential of pesantren. Among them are efforts to encourage IBS as the economic base of the community. In their article, Hudaefi and Heryani (2019) reveal the role of IBS as a stimulator in local economic empowerment. In addition, Purwanto (2019) also mentions that IBS can contribute to community empowerment in various economic fields. From the East Java regional government report, data were obtained, which state that pesantren can be agents that drive the community's economy. However, to improve this function, it is necessary to provide assistance and training related to organizational and financial management. One government support in this regard is through the provision of a good accounting system. The results of the observations found that most of the IBS in East Java Province had not implemented or understood the accounting standards for IBS provided by Bank Indonesia (BI) and the National Financial Institution. In addition, data also mention the refusal of IBS management members to apply the accounting technology.

---

\*Corresponding Author: ghofie@unusa.ac.id

Although technology is always considered a tool or machinery, its definition also includes science, in general (Agar 2020). Along with the changing times, technological developments are increasingly diverse. Technology is no longer only associated with physical development but also enters a system that can be applied to various life and social functions, such as the economy. Many researchers have examined various models of technology adoption, including the Unified Theory of Acceptance and Use of Technology (UTAUT2) model. Previous studies have shown empirical evidence linking various variables that influence individuals to use these technologies (Ayaz & Yanartas 2020; Catherine et al. 2017; Cabrera-Sánchez & Villarejo-Ramos 2019).

Talking about acceptance or rejection of something is inseparable from the motivation and intention of the individual to use it. This also happens in the application of accounting standards for IBS, which combines technology and accounting systems. Cabrera-Sánchez and villarejo-ramos (2019) find that performance expectations, social influence, and facilitation conditions significantly influence individuals' intention to use (IU) technology. On the contrary, Ayaz and yanartas (2020) state that although performance expectations and social influences have a positive effect on individual intentions, business expectations do not affect individual intentions. The existence of these differences raises issues that deserve further study.

In this regard, this study aims to find a relationship between technology implementation (the use of the accounting standard system for IBS) and the IU of users (managerial from IBS in East Java) through research that involves several variables related to individual behavior.

## 2 LITERATURE REVIEW

### 2.1 *Islamic boarding school (IBS) and accounting standard for IBS*

Syafe'i (2017) defines Islamic boarding schools as educational institutions that focus on deepening Islamic religious sciences, wherein the implementation is in dormitories under the leadership of *kyai* or *ulama* assisted by Islamic scholars (known as *ustadz*). IAI (2018) explains that Islamic boarding schools are Islamic educational institutions with a dormitory system, where *kyai* becomes the central figure, the mosque serves as an activity center, and Islamic knowledge as the main curriculum. There are five basic elements of IBS, including: dormitory, mosque, *santri* (student), classic Islamic book, and *kyai* (Alwi 2016). Based on adaptation efforts, IBS are divided into *salafi* and modern Islamic boarding schools Nihwan & Paisun 2019; Setiawan & Tohirin 2015). Meanwhile, the grouping of Islamic boarding schools based on the IBS Accounting Guidelines is divided into types A, B, C, and D IBS (IAI 2018).

Accounting standards for IBS are regulated in the IBS Accounting Guidelines issued by BI and officially promulgated in May 2018. The guidelines refer to 1) SAK ETAP issued by the IAI Financial Accounting Standards Board; and 2) Islamic PSAK and ISAK issued by the Islamic Accounting Standards Board of IAI. Munggaran and Hastuti (2020) confirm that the guideline is based on the Financial Accounting Standards for Entities without Public Accountability (SAK ETAP) and PSAK No. 45 concerning non-profit organizations. In addition, the guidelines explain that IBS as a legal entity in the form of a foundation is an entity in the accounting report.

The description of the IBS and guidelines provides an explanation of the object and subject/population to be studied. This study examines all types of IBS (A, B, C, and D) that have a legal entity (in the form of a foundation). In addition, the respondents selected are IBS financial administrators, financial employees, and the chairman. The respondents should be individuals who understand and make accounting policies for IBS.

### 2.2 *Resistance to technology adoption and UTAUT model*

Many studies discuss the various obstacles that arise in the application of accounting standards, including those related to individual behavior. These studies are needed to answer questions or

problems or issues related to the psychology of system users (in this case accounting) (Koonce & Mercer 2005). According to Wibbeke & Lachmann (2020), the study of accounting behavior is related to a) performance evaluation and measurement; b) compensation, rewards, and incentives; c) budgeting; d) organizational control; and e) decision making. The behavior of users of accounting information becomes part of accounting (science) where analyzing accounting from psychological and sociological factors is a counterweight to the technical aspects of applicable accounting (Kutluk 2017; Zygmant 2017). According to Coşkun & Karakoç (2020), there are several behavioral theories in behavioral accounting that are often applied, namely: expectation theory, equality theory, goal setting theory, people contingency approach, and agency theory.

Based on the research conducted by Teng et al. (2017), studies on technology use behavior cannot be separated from the forms of support and rejection. Empirically, the IU technology can be described from the opposite side, namely resistance. Swilley (2010) describes the rejection of the use of e-wallet through attitudes and intentions to accept technology. The results of this study are also supported by Bousbahi & Alrazgan (2015) and Ishak & Newton (2018) who also explained the existence of technological resistance. Talwar et al. (2020) mentioned that TAM and UTAUT are often used as the basis for the theory that is adopted as a technology and behavior-based research model. The results of this study support previous research conducted by Murthy & Mani (2013) on resistance and technology adoption.

As mentioned by Talwar et al. (2020), Brauer et al. (2018), and Teng et al. (2017) conceptual models of acceptance, intention, and behavior that are often used in research related to technology and behavior are the Technology Acceptance Model, Theory of Reasoned Action, Theory of Planned Behavior, Diffusion of Innovation, and Unified Theory of Acceptance and Use of Technology (UTAUT), which in its development became several derivative models, such as TAM 2 and TAM 3 as well as UTAUT 2 (Dwivedi et al. 2019). Venkatesh et al. (2003) and Chang (2012) state that the UTAUT model has the ability to explain 20% to 30% greater than TAM. In addition, Hoque and Sorwar (2017) state that the UTAUT model is a model derived from technology acceptance theory so that it can explain 70% of the variance of intentions/interests possessed by the object under study. Thus, it can give better results than TAM, which only looks at individual variables but not organization into its analysis (Kim et al. 2015). The variables used in UTAUT include: Performance expectations (PE), level of system ease of use (EE), beliefs from people around (SI), and belief in organizational support (FC) (Awwad & Al-Majali 2015; Venkatesh et al. 2003).

In this study, researchers used the UTAUT model, which is considered the most suitable model as an approach related to the research object used. In addition, the application of this model is taken from the point of view of the application of new technology in organizations (Rondan-Cataluña et al. 2015), which is considered sufficient to explain the purpose of using accounting standards by financial managers of IBS. However, this study does not reveal the use of technology by consumers, so the study does not support the research conducted by Nguyen and Borusiak (2021), Nordhoff et al. (2020), and Eneizan et al. (2019).

### 2.3 *Intention to use*

The IU is a tendency of the user's IU something, which is often associated with technology. According to Davis (1989), the level of use of technology in a person can be predicted from the attitude of his attention toward the technology, for example, the desire to add features or supporting devices, motivation to continue using, and the desire to motivate other users to take advantage of the related technology. In addition, other studies show that the motivational variable of technology has a significant influence on the IU the technology (Nysveen et al. 2005, Himel et al. 2021, Arsanti & Yuliasari 2018).

According to research by Catherine et al. (2017), performance expectancy (PE), effort expectancy (EE), social influence, (SI), and facilitating conditions (FC) have a positive relationship with the IU the ATM. Moreover, Cabrera-Sánchez and Villarejo-Ramos (2019) explain that the PE, SI, and FC influence the individual IU the Big Data Analysis. However, both researchers have a different



result from Ayaz and Yanartas (2020) who mention that although performance expectancy and social influence have a positive relationship with the IU, they are not significant to effort expectancy.

Rendering this, the study tries to find out how the IU the technology (new system for accounting standard in the IBS) of the managerial staff of IBS influences the decision to use the intended technology. Furthermore, this study adapts some of the research models, including hedonic motivation, price value, and habit variables, because IBS maintain their culture and custom highly. Finally, this study is important because of its possibility to answer the gap found in Ayaz and Yanartas (2020). However, this study is limited only in the variable IU because the respondents have not exhibited any indication to implement the model in their organization.

### 3 METHODS

#### 3.1 *Research design*

This study attempts to examine the effect of PE, EE, SI, and FC on the IU the Accounting Standards from financial managers in IBS in East Java. This research is a correlational study with a cross-sectional research design, wherein research data are collected at relatively the same time meaning that both independent and dependent variable data are collected at a certain time.

#### 3.2 *Population and sampling*

The population of this study is the ISB located in East Java, which participated in the IBS economic empowerment program (known as OPOP—One Pesantren One Product Program). The population consists of 114 ISB and each ISB is represented by a manager, meaning that there are 114 managers as the representation of ISB and serve as respondents. The population is selected to meet the standard requirement of sampling for statistical analysis according to Hair et al. (2014). Of the 114 respondents, 104 respondents agreed to participate in the study and serve as respondents by answering the questionnaires completely and correctly.

#### 3.3 *Research instrument*

The instrument used in this study was adapted from Nair et al. (2015) and Awwad and Al-Majali (2015). The variables used are PE, EE, SI, and FC, which are measured using four items. Meanwhile, the variable of IU is measured using three items. Those items are measured with a 5-Point Likert Scale from highly disagreed (1) to very agreed (5).

#### 3.4 *Data analysis technique*

SEM analysis is selected as the data analysis technique because it can explain the relationship between the variables as well as the construct of each variable. There are 6 stages of SEM analysis, namely: 1) defining individual constructs, 2) developing an overall measurement model, 3) designing studies to produce empirical results, 4) assessing the measurement model validity, 5) determining the structural model, and 6) assessing the structural model validity (Hair et al. 2014).

#### 3.5 *Hypotheses*

Accordingly, this study generates hypotheses to determine the relationship among the variables included.

H1 = there is a significant relationship between effort expectancy (EE) and intention to use (IU)

H2 = there is a significant relationship between Facilitating Condition (FC) and intention to use (IU)

H3 = there is a significant relationship between performance expectancy (PE) and intention to use (IU)

H4 = there is a significant relationship between social influence (SI) and intention to use (IU)

4 RESULTS AND DISCUSSION

The 104 data were analyzed in this study. The results were obtained through the reflective measurement models evaluation and the structural model validity assessment.

4.1 Result

4.1.1 Measurement models evaluation

This evaluation only included the evaluation of the reflective measurement model because all latent variables only had reflective not formative indicators. This evaluation includes convergent validity, discriminant validity, and internal consistency reliability. Convergent validity was evaluated from the value of outer loading > 0.7 and AVE > 0.5, discriminant validity was evaluated from the value of cross loading and the square root of the AVE ( $\sqrt{\text{AVE}}$ ), and internal consistency reliability was evaluated from Cronbach's alpha value > 0.7 (Hair Jr. et al. 2013). The results of the PLS SEM algorithm analysis provide an image of the measurement model (see Figure 1).

From the figure, it can be determined that the evaluation of the reflective measurement model shows the outer loading value of each indicator > 0.7 and the AVE value > 0.5 meaning that the existing model has convergent validity. In addition, the outer loading value of the construct (facilitating condition) shows a greater value than the other constructs. To determine the model discriminant validity, the AVE value of each construct must be higher than the highest correlation with other constructs. The result shows that the construct of facilitating condition has a higher value than its correlation value. Moreover, the data is considered reliable (according to the Construct Validity and Reliability analysis) as its value is higher than 0.7 according to Cronbach's alpha value.

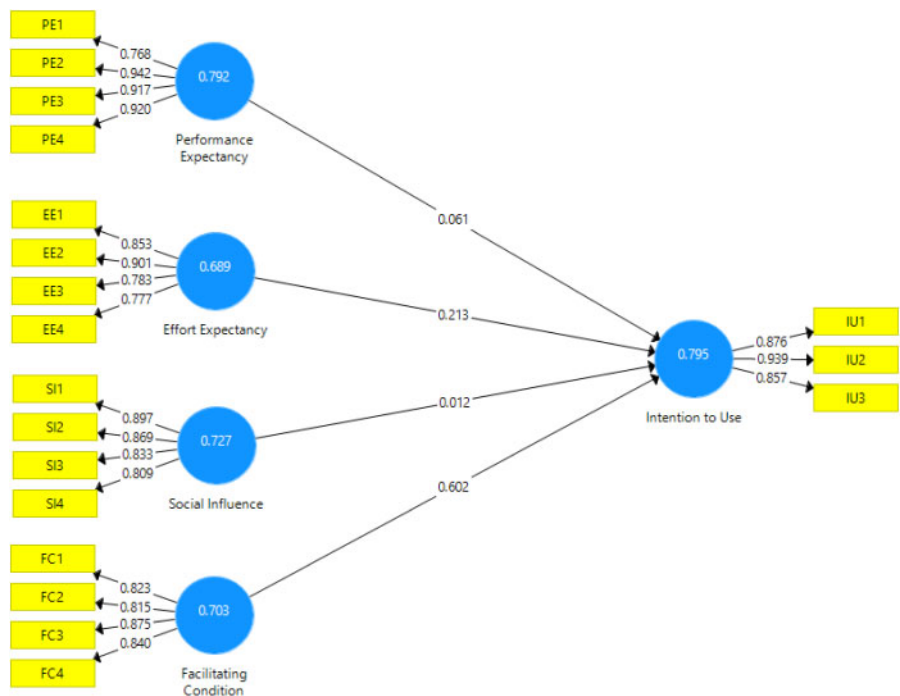


Figure 1. Outer loading value on reflective measurement model/outer model.  
Source: SEM-PLS output.

#### 4.1.2 The hypothesis testing

This stage is to test the research hypothesis using bootstrapping evaluation. The results of data processing show the following results.

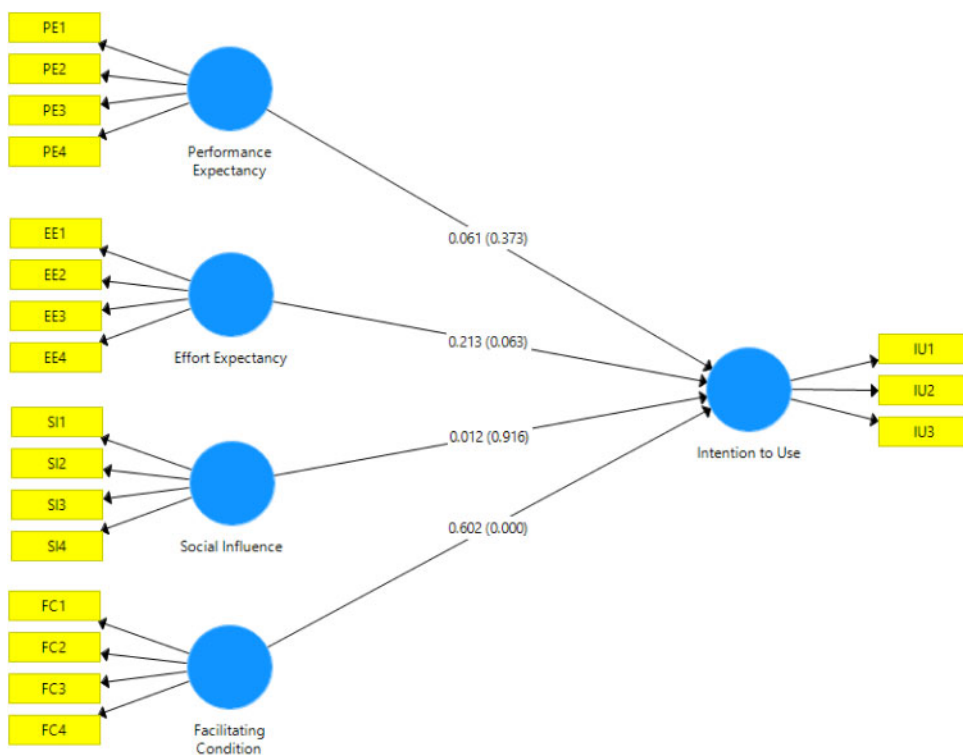


Figure 2. The path coefficient and loading factor of the inner model on bootstrapping output.  
Source: SEM-PLS output.

Table 1. Hypothetical results and type of relationship.

Type of Influences	(R2) Original Sampling	t Statistics	P Values	Conclusion	
				Type of Relationship	Hypothesis
Effort Expectancy → Intention to Use	0.213	1.799	0.073	Positive	Rejected
Facilitating Condition → Intention to Use	0.602	4.777	0.000	Positive	Accepted
Performance Expectancy → Intention to Use	0.061	0.860	0.390	Positive	Rejected
Social Influence → Intention to Use	0.012	0.114	0.910	Positive	Rejected

Source: bootstrapping SEM PLS Output

The results of the data analysis (see Table 1) show the significance and level of influence of each independent variable on the dependent variable. R2 from EE on IU is 0.21 with a p-value of

0.073 > 0.05 meaning that EE does not influence on IU and its level of influence is weak. While R2 from FC on IU is 0.62 with a  $p$  value of  $0.000 < 0.05$  meaning that FC has a significant influence on IU and it has a high level of influence. R2 from PE on IU is 0.061 with a  $p$  value of  $0.390 > 0.05$  meaning that PE does not influence on IU and its level of influence is weak. Lastly, R2 from SI on IU is 0.012 with  $p$  value of  $0.910 > 0.05$  meaning that SI has no significant influence on IU and its level of influence is weak. This level of influence on the variables used is referred to Hair Jr. et al. (2013).

Thus, it can be concluded that H02 is accepted because there is a significant and positive influence on facilitating conditions on IU (see Table 1). Meanwhile, H1, H3, and H4 are rejected because the Effort Expectancy, Performance Expectancy, and Social Influence variables show no significant influence on IU. Furthermore, the other output in this result, the value of  $R^2$  is 0.689 meaning that the dependent variable (IU) is influenced by the independent variables in this model by 68.9% and as much as 31.1% by other variables, which are not examined. In addition, this also notifies that the biggest influence of the dependent variable comes from the facilitating condition.

## 4.2 Discussion

From the data analysis, this study shows that only facilitating conditions have a significant effect on the IU technology, which is in line with the theory of UTAUT from Venkatesh et al. (2003). The result of H2 in this study supports previous studies such as Mensah (2019), Fadli et al. (2019), and Eneizan et al. (2019). In addition, the relationship between FC and IU is also in line with studies conducted by Cabrera-sánchez & Villarejo-ramos (2019), which state that there is a significant influence of facilitating conditions on the intention of CEOs and managers in using Big Data Analysis; Nair et al. (2015), which explains that FC has a significant positive effect on the intensity of the use of the lecture capture system (LCS) – ReWIND; and Naranjo-Zolotov et al. (2019), which also proves that there is a significant influence on FC in using e-participation.

However, from the results of this study (which can be seen from H1, H3, and H4) there are other possibilities caused by the existence of other factors not discussed in this study that may affect the relationship between business expectations, performance expectations, and social influences with an IU. There is no significant effect between effort expectancy, performance expectancy, and social influence on IU in this study similar to the results found by Wang et al. (2020), who studied the IU a business simulation game in Taiwanese students.

H1 is rejected meaning that there is no significant influence of EE to intention to use. This finding supports the studies conducted by Ayaz & Yanartas (2020), Wang et al. (2020), and Wiafe et al. (2019). Ayaz & Yanartas (2020) explain that the insignificant effort expectancy was possibly caused by the specifications and conditions for using the Electronic Document Management System (EDMS). While Wiafe et al. (2019) assume that there are contradictions regarding the EE and IU with pre-condition situations (such as high feminism influence). Wang et al. (2020) found that the contrasting result of the EE and IU is due to computer-assisted learning activities, which involves reducing the amount of efforts that must be expended to use this type of system/technology. This finding is in line with Wiafe et al. (2019) which indicates that in the situation where certain conditions/limitations are applied in the study there is a contradiction observed in the effect of EE on IU. Based on the discussion of the contradictions of the results of the study, EE has a non-significant influence in this study which is in line with the finding of the study conducted by Ayaz & Yanartas (2020). Unfamiliarity, as well as lack of knowledge regarding the technology, make the respondents resistant to using the guideline and view it as difficult.

H3 is rejected meaning that performance expectancy (PE) has no significant influence on IU. This result is different from studies conducted previously (Awwad & Al-Majali 2015; Ayaz & Yanartas 2020; Catherine et al. 2017; Cabrera-Sánchez & Villarejo-Ramos 2019; Nair et al. 2015), yet it supports the study conducted by Wang et al. (2020). They explain that PE has no significant influence on IU due to a lack of experience and knowledge regarding the intended technology (Wang et al. 2020). Meanwhile, in this study, it is found that most of the IBS managers have limited knowledge on the guidelines for accounting standards for IBS as they prefer to do it manually.

H4 is rejected meaning that social influence (SI) has no significant influence on IU. This finding supports the study conducted by Wiafe et al. (2019) who found that social influence has no significant influence on the IU in the situation with a certain condition (such as high feminism point of view). Although feminism serves as a social influence, it does not influence the IU certain technology (Wiafe et al. 2019). Had the situation applied in the IBS (where the patriarchy highly influences activity and decision making), the IU remains unaffected by the SI (Rahman 2018).

## 5 CONCLUSION

This study provides a deeper understanding of behavioral intentions to use the guideline of the accounting standards for IBS in East Java. Based on the UTAUT theoretical framework, the results of this study provide significant considerations regarding the adoption of LAP among IBS. Theoretically, this study provides an in-depth understanding of the role of facilitating conditions in the IU the guideline. Practically, both instructors and government can understand the factors influencing the decision of IBS financial managers to use the guideline of the accounting standard for IBS. Instructors, academics, as well as the government are the foremost parties to encourage good financial governance in East Java Islamic boarding schools. Although the results of this study theoretically and practically provide benefits, this study is limited in certain area with a certain condition, which possibly affects the overall result when different conditions are provided.

## REFERENCES

- Agar, J. 2020. What is technology?. *Annals of Science* 77(3): 377–382.
- Alwi, B. M. 2016. Pondok pesantren: Ciri khas, perkembangan, dan sistem pendidikannya. *Lentera Pendidikan: Jurnal Ilmu Tarbiyah Dan Keguruan* 16(2): 205–219.
- Arsanti, T. A. & Yuliasari, E. 2018. Personal factors as predictors of intention to use IT. *Jurnal Manajemen dan Kewirausahaan (JMK)* 20(2): 129–136.
- Awwad, M. S. & Al-Majali, S. M. 2015. Electronic library services acceptance and use: An empirical validation of unified theory of acceptance and use of technology. *The Electronic Library* 33(6): 1100–1120.
- Ayaz, A. & Yanartas, M. 2020. Computers in human behavior reports an analysis on the unified theory of acceptance and use of technology theory (UTAUT): Acceptance of electronic document management system (EDMS). *Computers in Human Behavior Reports Journal (Elsevier)* 2: 1–7.
- Bousbahi, F. & Alrazgan, M. S. 2015. Investigating IT faculty resistance to learning management system adoption using latent variables in an acceptance technology model. *Scientific World Journal* 2015: 1–11.
- Brauer, M., Alves, L. E., Vieira, P. R. da C., Albertin, A. L. & Romani-Dias, M. 2018. Corporate distance education: An applied understanding of its resistance factors. *Turkish Online Journal of Distance Education* 19(4): 43–63.
- Cabrera-sánchez, J. & Villarejo-ramos, Á. F. 2019. Factors affecting the adoption of big data analytics in companies. *RAE-Revista de Administração de Empresas (Journal of Business Management) FORUM* 59: 415–429.
- Catherine, B. N., Geoffrey, K. M., Moya, M. B. & Aballo, G. 2017. Effort expectancy, performance expectancy, social influence and facilitating conditions as predictors of behavioural intentions to use ATMS with fingerprint authentication in ugandan banks. *Global Journal of Computer Science and Technology: E Network, Web & Security*: 17(5): 4–22.
- Chang, A. 2012. Utaut and utaut 2: A review and agenda for future research. *Journal The WINNERS* 13(9): 106–114.
- Coşkun, A. & Karakoç, M. 2020. A conceptual framework for behavioral accounting. In *Uncertainty and Challenges in Contemporary Economic Behaviour* pp. 77–88.
- Davis, Fred & Davis, Fred. 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly* 13(3): 319–340.
- Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M. & Williams, M. D. 2019. Re-examining the unified theory of acceptance and use of technology (UTAUT): Towards a Revised Theoretical Model. *Information Systems Frontiers* 21(3): 719–734.

- Eneizan, B., Mohammed, A. G., Alnoor, A., Alabboodi, A. S. & Enaizan, O. 2019. Customer acceptance of mobile marketing in Jordan: An extended UTAUT2 model with trust and risk factors. *International Journal of Engineering Business Management* 11: 1-10.
- Fadli, Muchtar, Y. C. & Qamariah, I. 2019. E-Marketplace Acceptance and Use by Millennials for Business Start-Up. *Advances in Economics, Business and Management Research* 100(Icoi): 152-156.
- Hair Jr., J. F., Black, W. C., Babin, B. J. & Anderson, R. E. 2014. Structural Equations Modeling Overview. In *Multivariate Data Analysis* (7th ed.). New Jersey: Pearson.
- Hair Jr., J. F., Hult, G. T. M., Ringle, C. M. & Sarstedt, M. 2013. *A primer on partial least squares structural equation modeling*. SAGE Publication, Inc.
- Himel, T. A.; Ashraf, Sharif, Bappy, T. A.; Abir, Tanaz; Morshed, Khaled; & Hossain, Nazmul. 2021. Users' attitude and intention to use mobile financial services in Bangladesh: an empirical study. *South Asian Journal of Marketing* 2(1): 72-96.
- Hoque, R. & Sorwar, G. 2017. Understanding factors influencing the adoption of mhealth by the elderly: an extension of the UTAUT model international journal of medical informatics understanding factors influencing the adoption of mhealth by the elderly: An extension of the UTAUT mo. *International Journal of Medical Informatics* 101(February): 75-84.
- Huang, C. & Kao, Y. 2015. UTAUT2 Based predictions of factors influencing the technology acceptance of phablets by DNP. *Hindawi Publishing Corporation Mathematical Problems in Engineering* 2015: 1-23.
- Hudaefi, F. A. & Heryani, N. 2019. The practice of local economic development and Maqāṣid al-Sharī'ah: Evidence from a Pesantren in West Java, Indonesia. *International Journal of Islamic and Middle Eastern Finance and Management* 12(5): 625-642.
- IAI. 2018. *Pedoman Akuntansi Pesantren*.
- Ikatan Akuntan Indonesia (IAI). 2018. *Pedoman akuntansi pesantren*. Bank Indonesia.
- Ishak, S. S. M. & Newton, S. 2018. Testing a model of user resistance towards technology adoption in construction organizations. *International Journal of Innovation and Technology Management* 15(6): 1-27.
- Kim, S., Lee, K.-H., Hwang, H. & Yoo, S. 2015. Analysis of the factors influencing healthcare professionals' adoption of mobile electronic medical record (EMR) using the unified theory of acceptance and use of technology (UTAUT) in a tertiary hospital. *BMC Medical Informatics and Decision Making* 16(1): 1-12.
- Koonce, L. L. & Mercer, M. 2005. Using psychology theories in archival financial accounting research. *SSRN Electronic Journal*.
- Kutluk, F. A. 2017. Behavioral accounting and its interactions. *Accounting and Corporate Reporting - Today and Tomorrow* pp. 191-207.
- Mensah, I. K. 2019. Factors influencing the intention of university students to adopt and use e-government services: An empirical evidence in China. *SAGE Open* 9(2): 1-19.
- Munggaran, S. M. & Hastuti. 2020. Penyusunan sistem akuntansi pokok pondok pesantren daarul haliim berdasarkan pedoman akuntansi pesantren. *Prosiding The 11th Industrial Research Workshop and National Seminar* 26-27.
- Murthy, S. R. & Mani, M. 2013. Discerning rejection of technology. *SAGE Open* 3(2): 1-10.
- Nair, P. K., Ali, F. & Lim, C. L. 2015. Factors affecting acceptance & use of ReWIND: Validating the extended unified theory of acceptance and use of technology pradeep. *Interactive Technology and Smart Education* 12(3): 183-201.
- Naranjo-Zolotov, M., Oliveira, T. & Casteleyn, S. 2019. Citizens' intention to use and recommend e-participation: Drawing upon UTAUT and citizen empowerment. *Information Technology and People* 32(2): 364-386.
- Nguyen, N. M. H. & Borusiak, B. 2021. Using utaut2 model to examine the determinants of omnichannel technology acceptance by consumers. *Logforum* 17(2): 231-241.
- Nihwan, M. & Paisun. 2019. Tipologi Pesantren (Mengkaji Sistem Salaf dan Modern). *Jpik* 2(1): 59-81.
- Nordhoff, S., Louw, T., Innamaa, S., Lehtonen, E., Beuster, A., Torrao, G., Bjorvatn, A., Kessel, T., Malin, F., Happee, R. & Merat, N. 2020. Using the UTAUT2 model to explain public acceptance of conditionally automated (L3) cars: A questionnaire study among 9,118 car drivers from eight European countries. *Transportation Research Part F: Traffic Psychology and Behaviour* 74: 280-297.
- Nysveen, Herbjørn; Pedersen, Per; & Thorbjørnsen, Helge. 2005. Intentions to Use Model Services: Antecedents and Cross-Service Comparisons. *Journal of the Academy of Marketing Science* 33: 330-346.
- Purwanto, M. R. 2019. The use of entrepreneurship education in community empowerment at Lintangsono Islamic Boarding School of Yogyakarta. *International Journal of Engineering and Advanced Technology* 9(2): 796-800.
- Rahman, Y. 2018. Feminist Kyai , K . H . Husein Muhammad the feminist interpretation on gendered verses and. *Al-Jāmi'ah: Journal of Islamic Studies* 55(2): 293-236.

- Rondan-Cataluña, F. J., Arenas-Gaitán, J. & Ramírez-Correa, P. E. 2015. A comparison of the different versions of popular technology acceptance models a non-linear perspective. *Kybernetes* 44(5): 788–805.
- Stiawan, K. & Tohirin, D. M. 2015. Format pendidikan pondok pesantren salafi dalam arus perubahan sosial di Kota Magelang. *Cakrawala* X(2): 194–209.
- Swilley, E. 2010. Technology rejection: The case of the wallet phone. *Journal of Consumer Marketing* 27(4): 304–312.
- Syafe'i, I. 2017. Pondok pesantren: Lembaga pendidikan pembentukan karakter. *Al-Tadzkiyyah: Jurnal Pendidikan Islam* 8(1): 61.
- Talwar, S., Talwar, M., Kaur, P. & Dhir, A. 2020. Consumers' resistance to digital innovations: A systematic review and framework development. *Australasian Marketing Journal* 28(4): 286–299.
- Teng, J. T. C., Dissanayake, I. & Dantu, R. 2017. A theoretical model for assessing user resistance intention in is implementation. *Decision Science Intitute* 1: 1–12.
- Venkatesh, V., Morris, M. G., Davis, G. B. & Davis, F. D. 2003. User acceptance of information technology: toward a unified view. *IMIS Quarterly* 27(3): 425–478.
- Wang, Y., Wang, Y. & Jian, S. 2020. Investigating the determinants of students' intention to use business simulation games. *Journal of Educational Computing* 58(2): 433–458.
- Wiafe, I., Koranteng, F. N., Tettey, T., Kastriku, F. A. & Abdulai, J. D. 2019. Factors that affect acceptance and use of information systems within the maritime industry in developing countries: The case of Ghana. *Journal of Systems and Information Technology* 22(4): 21–45.
- Wibbeke, L. M. & Lachmann, M. 2020. Psychology in management accounting and control research: an overview of the recent literature. *Journal of Management Control* 31(3): 275–328.
- Zygman, T. 2017. The selected problems of behavioral accounting: The issue of intellectual capital. In *Springer Proceedings in Business and Economics* pp. 215–224.

## A study on business sustainability of SMEs during pandemic COVID-19

M.K. Siwi\*, T. Kurniawati & Z. Afdal

*Economic Faculty, Universitas Negeri Padang, Padang, West Sumatera*

**ABSTRACT:** This study aims to conduct a study on business sustainability of Embroidery SMES in Agam regency, West Sumatera during the COVID-19 pandemic. The study is based on qualitative research with a case study approach and the object of this research is embroidery SMEs in Agam regency. Data were collected through questionnaires and interviews. The results showed that 60% of companies were still able to survive in the pandemic though income and profits decreased. Around 75% of the companies already have a good processing system and their business produces almost no waste, because every waste material they have is reprocessed to become a new product. About 70% of companies provide maximum service to employees because most of them are family businesses that have been passed down from generations. Only 60% of entrepreneurs are already actively involved in social activities and have a special budget for donations and charitable activities.

### 1 INTRODUCTION

The development of MSME business in Indonesia has increased since the past 10 years. In 2016–2019, the growth in the number of MSME units increased by 4.2% annually. The average contribution of MSMEs to Indonesia's Gross Domestic Product (GDP) is more than 50% over the past 3 years. This proves that MSMEs have been able to help improve the community's economy independently and are able to encourage economic growth in Indonesia.

MSMEs are a combination of micro, small, and medium enterprises. Small business is a business that has less than 50 workers and has a net worth of at most IDR 200 million excluding land and buildings and has a maximum sales turnover of 1 billion per year (Law No. 9 1995). This small business can be in the form of a sole proprietorship, business entity, or cooperative. Sheperd and Wiklund (2009) identified five common firm growth measures that have been used in past studies; these are growth in sales, employees, profit, assets, and equity.

During the COVID-19 pandemic, MSMEs had a major impact on their business continuity. Based on the survey results, 96% of business actors experienced a negative impact from COVID-19 in Indonesia. A total of 1,785 cooperatives and 163,713 MSMEs were significantly affected. Around 75% of these business actors experienced a decline in sales, 51% of business actors had a business continuity of not more than 3 months, and 75% expressed their lack of understanding of government policies during the crisis. Even so, there are still 13% of businesses that are able to survive and are optimistic about having future work plans and solutions for their businesses.

To deal with the crisis during the pandemic, the government prepared various policies. The Ministry of Cooperatives and SMEs has also provided a hotline service, 1500 587, which is intended as a place of registering complaints for MSMEs and SMEs whose businesses are affected by COVID-19. Government programs in times of crisis include stimulus for purchasing power of MSMEs and cooperatives, restructuring of interest loans, direct cash assistance, to SME tax relaxation.

---

\*Corresponding Author: [menikkurnia@gmail.com](mailto:menikkurnia@gmail.com)



The COVID-19 pandemic has created many problems for businesses. However, this also creates new opportunities for business people to use technology in their business. MSMEs and cooperatives can maximize technology to help their business because electronic commerce in Indonesia in 2020 is expected to reach 130 billion. However, small businesses have not been able to fully utilize technology.

Commonly defined as development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development (WCED 1987), sustainability aims to secure intergenerational equity. Expressed in this way, the principles of sustainability are indisputable. Most people want to live as well as their parents, and they want their children to enjoy similar opportunities. The same logic applies in business—most managers want their business to be at least as profitable as in the past and, ideally, for profits to grow. Based on this logic, business sustainability can be defined as the ability of firms to respond to their short-term financial needs without compromising their (or others’) ability to meet their future needs. Thus, time is central to the notion of sustainability (Pratima Bansal 2014).

In simple terms, business processes are related to input-process-output. If this is associated with the concept of sustainability, it will mean the sustainability of inputs (what will be produced) processes (how to produce?) and outputs (for whom goods/services are produced?) (Dyllick, T. & Muff, K 2016). The concept of sustainability was further developed into Business Sustainability 1.0 (Refined Shareholder Value Management), then Business Sustainability 2.0 (Managing for the Triple Bottom Line), and Business Sustainability 3.0 (True Sustainability) (Dyllick, T. & Muff, K 2016). Business Sustainability 1.0 is related to the ability of businesses to seize opportunities and control risks arising from developments in economic, environmental, and social conditions (Dyllick, T. & Muff, K 2016; Hahn, T. & Figge, F 2011). Business Sustainability 2.0 is the ability to manage the triple bottom line (people, planet, profit)—financial management, risk management, and the ability to manage obligations and opportunities (Dyllick, T. & Muff, K 2016, Network for Business Sustainability 2012). Business Sustainability 3.0 (True Sustainability) is also called real sustainability. Real business sustainability takes on a much deeper meaning. True sustainability reflects the ability of businesses to contribute to sustainability issues in society through the products or services they produce. How business through its resources, competence, and experience is able to play a role in overcoming economic, social, and environmental issues, such as climate change, population, corruption, poverty, pandemics, unemployment, and financial instability and so on (Dyllick, T. & Muff, K 2016).

Of the three business sustainability models that have been proposed (Dyllick, T. & Muff, K 2016), business sustainability is closely related to the ability of the business to manage or manage risk, financial management, and the ability of the business to contribute to society or corporate social responsibilities. For MSMEs themselves, managing risk is not easy (de Araújo Lima et al. 2020). The tools used by large companies in risk management are often unsuitable and too complicated for MSMEs (Pereira et al. 2015).

In addition to risk management capabilities, business sustainability is also related to financial management, whose output can be seen from the company’s financial performance. Financial performance is one of the important factors in determining the sustainability and growth of the company (Brown, D. M. & Laverick, S 1994). Kaplan and Norton (Kaplan, R. S 2009) stated that the company would concentrate on its financial aspects to be able to continue and grow. Sales, capital expenditure, cash flow, and profit are some of the main indicators including liquidity, solvency, and effective use of assets (Ensley, M. D. et al. 2006). However, in reality, complete and adequate MSME financial data are relatively difficult to obtain (Perera, S. & Baker, P 2007; Sian, S. & Roberts, C 2009). For this reason, obtaining MSME financial data can also be done indirectly by interviewing MSME owners at least for the data for the past 3 years (Ellis, P. D 2007).

Business sustainability is the focus for business actors to be able to survive during the pandemic. The existence of government policies, especially related to restrictions on community activities (PSBB) makes it increasingly difficult for small businesses to survive. This happens throughout Indonesia, including in Agam Regency, West Sumatra. Agam Regency is a tourist destination and

local economic manager in West Sumatra. The pandemic makes them really try hard to sell their superior product in the form of embroidered cloth. The business sustainability studied in this case is not only related to profit, planet, people, and CSR during the COVID-19 pandemic with a case study on embroidery craftsmen in Agam Regency, West Sumatra.

2 METHODS

The research method is qualitative research with a case study approach. The object of this research is embroidery SMEs in Agam Regency. The data were collected through interviews, observations, and documentations (Creswell 2010). We interviewed the owner. We used a semi-structured interview with open-ended questions, so we can explore deeper information from the participant (Sugiyono 2016).

We also conducted observations and documentary analyses to strengthen the results gained from the interview. The results of the interview will be transcribed and analyzed through the coding process to get the main themes and specific themes. The answers from the informants will be grouped into these themes, after that we selected several themes that often appear. Data contradictions that appear will cross check with the results of observations, so that conclusions can be drawn.

3 RESULTS AND DISCUSSION

The discussion will be divided into five parts: (1) Sustainability business in COVID-19 pandemic, (2) business sustainability dimension profit, (3) business sustainability dimension planet, (4) business sustainability dimension people, and (5) business sustainability dimension CSR.

3.1 Sustainability business during COVID-19 pandemic

We conducted interviews and observations about business sustainability with 30 embroidery craftsmen of SMEs in Agam Regency. Our main resource person is Mrs. E as the head of the group of embroidery craftsmen in Agam Regency. The embroidery business in Agam Regency is a hereditary family business. This business has been running since a very long time but only recently has it been managed professionally. The age of the business here is quite varied, some have been around for 25 years and some are just starting out. Usually, those who are just starting out are the younger generation who still want to continue the business of their parents. Meanwhile, the managers themselves are still dominated by craftsmen with the age of 40–50 years.

Since the onset of COVID-19, the sustainability of people’s businesses such as embroidery has been affected due to the decline in buyers. However, according to the observations in Figure 1. More than 50% of the craftsmen are still able to survive and remain optimistic that their business will continue even though they are affected by the pandemic. The strategies they take to maintain

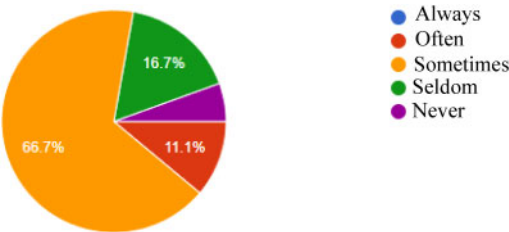


Figure 1. “My company will be able to survive in the era of the COVID-19 pandemic”.

their business include maintaining orders from customers and adding orders from out of town to marketing online.

### 3.2 *Business sustainability dimension profit*

Based on the results of interviews with embroidery craftsmen, information was obtained that this business is quite promising in terms of profit. As shown in Figure 2. It shows that based on the interview results, embroidery business is able to provide a profitable business for more than 40% of respondents. Although the turnover of goods is not too fast due to the long manufacturing process, this embroidery business is able to meet the needs of families and can even help pay for children's education costs up to college. In addition, this business is also able to create job opportunities for the surrounding community. In a MSME can recruit 2 to 3 employees.

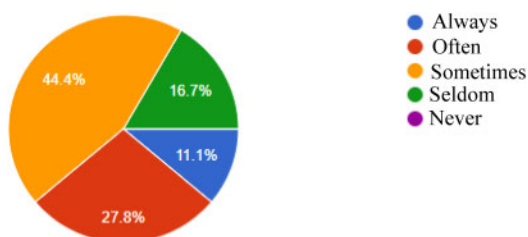


Figure 2. "My business gives great profit".

At the times of crisis due to the pandemic, many businesses were affected. Although most are still able to survive, in terms of profits, they have decreased compared to that before the pandemic. The business survival of MSMEs during this pandemic is supported by several things, including their small business capital of less than 25 million so they can still be met, and the costs incurred are not too large, as most of the businesses used are at home, so they do not require a fee or rent

### 3.3 *Business sustainability dimension planet*

Entrepreneurial orientation refers to "processes, practices, and decision-making activities that lead to new entry" (Lumpkin & Dess 1996). The business continuity of a business must also pay attention to environmental sustainability and is commonly referred to as the planet. Some of the things that are researched related to the environment are about the waste disposal system and energy-saving policies that are carried out by a business. In terms of waste disposal, embroidery craftsmen in Agam Regency, more than 75% stated that they have a good waste disposal system as illustrated in Figure 3. The waste produced by the embroidery is minimal and they use it as recycled material into finished goods.

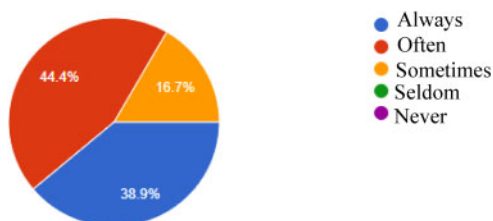


Figure 3. "My business has a good garbage disposal system".

The machines and equipment used are also energy efficient because they still use traditional machines in the form of needles and threads. Craftsmen also avoid the use of hazardous chemicals

in the production process. For dyeing the threads, natural dyes from plants are used. However, there is still one thing that needs to be considered for embroidery craftsmen, they still use plastic as their product packaging.

### 3.4 Business sustainability dimension people

Entrepreneurial orientation has been used as a firm resource in form of processes (Barney 1991). In maintaining business sustainability, one of the components that need to be considered is people. People, here, is how a business manages and pays attention to its employees based on a survey with their embroidery craftsmen stated that more than 70% are concerned about employee job satisfaction and it is an important thing for the company as shown in Figure 4.

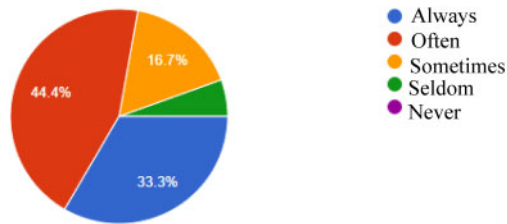


Figure 4. “Employee job satisfaction is important in my company”.

Some things that are considered related to employees include providing employees with opportunities to receive training. Owners also involve employees in business decision making. Businesses also have a work safety system for employees (K3). The company also has an employee performance appraisal system as a basis for paying overtime pay for employees who work more than working hours. And finally, some businesses design the workplace as comfortable as possible for their employees.

### 3.5 Business sustainability dimension CSR

The last component in business sustainability is related to CSR. CSR is how a business is able to care about the social environment and community needs. Some of the things that form the basis of a company’s CSR assessment include whether a business has a budget for donations, charities and other social activities. For embroidery craftsmen, social activities have become part of their activities. Figure 5 shows that around 30% of entrepreneurs already have a special budget for the construction of public facilities.

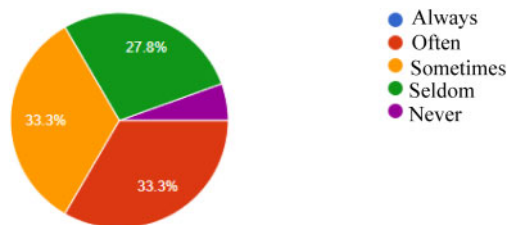


Figure 5. “My company has a budget to donate in the construction of public facilities”.

Figure 6 shows that more than 50% of entrepreneurs are able to consider the impact on the environment before making a decision. This social concern is shown by following health protocols in their business, such as providing a place for washing hands and always using masks when working and serving buyers. CSR, on the other hand, does not necessarily require trade-offs. Most

responsibility scholars argue that CSR represents the set of organizational activities that are good for society and the firm (McWilliams & Siegel 2001). Framed in this way, responsibility is nothing more than good business. Concepts like “shared value” and “win-wins” suggest that firms can create value for both business and society simultaneously (Porter & Kramer 2006).

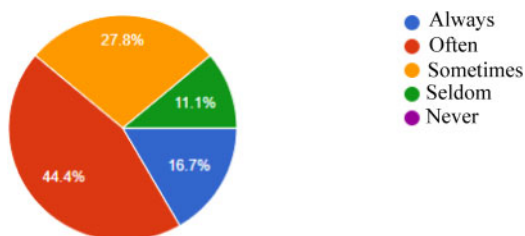


Figure 6. “In making company decisions I consider the impact on society”.

For entrepreneur, one must notice that while considering entrepreneurial culture in an organization, innovation is one of the most importance for its growth and success (Kang et al. 2016). Culture in organization consists of an arrangement of shared, taken-for-granted expectations which can be held by the participants of the institute and imparted to the new and recent participants (Schein 1985). Under the resource-based view, firms create sustainable competitive advantage by developing valuable, rare, and, most importantly, inimitable resources, which preserve firm-specific advantages (Barney 1991). For SMEs, entrepreneurial is important. Past studies show that entrepreneurial orientation influences SMEs’ performance (Amin 2015; Amin et al. 2016; Fatoki 2012; Mahmood & Hanafi 2013; Mata & Aliyu 2014; Rauch Wiklund et al. 2009; Yeni 2015; Zehir et al. 2015).

#### 4 CONCLUSION

Based on the explanation above, it can be seen that in the COVID-19 pandemic, MSMEs have become one of the victims affected by losses. A case study conducted on embroidery craftsmen in Agam Regency show that even though their business is affected by the pandemic and has decreased profits, they are still optimistic in running their business. Business sustainability has four assessment dimensions, including profit, planet, people, and CSR.

This research was only conducted on MSMEs affected by the COVID-19 pandemic but did not discuss the influence of government policies on MSME business sustainability. Hence, further research can focus on solutions to overcome the COVID-19 pandemic crisis for affected MSMEs.

#### REFERENCES

- Amin, M. 2015. The effect of entrepreneurship orientation and learning orientation on SMEs’ performance: an SEM – PLS approach. *Journal of International Business and Entrepreneurship Development* 8(3): 215–230.
- Amin, M., Thurasamy, R., Mohamad, A., Aznur, A. & Kaswuri, H. 2016. The effect of market orientation as a mediating variable in the relationship between entrepreneurial orientation and SMEs performance. *Nankai Business Review International* 7(1): 39–59.
- Bansal, Pratima and Mark R. Desjardine. 2014. *Business sustainability: It is about time*. Canada: Western University.
- Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management* 17(1): 99–120.
- Bos-Brouwers, H. E. J. 2010. Corporate sustainability and innovation in SMEs: evidence of themes and activities in practice. *Business strategy and the environment* 19(7): 417–435.
- Creswell John. 2010. *Research Design Pendekatan Kualitatif, Kuantitatif dan Mixed*. Yogyakarta: Pustaka Pelajar.

- Dey, P. K., Malesios, C., De, D., Chowdhury, S. & Abdelaziz, F. B. 2019. Could lean practices and process innovation enhance supply chain sustainability of small and medium-sized enterprises? *Business Strategy and the Environment* 28(4): 582–598.
- Dey, P. K., Malesios, C., De, D., Budhwar, P., Chowdhury, S. & Cheffi, W. 2020. Circular economy to enhance sustainability of small and medium-sized enterprises. *Business Strategy and the Environment* 29(6): 2145–2169.
- Dutta, G., Kumar, R., Sindhvani, R., Singh, R.K., 2020. Digital transformation priorities of India's discrete manufacturing SMEs: a conceptual study in perspective of Industry 4.0. *Compet. Rev. An Int. Bus. J.* 30: 289–314.
- Dyllick, T. & Muff, K. 2016. Clarifying the meaning of sustainable business: Introducing a typology from business-as-usual to true business sustainability. *Organization & Environment*, 29(2): 156–174.
- De Araujo Lima, P. F., Crema, M. & Verbano, C. 2020. Risk management in SMEs: A systematic literature review and future directions. *European Management Journal* 38(1): 78–94.
- Kamble, S., Gunasekaran, A., Dhoke, N.C., 2020. Industry 4.0 and lean manufacturing practices for sustainable organisational performance in Indian manufacturing companies. *Int. J. Prod. Res.* 58: 1319–1337.
- Kang, J. H., Matusik, J. G., Kim, T. Y. & Phillips, J. M. 2016. Interactive effects of multiple organizational climates on employee innovative behavior in entrepreneurial firms: a cross-level investigation. *Journal of Business Venturing* 31(6): 628–642.
- Kementerian Keuangan RI. 2020. *UMKM Bangkit, Ekonomi Indonesia Terungkit*.
- Lumpkin, G. T. & Dess, G. G. 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review* 21(1): 135–172.
- Mahmood, R. & Hanafi, N. 2013. Entrepreneurial orientation and business performance of women-owned small and medium enterprises in Malaysia: Competitive advantage as a mediator. *International Journal of Business and Social Science* 4(1): 82–90.
- Mata, B. A. K. & Aliyu, M. S. 2014. The relationship between some determinants of SME performance in Nigeria: A qualitative approach. *European Journal of Business and Management* 6(2): 107–114.
- McWilliams, A. and Siegel, D. 2001. Corporate Social Responsibility: A theory of the firm perspective. *Academy of Management Review* 26(1): 117–27.
- Mitchell, S., O'Dowd, P. & Dimache, A. 2020. Manufacturing SMEs doing it for themselves: developing, testing and piloting an online sustainability and eco-innovation toolkit for SMEs. *International Journal of Sustainable Engineering* 13(3): 159–170.
- Nagy, K. Hanna. 2020. Assessing the digital economy: aims, frameworks, pilots, results, and lessons. *Journal of Innovation and entrepreneurship* 9:16.
- Network for Business Sustainability. 2012. *Definition of business sustainability*.
- Pereira, L., Tenera, A., Bispo, J. & Wemans, J. 2015. A risk diagnosing methodology web-based platform for micro, small and medium businesses: Remarks and enhancements. *Communications in Computer and Information Science* 340–356.
- Porter, M. E. and Kramer, M. R. 2006. Strategy and Society: The Link between Competitive Advantage and Corporate Social Responsibility. *Harvard Business Review* 84(12): 78–92.
- Raghuvanshi, J. & Agrawal, R. 2020. Revitalization of Indian SMEs for sustainable development through innovation. *Business Strategy & Development*, 3(4): 461–473.
- Rauch, A., Wiklund, J., Lumpkin, G. T. & Frese, M. 2009. Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice* 33(3): 761–787.
- Shen, K. Y., Yan, M. R. & Tzeng, G. H. 2017. Exploring R&D influences on financial performance for business sustainability considering dual profitability objectives. *Sustainability* 9(11): 1964.
- Singh, R.K., Kumar, R. 2020. Strategic issues in supply chain management of Indian SMEs due to globalization: an empirical study. *Benchmark Int. J.* 27: 913–932.
- Sugiyono. 2016. *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta.
- Yeni, Y. H. 2015. *The influence of entrepreneurial orientation and learning orientation on firm performance of MSMEs in west Sumatra*. Paper presented at the Australasian conference on business and social sciences. Sydney.
- Zehir, C., Can, E. & Karaboga, T. 2015. Linking entrepreneurial orientation to firm performance: The role of differentiation strategy and innovation performance. *Procedia – Social and Behavioural Sciences* 210: 358–367.

# Compensation, workload, work satisfaction analysis toward performance through employee work stress at Royal Orchids Garden Hotel and Condominiums Batu, East Java

D. Orbaningsih & R.M. Putri

*Post Graduate Gajayana University, Malang, Indonesia*

Ahmad\*

*Faculty of Educational Sciences, Universitas Negeri Malang, Indonesia*

**ABSTRACT:** This study aims to analyze the effect of compensation variables, workload and job satisfaction on performance through employee work stress. This causal associative study involved 70 samples taken by census. Research data collected through questionnaires and documentation, then analyzed using structural equation model based on partial least square techniques. Research results: (1) compensation, workload, and job satisfaction have a positive and significant effect on performance; (2) compensation and job satisfaction have no effect on work stress, while workload has a positive and significant effect on work stress; (3) job stress has a positive and significant effect on performance; (4) compensation has no effect on employee performance through work stress; (5) workload and job satisfaction have a positive and significant effect on employee performance through work stress of ROGHCB employees.

## 1 INTRODUCTION

Royal Orchids Garden Hotel & Condominiums Batu shortened to (ROGHCB) is one of the companies engaged in hospitality services, which was established in 1992 with a capacity of 113 rooms and 19 villas. Hotels with a vision to be one of the best hotels for business and leisure in Batu City, on its journey has decreased its occupancy rates from year to year from 2016 to 2019, this can be shown as follows.

Table 1. Room sales from 2016 to 2019.

Houses	Year			
	2016	2017	2018	2019
Room Sold	20,628	20,778	19,778	21,797
Room Available	23,897	24,727	25,535	28,908
Percentage	86,30 %	84,07 %	77,45 %	75,40 %

Source: ROGHCB Annual Room Sales Data

These data provide information that the decline in occupancy rates in ROGHCB caused by external and internal factors. External factors such as the low level of customer specialization in addition to the quality factor of employee performance. Performance is the output generated from a

\*Corresponding Author: ahmad.fip@um.ac.id

work function within a certain time period. Wijayanti (2008) argues that employee performance is the controller of a company's operation, so that if the company's employee performance is good the company's performance will increase, and vice versa. The more high-performance employees, the overall productivity of the company will increase so that the company will be able to survive in global competition. Performance is an organizational achievement both short and long term, which is useful for contributing to organizational performance based on the results of performance appraisal.

Rao (2002: 67) argues that performance appraisal is a strategy to assess how well a job is done and if necessary it can be used to improve employee performance. Mangkunegara (2000: 10) explains the objectives of performance appraisal, including: (1) Increasing tolerance among employees; (2) Record and acknowledge employee work; (3) Providing career promotion opportunities; (4) Formulating future work targets; (5) Check the implementation and development plan as needed. So, employee performance is the ability of a person to carry out his work following with work quality standards, speed, the accuracy of work, the initiative in work, workability, communication, motivation in working, and able to see opportunities that exist where a work target can be completed on time in accordance with moral and ethical. The factors that affect employee performance include workloads as Setyawan and Kuswati (2006: 109) argue that if workload continues to increase without an appropriate division of workload, employee performance will decline.

The workload is a set of activities that must be completed by an organizational unit, (Dhanias, 2010). According to Kurnia (2010) workload is a process of analyzing the time spent by a person or group of people in completing the tasks of a job carried out under normal conditions. So, the workload is a number of task demands to someone who must be done during a certain time require mental and physical activity, which must be completed within a certain period of time in its implementation requires the ability of an individual in accordance with his work capacity.

Other factors that affect employee performance are compensation and job satisfaction. Armstrong (1998) defines an award system that consists of organizational policies, processes, procedures, and integrated practices to reward employees according to their contributions, skills and competencies. Sirait (2006: 77) states that compensation is what is received by employees, either in the form of money or not money a remuneration for services provided to the efforts of employees that they provide to the organization. Ghazanfar (2015) states that compensation is all remuneration in the form of money, goods, or awards given by companies to employees based on their performance. compensation related to basic salary, adequacy of compensation, compensation justice program and compensation understanding program. the results will have an impact on individual performance.

Compensation is anything that is received by employees provided by the company as remuneration for what has been done by employees for the organization or company for the progress of the company, can be in the form of money or not money in the form of appreciation or appreciation, if compensation is given appropriately and correctly employees will be motivated and focused to carry out company goals because for employees the value of compensation reflects the value of work that has been done for the organization or company.

Fitrianti (2016) explains compensation affects the performance of employees, it can be explained that the better the compensation provided by the company directly or indirectly, the higher the employee's performance towards the company. About job satisfaction, Wibowo (2015: 141) explains that job satisfaction is a predictor of performance because job satisfaction has a moderate correlation with performance. Thus it can be stated that the level of employee satisfaction will affect performance. If job satisfaction is achieved, employee performance will be high, and vice versa. If someone does not get job satisfaction, it can be expressed through resignation, easy complaining, disobedience, stealing work equipment, and avoiding responsibilities at work. It can be concluded that job satisfaction reflects the attitudes and behavior of employees in dealing with their work which can be seen as enthusiasm in carrying out the work.

Based on the opinions of the experts, it is concluded that job satisfaction is an individual thing. Everyone has a different level of satisfaction; these attitudes can be either a positive attitude or a negative attitude. Thus, satisfaction is an evaluation that illustrates a person's feelings of pleasure/displeasure, satisfaction, or dissatisfaction in working and assessing his work.



Job stress as another factor can affect employee performance directly or indirectly. Work stress if managed properly can be a driving force and increase the intensity of the performance, whereas if not managed properly work stress will cause problems that negatively impact the performance of individual employees and companies. Kreitner and Kinicki (2005: 79) distinguish between eustress which is positive stress or stress that produces a positive result and distress that is destructive power or negative stress that often causes physical or mental problems. According to Mangkunegara (2009: 179), stress is a feeling of stress experienced by employees when facing work.

This can be seen from unstable emotions, feelings of unease, increased blood pressure, and indigestion. While the definition of stress according to Robbins (2007: 793) is a condition experienced by individuals in facing an opportunity, obstacle, or demand whose results are considered uncertain but important. From the above understanding, it can be concluded that stress is a response or action taken by someone in response to changes in their surroundings.

Based on the opinion of the experts, it can be concluded that work stress is a condition of tension experienced by someone when working that is not pleasant to create an imbalance of physical, psychological, and behavioral conditions of employees that affect the process and condition of employees, work stress can be sourced from individuals or organizations. Therefore, handling work stress must be done well because it will have an impact on employee performance. Research needs to be done related to factors that affect employee performance including compensation, workload, job satisfaction, and work stress variables on employee performance at ROGHCB.

## 2 METHODS

Research conducted at ROGHCB is a type of causal associative research involving 70 samples taken by the census. Umar (2005: 30) argues causal associative research is research that aims to determine the effect of two or more variables. Research data were collected by questionnaire and documentation, with data analyzed by the path analysis formula with the help of Partial Least Square.

## 3 RESULTS AND DISCUSSION

Results in Smart PLS analysis with the instrument validity level are as follows.

Table 2. Instrument validity.

Variable	Indicator	Outer Loading	AVE	Fornell Larcker C.	Cross Loading
Compensation	X1.1	0.797	0.890	0.782	0.802
	X1.2	0.832			0.832
	X1.4	0.740			0.736
	X1.6	0.757			0.757
Workload	X2.1	0.925	0.894	0.926	0.926
	X2.2	0.935			0.934
	X2.3	0.917			0.916
Job Satisfaction	X3.2	0.778	0.879	0.830	0.776
	X3.3	0.833			0.832
	X3.5	0.852			0.852
	X3.6	0.856			0.859

(continued)

Table 2. Continued.

Variable	Indicator	Outer Loading	AVE	Fornell Larcker C.	Cross Loading
Employee Performance	Y.1	0.722	0.890	0.817	0.777
	Y.2	0.785			0.795
	Y.3	0.817			0.831
	Y.4	0.754			0.768
	Y.5	0.796			0.794
	Y.6	0.881			0.893
Work Stress	Z.2	0.890	0.894	0.888	0.889
	Z.3	0.894			0.895
	Z.6	0.879			0.878

Results of Research Data Processing, 2020

The results of the outer model analysis show that the data has a high level of validity so that it is suitable for use in research (Irwan & Adam 2015). After all, indicators have been declared valid, they can proceed with AVE the results of the analysis concluded that the data was significant. Thus, it can be stated that each variable has a good convergent validity by the opinion of Wijayanto, (2008: 66). The minimum AVE value to a state that reliability has been achieved is  $< 0.50$ , the AVE value  $< 0.50$  indicates that the indicator has a higher average error rate.

To find the value of the variable validity gap, the Fornell-Larcker Criterion. criteria are used. the data above already meets the requirements with the AVE square root value of the variable with the variable itself being greater than the correlation value of the variable with other variables. The next discriminant validity test uses the cross-loading value. An indicator is declared to meet discriminant validity if the cross-loading indicator value on the variable is the largest compared to other variables. The cross-loading value that has been presented above can be seen that each indicator on the research variable shows the largest cross-loading value on the variable it forms compared to the cross-loading value on each indicator against other variables of the other variables. Based on these results, it can be stated that the indicators used in this study already have good discriminant validity in preparing their respective variables.

Table 3. Reliability test.

Variable	Composite Reliability	Cronbach's Alpha
X1	0.863	0.788
X2	0.947	0.916
X3	0.899	0.851
Y	0.909	0.875
Z	0.918	0.865

Results of Research Data Processing, 2020

The reliability of the variables is also the focus of the analysis. the technique used to measure its Composite Reliability with value criteria,  $> 0.70$ . The data results in the table above show the composite reliability value  $> 0.70$ . according to Sarwono's (2011) statement that the value of Cronbach's alpha reflects the reliability of all indicators in the model. The minimum value is  $> 0.7$  while the ideal is 0.8 or 0.9. The results of the data in the table above show a value  $> 0.7$ .

The R-Square results in the table above show the effect of compensation, workload, and job satisfaction on employee performance giving a value of 0.782 with the meaning that the employee

Table 4. R-square &amp; predictive relevance.

Variable	R-Square	Predictive Relevance
Y	0.782	0.500
Z	0.703	0.532

Results of Research Data Processing, 2020

performance variable is affected by 78.2% by the variable compensation, workload, and job satisfaction while the remaining 21.8% is influenced by other variables outside the variables used in this study. Furthermore, the data also shows the effect of workload compensation, and job satisfaction on work stress gives a value of 0.703 with the meaning that the work stress variable is affected by 70.3% by the compensation, workload, and job satisfaction variables, while the remaining 29.7% is influenced by other variables outside the variable used in this study.  $Q_2$  value > 0 indicates that the model has an accurate predictive relevance to certain constructs, while  $Q_2$  < 0 indicates that the model lacks predictive relevance. work stress shows a value of 0.532, it can be stated that the data above has an accurate predictive relevance.

Path coefficients testing between constructs is done to see the strength of the relationship and to test the hypothesis. The path coefficients range from -1 to +1. The closer to +1, the relationship between the two constructs is positive, and when it gets closer to -1 the relationship between the two constructs is negative and is said to be influential if the p-value is <0.05 and it is said that there is no effect if the p-value is > 0.05. To see the results of hypothesis testing simultaneously or together it can be seen the value of the path coefficients and p-values in the total effects of the results of simultaneously processing variable data.

Table 5. Path coefficient, P-values &amp; T-statistics.

Antar Variabel	Path Coefficient	P-Values	T-statistics	Keterangan
X1 -> Z	0.155	0.141	1.476	Tidak Berpengaruh
X2 -> Z	0.327	0.016	2.414	Berpengaruh Positif Signifikan
X3 -> Z	0.455	0.356	0.923	Tidak Berpengaruh
X1 -> Y	0.123	0.042	2.043	Berpengaruh Positif Signifikan
X2 -> Y	0.283	0.006	2.783	Berpengaruh Positif Signifikan
X3 -> Y	0.079	0.001	3.499	Berpengaruh Positif Signifikan
Z -> Y	0.495	0.000	4.251	Berpengaruh Positif Signifikan
X1 -> Z -> Y	0.077	0.081	1.747	Tidak Berpengaruh
X2 -> Z -> Y	0.162	0.021	2.312	Berpengaruh Positif Signifikan
X3 -> Z -> Y	0.225	0.011	2.539	Berpengaruh Positif Signifikan

Results of Research Data Processing, 2020

It can be concluded that SRMR and NFI have met the criteria, so the PLS model used is declared fit and fit for use to test the research hypothesis. Based on the results of data processing that has been carried out, the results of the discussion and a variety of information are obtained regarding the influence of variables on the following variables:

Table 6. Model fit.

Model Fit	
SRMR	0.069
NFI	0.750

Hypothesis 1 is accepted, one of the factors that cause the influence that occurs in this study is based on the results of the analysis of the questionnaire instrument, the majority of employees stated that they were not satisfied with compensation outside the basic salary received, this could affect employee performance because employees were dissatisfied with compensation outside the basic salary by the theory. two factors by Herzberg (1990) say that compensation can affect employee performance. So, the proper compensation and regulation mechanism will provide job satisfaction that has an impact on employee performance.

Hypothesis 2 is accepted, one of the factors that cause the influence that occurs in this study is based on the results of the questionnaire instrument analysis, most of the employees state that employees often have to complete sudden tasks and jobs in a short period, but employees also provide answers that the targets to be achieved have been determined. clearly by the company, in this case, it can be explained that although high employee workloads do not lead to a decline in employee performance because employees have clear targets that have been determined by employees so that employees' perceptions of the workload are good because of good management, by Researcher's opinion Ardianto (2010), the more positive the perception of the workload of employees, the higher the employee's performance and vice versa. So it is necessary to determine clear targets by the company and good workload management so that the perception of the workload on employees is good.

Hypothesis 3 is accepted, one of the factors that cause the influence that occurs in this study is based on the results of the analysis of the questionnaire instrument, most of the employees state that the company's work environment has not provided facilities and infrastructure that support employees at work and an increase in employee workload is not followed by an increase in compensation, this can affect performance. employees because if employee job satisfaction is not fulfilled it will reduce their performance because they feel their rights are not fulfilled, this is by the opinion of Wibowo (2015: 141) in his book which argues that job satisfaction is a predictor of performance because job satisfaction has a moderate correlation with performance. low employee job satisfaction will affect performance.

Hypothesis 4 is rejected, one of the factors causing the influence that occurs in this study based on the results of the analysis of the size of the compensation received by employees does not affect employee work stress, this can occur because the factors that cause work stress are not only caused by the compensation received but can be caused due to other factors such as unsuitable workload or lack of job satisfaction related to infrastructure that is not suitable for employees to be able to complete their work, according to Khoddin (2012) opinion that high and low work stress is not always caused by service fees

Hypothesis 5 is accepted, one of the factors causing the influence that occurs in this study is based on the results of the analysis of the questionnaire instrument, the majority of employees state that employees often get sudden assignments with high difficulty, this can trigger work stress, according to the opinion of Koesoemowidjojo (2017: 22) in his book states that the workload both physical, mental, quantitative and qualitative workloads received must be by the existing SOP standards because workloads that are too high than the standards will result in work stress.

Hypothesis 6 is rejected, one of the factors that cause the influence that occurs in this study is based on the results of the analysis where the factors that can affect work stress are not always predominantly caused by job satisfaction but can be caused by other factors according to the opinion of Tantra and Larasati (2015) in their research that stress work that occurs to employees can be caused by individual factors and factors outside the organization.

Hypothesis 7 is accepted, one of the factors that cause the influence that occurs in this study based on the results of the questionnaire instrument analysis, the majority of employees state that leadership attitudes and work pressure make the climate in the company relatively unfavorable but in this case, it can also trigger employee performance productivity to adapt to the company climate. and improve performance by the opinion of Suprihanto (2003) which states that from an organizational point of view, management may not worry if employees experience light stress. The reason is that a certain level of stress will have a positive effect because it will force them to do a better job. If managed properly, work stress can be a driving force and increase the intensity of the performance, whereas if it is not managed properly, work stress will cause problems that hurt the performance of individual employees and the company.

Hypothesis 8 is rejected, based on the results of the analysis, it is found that compensation does not affect employee performance through job stress with the results of the direct effect that has been analyzed previously, compensation has a significant positive effect on employee performance but after being mediated by work stress, the compensation variable on employee performance has no effect. Not having a mediating variable affects these two variables, because the influence of the compensation variable on employee performance is greater than the effect of compensation on employee performance through work stress, this indicates that work stress is not significant in mediating the compensation variable on employee performance according to Anandata's opinion (2018). that work stress is significant to be an intervening variable if it shows a direct relationship with the same indirect relationship, the direct relationship is significant and the indirect effect has a significant effect, then the intervening variable is declared significant.

Hypothesis 9 is accepted, one of the factors causing the influence that occurs in this study based on the results of the analysis shows that the results have a positive and significant effect on employee performance through work stress, where previously the direct effect of workload and employee performance shows the results have a positive and significant effect then mediated. by work stress, to determine the indirect effect, the same results have a positive and significant effect where work stress can mediate the effect of workload on employee performance, the smaller the workload and work stress followed by lower employee performance, conversely the increase in workload and work stress. followed by an increase in employee performance. Munandar (2014: 375) with the workload of each task is expected to be completed as quickly as possible precisely and accurately. And at certain times, in certain cases, the end time (deadline) which triggers increased work stress can increase motivation and produce high employee performance.

Hypothesis 10 is accepted, based on the results of the analysis, the results have a positive and significant effect where work stress can mediate the effect of job satisfaction on employee performance, the direct effect that has been analyzed previously shows the results have a positive and significant effect, after being mediated by work stress, the same results are obtained, namely the effect. positive and significant, it can be stated that job stress can mediate significantly according to the opinion of Baron and Kenny (1986) which explains that significant mediation occurs when the significant direct effect remains significant when controlled by the mediating variable.

In this case, it can be explained that high or low job satisfaction and work stress will be followed by an increase in employee performance, job stress as a mediating variable can also trigger a person to develop themselves, increase performance, that is if the employee succeeds in doing a very difficult task, and the pressure makes someone can reach the target. Employees who don't experience stress do not mean that their performance is always good. In the opinion of Zafar (2015) in his research, job stress can increase performance and positively encourage employees to try their best.

#### 4 CONCLUSION

Based on the research that has been done, the following conclusions can be drawn: (1) Compensation has a positive and significant effect on performance; (2) Workload has a positive and significant effect on performance; (3) Job satisfaction has a positive and significant effect on performance; (4) Compensation does not affect work stress; (5) Workload has a positive and significant effect on

work stress; (6) Job satisfaction does not affect job stress; (7) Job stress has a positive and significant effect on performance; (8) Compensation has no effect on employee performance through job stress; (9) Workload has a positive and significant effect on employee performance through job stress, and (10) Job satisfaction has a positive and significant effect on performance through employee job stress at ROGHCB.

## REFERENCES

- Anandata, B.O. 2018. *Peran stres kerja dalam memediasi pengaruh kontrak psikologis dan beban kerja terhadap keinginan karyawan untuk keluar dari organisasi studi kasus home industry tenun ikat citra legowo di Desa Troso, Pecangaan, Jepara. Skripsi*. Surakarta: Institut Agama Islam Negeri Surakarta.
- Ardianto, E. 2010. *Pengaruh kompensasi, supervisi, beban kerja dan kelompok kerja terhadap kinerja melalui mediasi variabel kepuasan kerja karyawan studi kasus pada karyawan bagian produksi PT. FUMIRA. Skripsi*. Semarang: Universitas Diponegoro.
- Armstrong, M. 1998. *Performance Management-The New Realities*. London: Institute of Personnel and Development.
- Baron, R. M, dan Kenny, D. A.. 1986. The moderator – mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*. 51 (6), 1173–1182.
- Dhanias, D. R. 2010. *Pengaruh stres kerja, beban kerja, terhadap kepuasan kerja (Studi pada Medical Representatif di kota Kudus)”. Skripsi*. Semarang: IAIN Semarang.
- Fathoni, A. 2006. *Organisasi dan Manajemen Sumber Daya Manusia*. Jakarta: Bumi Aksara.
- Fitrianti, N. 2016. *Pengaruh Kompensasi dan Stres Kerja Terhadap Kinerja Karyawan Perbankan Syariah. Skripsi*. UIN Syarif Hidayatullah Jakarta.
- Ghazanfar, Y. 2015. The influence of compensation on performance management. *Global Journal of Management and Business Research: An Administration and Management*, 16(1), 201.
- Herzberg, F. 1990. *Work and The Nature of Man*. New York: The World Publishing Company Cleveland And New York.
- Irwan & Adam, K. 2015. Metode *partial least square* (Pls) dan terapannya. *Jurnal Teknosains*. 9(1), 53–68.
- Khoddin. 2012. *Kajian beberapa penyebab stres kerja pada perawat di ruang rawat inap rumah sakit roemani Muhammadiyah Semarang, manuscript. Skripsi*. Semarang. Universitas Muhammadiyah Semarang.
- Koesomowidjojo, S. 2017. *Panduan praktis menyusun analisis beban kerja*. Jakarta: Raih Asa Sukses
- Kreitner, R & Angelo K. 2005. *Perilaku organisasi terjemahan erly suandy buku 1*. Jakarta: Salemba Empat
- Kurnia, D.R. 2010. *Analisis pengaruh stres kerja dan kompensasi terhadap kinerja karyawan*. Semarang: Badan Penerbit Universitas Diponegoro.
- Mangkunegara. 2000. *Manajemen sumber daya manusia*. Bandung: PT. Remaja Rosdakarya.
- \_\_\_\_\_. 2009. *Perencanaan dan pengembangan sumber daya manusia*. Bandung: PT. Remaja Rosda Karya.
- Munandar, S.,A. 2014. *Psikologi industri dan organisasi*. Jakarta: Badan Penerbit Universitas Indonesia.
- Rao, T.V. 2002. *Penilaian prestasi kerja teori dan praktek*. Jakarta: PT. Karya Uni Press.
- \_\_\_\_\_. 2007. *Perilaku organisasi*. Jakarta: Salemba Empat.
- Sarwono, J. 2011. *Psikologi remaja edisi revisi*. Jakarta: Rajawali Pers.
- Setyawan, A. A. & Kuswati, R. 2006. Teknologi informasi dan reposisi fungsi manajemen sumber daya manusia. *Jurnal Manajemen dan Bisnis*, 9(4), 109.
- Sirait, J. 2006. *Memahami aspek- aspek pengelolaan sumber daya manusia dalam organisasi*. Jakarta: Garasindo.
- Suprihanto, J. 2003. *Perilaku organisasional*. Yogyakarta: Sekolah Tinggi Ilmu Ekonomi YKPN.
- Tantra, M.S, & Larasati T.A. 2015. Faktor-faktor sosial yang mempengaruhi stres kerja. *Jurnal Majority*. 4(9), 58–63.
- Umar, H. 2005. *Metode riset bisnis*. Jakarta. PT. Gramedia Pustaka Utama.
- Wibowo. 2015. *Perilaku dalam organisasi*. Jakarta: Rajawali Pers
- Wijayanti, L. 2008. *Hubungan antara kepuasan kerja dengan kinerja karyawan. Tesis*. Surakarta: Universitas Muhammadiyah Surakarta.
- Wijayanto, S.H. 2008. *Structural equation modeling dengan LISREL 8.8* Yogyakarta: Graha Ilmu
- Zafar, Q. 2015. The influence of job stress on employees performance in Pakistan. *American. Journal Of Social Science Research*. 1 (4), 221–225.

## Collecting toys for happiness: Examining adults' satisfaction in playing with their toys

D. Tio\*

*Universitas Indonesia, Depok, West Java, Indonesia*

S.H. Situmorang

*Universitas Sumatera Utara, Medan, North Sumatera, Indonesia*

**ABSTRACT:** Toys can be a status symbol for their owners in addition to being a play object. The study of toys is aimed at many children and is often a qualitative research. Research on adults with toys is still lacking. This study examined how toys relate to adults and how they behave in interacting with toys. As many as 100 people became the sample using purposive sampling techniques. The toy brand used in the study was Hot Toys, a collection of toys closely shared with adults. Using SEM to analyze the data, this study shows a significant relationship between adults and toys. These results can be seen in hedonic lifestyle, brand experience, and brand image that affect customer satisfaction. Hypothesis testing shows the positive and significant influence of hedonic lifestyle on brand experience. Brand experience has a positive and significant impact on brand image, and a positive brand image creates a considerable effect on satisfaction.

### 1 INTRODUCTION

Children love toys, and toys are childhood supplies aimed at children (Heljakka 2018). Toys show how children understand the world, stimulate the imagination, and teach physically, mentally, and socially. From birth, children are given toys that are fun and helpful in their development (Scott 2010). Early childhood toys improve basic skills, such as shape matching and word recognition. Toys for children introduce higher skills, such as building and reading. Toys consistently improve the real world of adults (Magalhães & Goldstein 2018). Children playing with their toys are intrinsically motivated (with destination), and are called players. However, adults as toy users are not referred to as player but are often referred to as collector or hobbyist (Heljakka 2018). Adults still collect toys because of their playing experience as a child (Dinella & Weisgram 2018). Playing with toys is an imaginative activity, and therefore the creativity used requires memories of childhood as inspiration. Still, players don't need to limit themselves in using memento's childhood as a source of inspiration.

In recent years, collectible toys made especially for adults have emerged as either an investment objects or a hobby. Now toys have transformed into a lifestyle. It can be seen in the toy industry market, which continues to grow by 2% every year (Statista 2020). One of the toy industries that are closely related to adults is Hot Toys. Hot Toys is a toy company engaged in 1/6 scale toys. Hot Toys is synonymous with collectors or hobbyists as they are specially made for collectors or hobbyists. However, when we look at studies of adults' attitudes toward their toys, very few studies are present. Research on adult relationships can be seen in Heljakka (2018), who examine using a qualitative approach. Analysis of adults' attitudes in playing is very interesting to study because

---

\*Corresponding Author: [dennis.t@ui.ac.id](mailto:dennis.t@ui.ac.id)

there are many quantitative types of research to get a generalized understanding of the relationship between adults and their toys.

## 2 METHODS

This research uses conclusive and descriptive research, and the method used in this research is quantitative. Conclusive research is research designed to assist decisions in determining, evaluating, and selecting the best action to take in certain situations (Malholtra & Dash 2016). This is a type of descriptive research. Descriptive research is a type of conclusive research with the primary goal of describing something, usually the characteristics of a market phenomenon or function (Malholtra & Dash 2016). This research includes associative research because it connects several variables to be studied (Situmorang 2017). This research was conducted on customers who have bought Hot Toys products at least once. This study uses purposive sampling in selecting respondents because the population is unknown. The variables used in this study used several variables, namely, hedonic lifestyle, brand experience, brand image, and customer satisfaction. The sample size in this study of 100 respondents was taken using the approach of Malholtra and Dash (2016), which states that the sample must be at least five times the question items, and the question items in this study are 20 items. Data analysis in this study using PLS-SEM with the statistical tool Smart PLS 3.0. The scale used in this study used a 6-Point Likert Scale.

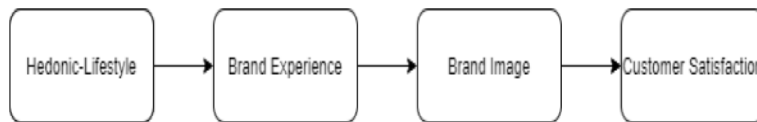


Figure 1. Research model.

## 3 RESULTS AND DISCUSSION

The structural model analysis comprises the outer model and the inner model. The outer model analysis ensures that measurements used are suitable (Valid & Reliable). Outer model analysis can be seen from convergent validity, discriminant validity, and composite reliability (Hair et al. 2017). The rules for analyzing outer loadings are that at least the latest variable must explain a substantial part of each indicator variance at least a 50% or 0.5 (Hair et al. 2017). The measurement of discriminant validity can consider the value of the Average Variance Extracted (AVE) where the AVE value is at least 0.5 or higher. Composite reliability provides a reliability estimate based on the intercorrelation of the observed indicator variables. To evaluate composite reliability in its measurement, if the value achieved is  $> 0.70$ , it can be said that the construct has a high reliability. (Hair et al. 2017).

Based on the results of the analysis, all variables have good convergent validity. This can be seen from the value of the outer loading, which is greater than 0.5 except for Items from the Brand Image (BI3) variable, which has a value below 0.5. In practice, items (BI3) should be removed. Hair et al. (2016) state that a variable must be measured by three indicators. Therefore, researcher still maintains the item (BI3). Furthermore, the analysis for discriminant validity of each variable has been fulfilled, as seen in the AVE value of each variable which is already above 0.5. Finally, in the outer model test, the composite reliability value of each variable has been above 0.7, so it can be said that all items have a good reliability.

The  $R^2$  value of the dependent construct of brand experience is 0.403, which means that the construct of brand experience can be explained by 40.3% by the hedonic lifestyle construct. The brand image construct has an  $R$  square of 0.209, which means that the brand image construct can



Table 1. Outer model result.

Variable	Indicator	Outer Loading	AVE	CR
Brand Imag	BI1	0,833	0,576	0.803
	BI2	0,845		
	BI3	0,459		
Brand Experience	BX1	0,705	0,540	0,768
	BX2	0,801		
	BX3	0,768		
Hedonic Lifestyle	GH1	0,732	0,557	0,897
	GH2	0,827		
	GH3	0,720		
	GH4	0,746		
Customer Satisfaction	KPN1	0,808	0,574	0,843
	KPN2	0,639		
	KPN3	0,615		
	KPN4	0,796		
	KPN5	0,840		
	KPN6	0,687		
	KPN7	0,804		

Source: Processed Data (2021)

Table 2. R-Square.

Construct	R-Square
Brand Experience	0,403
Brand Image	0,209
Customer Satisfaction	0,329

Source: Processed Data (2021)

be explained by 20.9% by brand experience. The customer satisfaction construct has an R square of 0.329, which means that customer satisfaction can be explained by the brand image variable of 32.9%. Moreover, any remaining unexplained constructs can be explained by factors not examined in this study, after evaluating R square, then evaluating the model by testing the estimated path coefficient to determine the effect between bootstrap variables. The number of bootstraps in this study was 5000. Hair et al. (2017) stated that the number of bootstrap samples must be greater than the number of observations. Generally, 5000 re bootstrap samples are recommended. In this test, a variable affects other variables if the t-statistic is higher than the t table at 5% alpha is 1.96.

Based on the results, the structural model that has bootstrapped, the path coefficient value is obtained, which is used to test the construct's significance in the structural model. In this study, the results of the path coefficient indicate that the structural model used is accepted. It can be seen from the T-statistic value of each construct, which is greater than 1.96, and the *p* value is below 0.05.

Based on the results of the hedonic lifestyle hypothesis testing on brand experience, the t-statistic (10.729) is higher than the t-count (1.96), and the significance value (0.000) is below 0.05. Therefore, it can be concluded that hedonic lifestyle has a significant influence on brand experience. The effect of experience on brand image is also shown to have a significant effect, which can be seen in the t-count value (5.598), which is higher than the t-table (1.96) and a significance value (0.000), which is lower than 0.05. This study also shows the relationship between brand image and

Table 3. Path coefficient.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistic	P-Values
Brand Experience -> Brand Image	0,458	0,465	0,082	5.598	0.000
Brand Image-> Customer Satisfaction	0,573	0,589	0,068	8.379	0.000
Hedonic Lifestyle -> Brand Experience	0,635	0,643	0,059	10.729	0.000

Source: Processed Data (2021)

customer satisfaction, which can be said to have a significant effect as can be seen in the t-count (8.379), which is higher than the t-table (1.96) and the significance value (0.000), which is lower than 0.05.

#### 4 CONCLUSION

The results of this study can add to the literature that discusses the relationship between adults and toys. This research shows that there is a bond from childhood between them and their toys that shape their personality in collecting and collecting toys when they are adults. This research also shows that those who are said to be collectors or hobbyists do not hesitate to spend their money to get their coveted toys. Price is not an issue in this case. In the end, this research can be used as a reference for similar research that uses the theories and concepts of hedonic lifestyle, brand experience, brand image, and customer satisfaction. Limitations of this study include the need for study redevelopment to get a more comprehensive understanding. For the next researcher, it can increase the sample and add other variables that can affect the customer satisfaction of collectors or hobbyists, such as product quality, because it affects customer satisfaction. In addition, subsequent research can also increase loyalty of collectors or hobbyists.

#### REFERENCES

- Dinella, L. M., & Weisgram, E. S. 2018. Gender-typing of children's toys: Causes, consequences, and correlates why are there gender differences in toy. *Sex Roles*, 79(5–6), 253–259.
- Hair, J. F. J., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. 2017. A primer on partial least squares structural equation modeling (PLS-SEM). In *Practical Assessment, Research and Evaluation*, Vol. 21, Issue 1.
- Heljakka, K. I. 2018. More than collectors: exploring theorists', hobbyists', and everyday players' rhetoric in adult play with character toys. *Games and Culture*, 13(3), 240–259.
- Magalhães, L., & Goldstein, J. 2018. *Toys and communication*. London: Palgrave Macmillan.
- Malholtra, N. K., & Dash, S. 2016. *Marketing research: An applied approach seventh edition*. Pearson India Education Services.
- Scott, S. M. 2010. *Toys and american culture: An encyclopedia*. In Abc-Clio, Llc. Abc-Clio, Llc.
- Situmorang, S. H. 2017. *Riset pemasaran*. USU Press.
- Statista. 2020. *Toys & games – worldwide | statista market forecast*. <https://www.statista.com/outlook/cmo/toys-hobby/toys-games/worldwide>.

## The phenomenon of accumulation budget realization in the end of the year: A case study in Malang city of East Java Indonesia

N.B. Priadmadhi\* & S.A. Rahmawati

*Universitas Negeri Malang, Indonesia*

A. Nazzal

*Technical University, Palestine*

**ABSTRACT:** This Study aims to examine the effect of regulation, budget revision, and budget political on late budget realization. This research is quantitative research and used questionnaire as the data collection method. Population in this research is all of working institution KPPN Malang area. Multiple regression is used to analyzing data in this research. The result of this study based on data analyst show that regulation, budget revision, and budget political have positive effect on late budget realization in the end of the year.

### 1 INTRODUCTION

The budget is referred to as a driving tool in a government cycle. The APBN is designed in a structured manner by the central government which consists of revenue and expenditure plans for one year/budget period (Sudarwati et al. 2017). In its implementation, the budget process is divided into several stages which include preparation, approval, implementation, and audit and evaluation (Lee & Johnson 1998 in Ríos et al. 2017). However, until now in Indonesia, the implementation of the budget is still the focus of the government in economic growth due to the ineffective absorption of the budget (Aziz et al. 2016).

One of the problems in the government spending budget is the level of budget absorption which tends to be low at the beginning of the year and higher at the end of the year due to poor planning, and because planning is the most important aspect that can affect other factors in budget absorption (Zarinah et al. 2016). The value of the budget's benefits will be delayed as a result of the delay in realizing the expenditure budget, resulting in huge amounts of idle cash in the state account (Herriyanto 2012).

The table shows that in the five-year budget period, the phenomenon of the accumulation of budget realization still occurs in Indonesia and Malang KPPN. This is indicated by the level of absorption of the budget, which is still below 75% in the third quarter. The rapid increase in budget realization activities or more than 25% from the third to fourth quarters also indicates that the intensity of budget absorption is quite high towards the end of the year, where the ideal proportion of budget absorption every quarter is 25% so that there is no delay in absorption (Muchsin & Noor 2011).

The first factor that affects the delay in budget realization is regulation, according to Ramadhani & Setiawan (2019), there is a change in the regulation regarding the budget absorption mechanism which tends to quickly force the employees of each agency to deepen the changes in

---

\*Corresponding Author: nugipriadmadi@gmail.com

Table 1. Achievements in the realization of the national level budget and KPPN Malang.

Year	TW I		TW II		TW III		TW IV	
	Nasional	Malang	Nasional	Malang	Nasional	Malang	Nasional	Malang
2015	18,50%	11,91%	39,00%	21,45%	62,90%	41,51%	90,50%	92,95%
2016	18,70%	13,36%	41,50%	39,47%	62,70%	58,29%	89,30%	90,56%
2017	19,20%	15,21%	42,90%	39,80%	64,50%	64,65%	93,83%	96,06%
2018	16,08%	14,29%	38,39%	40,12%	64,54%	63,64%	99,31%	96,32%
2019	15,95%	17,93%	38,58%	45,22%	61,15%	65,03%	91,71%	95,04%

Source: Kemenkeu.go.id and LRA KPPN Malang

regulations that have been set while the time available is not enough. Understanding of regulations on changes must be mastered by budget users because the achievement of budget absorption will be influenced by the adaptation process (Juliani & Sholihin 2014). However, this contradicts Rifai's research (2016) which proves that regulation has no effect on budget absorption. In contrast to Rifai's (2016), research conducted by (Arif 2011; Cristea et al. 2011; Kaharuddin & Halim 2013; Sembiring 2017; Widianingrum et al. 2017) shows that regulation has an effect on budget absorption.

H1: Regulation has a positive effect on the accumulation of budget realization in the Malang KPPN area.

The second factor that has an influence on the delay in budget absorption is budget revision. The existence of revisions in the budget results in disruption of budget absorption since the implementation time must be changed again so that it will be even longer and result in the remaining unused budget until the end of the year (Ruwaida et al. 2015). According to Sudarwati et al. (2017), the realization of the budget is delayed due to the budget revision process that must be completed due to the lack of maturity of budget planning, so that this has an impact on the budget implementation schedule which is disrupted. Research conducted by (Akadira 2010; Fitriany et al. 2015; Herriyanto 2012; Murtini 2009; Siswanto & Rahayu 2010; Sinaga 2016) shows that budget revisions have a significant effect on delays in budget absorption.

H2: Budget revision has a positive effect on the accumulation of budget realization in the KPPN Malang area.

The third factor that affects the delay in budget realization is budget politics. Political factors in budgeting cannot be separated, because there is a conflict of interest between the government and the legislature which will directly interfere with the implementation of the work program that was initially agreed upon by the government (Handayani 2017). According to Sanjaya (2018), the fast or slow absorption of the budget can be influenced by budgetary political factors in which budget implementation policies are determined by various political interests. Research conducted by (Arif 2011; Bostashvili & Ujhelyi 2019; Sanjaya 2018) shows that budget politics has an effect on budget absorption, while Ramadhani & setiawan (2019) states that budget politics has no significant effect on budget absorption.

H3: Budget politics has a positive effect on the accumulation of budget realization in the Malang KPPN area.

The problem of slow budget absorption is explained by stakeholder theory which according to Freeman & reed (1983) is a group of people or individuals who are able to exert influence or are influenced by the achievement of organizational goals. In realizing the budget, the work unit is faced with problems such as poor planning, conflicts of political interest in the APBN, and incompetent human resources, causing uneven absorption of the budget and the government's goals in the APBN are also not achieved.

This study uses a sample of the Malang KPPN regional work unit because the focus of the research is the phenomenon of the absorption of the APBN which always accumulates at the end of the year for the past five years. And the area of the work unit which is quite large among other KPPNs in East Java is a consideration for researchers.

## 2 METHODS

This quantitative research method uses the Malang State Treasury Service Office as the object and the entire work unit as the population. The sampling method in this study is purposive sampling, the criteria set are (1) work units that are still active and receive state budget funds in the KPPN Malang area, (2) work units that have budget absorption achievements of less than 75% until the third quarter fiscal year 2019. So that a sample of 43 budget users was obtained who met the sampling criteria.

### 2.1 *Variable operational definition*

#### 2.1.1 *Dependent variable*

##### 2.1.1.1 *Accumulation of budget realization*

Accumulation of budget realization is a pattern of budget absorption where budget realization activities cannot take place on time which tends to be low at the beginning of the year and high at the end of the budget year. It is said to accumulate if it is proven by the level of achievement of budget absorption until the end of the third quarter still shows less than 75% (Rozai & Subagiyo 2015).

Some of the indicators used by researchers to measure the variable accumulation of budget realization according to Zulaikah (2019) are, (1) Not on time, (2) Budget absorption in a low presentation at the beginning of the period, (3) Budget absorption in a high presentation in the fourth quarter.

#### 2.1.2 *Independent variable*

##### 2.1.2.1 *Regulation*

According to James (2005), regulation is a special form of control using standards supported by monitoring and enforcement activities as a control procedure. Some of the indicators that researchers used to measure regulatory variables according to Handayani (2017) are, (1) Regulatory changes that spur understanding of procedures, (2) Studying regulations, (3) and Compliance with regulations.

##### 2.1.2.2 *Budget revision*

A budget revision is a detailed change in the budget that has been stipulated in the APBN and has also been ratified in the Budget Implementation List for the year concerned. In revising the budget, it is necessary to pay attention to the provisions related to the guidelines for the preparation and review of K/L RKAP as well as the ratification of DIPA as regulated in the Minister of Finance Regulation (PMK No. 206 of 2018). Some of the indicators that the researcher uses to measure the budget revision variable according to Muslimah (1997) developed by Alim (2008) are, (1) Opportunity for discussion, (2) Change, (3) Ease, and (4) Authority to revise.

##### 2.1.2.3 *Budget politics*

Budget politics is a method used through power, decision making, public policy, allocation, and distribution as an effort to achieve a binding and collective goals whose final process is the result of government financial plans (Arniati et al. 2015). Some of the indicators that researchers use to measure budgetary political variables according to Handayani (2017) are (1) budget allocation, (2) the principle of need, and (3) the principle of justice.

2.2 Data collection technique

This study uses primary data obtained by using a questionnaire.

Table 2. Score measurement guidelines table.

Alternative Answer	Score
Strongly Disagree	1
Disagree	2
Agree	3
Strongly Agree	4

Source: data modification by researcher, 2020

The range of this scale was adopted from Zulaikah’s research (2019), namely 1 to 5 which was later modified by the author to 1 up to 4. This study used a Likert scale of 1 to 4 because to avoid respondents choosing a neutral answer.

Multiple linear regression

The model is used because this study examines the effect of Regulation, Budget Revision, and Budget Politics on the Accumulation of Budget Realization. Here’s the equation model:

$$Y = a + b1X1 + b2X2 + b3X3 + e$$

Description:

Y = Accumulation of Budget Realization

X1 = Regulation

X2 = Budget Revision X3 = Budget Politics

A = Constant (value of Y, if X=0)

B = Regression Coefficient (increase or decrease dependent based on independent value relationship)

e = Error

3 RESULTS AND DISCUSSION

3.1 Descriptive statistics

Table 3. Descriptive statistics.

Description	N	Min	Max	Mean Std.	Deviation
Regulation	43	11	28	18.79	2.973
Budget Revision	43	14	35	26.74	3.922
Budget Politics	43	11	24	16.19	3.119
Accumulation of Budget Realization	43	15	28	20.98	3.299
Valid (listwise)	43				

Source: SPSS descriptive statistics output results, 2020.

In the regulation variable, the questionnaire consists of 7 questions, it is known to have a minimum level of 11 while the maximum level of 28. So that the range value of the regulatory variable is 11 to 28, the average value is 18.79 and the standard deviation is 2.973. This explains that the observation data is close to the average value, and the observation data is representative.

Furthermore, on the variable budget revision, the questionnaire consists of 9 questions. It is known that the budget revision has a minimum value of 14 while the maximum value of 35. So that the range value of the budget revision variable is 14 to 35, the average value is 26.74 and the standard deviation is 3.922. This informs that the observation data is representative or there are no gaps.

The political variable budget questionnaire consists of 6 questions. It has a minimum value of 11 while a maximum value of 24. So that the range value on the political budget variable is 11 to 24, the average value is 16.19 and the standard deviation is 3.119. This shows that the observational data is close to the average value, and the observational data is representative.

Variable accumulation of budget realization consists of 7 questions on the research questionnaire. It is known that the budget realization accumulation variable has a minimum value of 15 while the maximum value of 28. So that the range value of the budget realization accumulation variable is 15 to 28, the average value is 20.98 and the standard deviation is 3.299. This shows that the observational data is close to the average value, and the observational data is representative.

### 3.2 Normality test results

Table 4. One-sample Kolmogorov-Smirnov test.

		Unstandardized Residual
N		43
Normal Parameters <sup>a,b</sup>	Mean	,0000000
	Std. Deviation	2,07447003
Most Extreme Differences	Absolute	,116
	Positive	,116
	Negative	-,060
Test Statistic		,116
Asymp. Sig. (2-tailed)		,172 <sup>c</sup>

Source: SPSS normality test output results, 2020.

From the table, it can be observed that the results of the Kolmogorov-Smirnov test inform that the data is normally distributed. This is based on a significance level of 0.172, which means that the value is higher than 0.05. Thus, the research data is normally distributed.

### 3.3 Multicollinearity test results

Table 5. Multicollinearity test results.

Variable	Tolerance ( $\alpha$ )	VIF
Regulation (X1)	43	11
Budget Revision (X2)	43	14
Budget Politics (X3)	43	11

Source: Multicollinearity test SPSS output results, 2020.

Based on the results in the table indicate that all independent variables have a Tolerance ( $\alpha$ ) value of more than 0.10 and a value of Variance Inflation Factor (VIF) count of 10. So that between all independent variables in the study there is no multicollinearity.

### 3.4 Heteroscedasticity test results

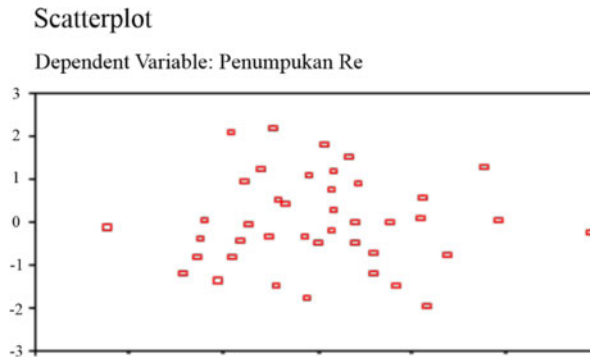


Figure 1. Regression standardized predicted value.

Based on the results of the heteroscedasticity test in the image above, the scatter plot graph indicates that the resulting points spread or do not create a certain pattern above or below the number 0 on the Y-axis. So that the regression model does not occur heteroscedasticity.

### 3.5 Multiple linear regression test

Table 6. Multiple linear regression test results.

Model	Un Std. Coefficients		Std. Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.572	2.528		1.017	0.315
Regulation (X1)	0.392	0.164	0.354	2.396	0.021
Budget Revision (X2)	0.209	0.101	0.248	2.062	0.046
Budget Politics (X3)	0.337	0.146	0.318	2.304	0.027

Source: SPSS output results of multiple linear regression test, 2020.

Based on the test results shown by the table, the equation of the multiple linear regression model is obtained as follows:

$$Y = 2.572 + 0.392X1 + 0.209X2 + 0.337X3 + e$$

#### 3.5.1 Effect of regulation on accumulation of budget realization

Based on hypothesis testing, the results of this study support the stakeholder theory which explains that the achievement of organizational goals can affect or be influenced by the existence of a group or individual (Freeman & Reed 1983). Changes in regulations have an impact on budget absorption activities that can affect the achievement of the government's development goals.

Based on the results of the questionnaire distribution, it shows that budgetary regulations that overlap with one another affect employees to be more careful in using the right regulatory basis to get the highest score. As in PP Regulation Number 53 of 2010 concerning Guidelines for the Implementation of the State Budget in Article 5 paragraph (3) that the expenditure budget document is still divided into two parts, namely the routine budget implementation document determined through the Activity List (DIK) and the development budget implementation document, which is loaded through the List of Projects (DIP). While in PMK Number.



134 of 2005 concerning Guidelines for Payments in the Implementation of the State Budget, it is stated that the implementation of the expenditure budget has been regulated in an integrated manner through the Budget Implementation List (DIPA). Based on these two legal bases, there is an overlap of vertical regulations. Therefore, it is necessary to harmonize regulations so that they become a strong legal basis for implementing the budget.

However, the results of this study are not in line with (Rifai et al. 2016) which proves that regulation has no significant effect on delays in budget absorption. In contrast to Rifai et al. (2016) the results of this study also support research (Arif 2011; Cristea et al. 2011; Kaharuddin & Halim 2013; Widianingrum 2017) which show that regulation has a significant effect on budget absorption.

### *3.5.2 The effect of budget revision on accumulation of budget realization*

The results of this study support the stakeholder theory which explains that stakeholder groups can influence the achievement of government goals, or vice versa in a narrow scope of government goals are able to provide a major influence on the sustainability of these stakeholder groups (Freeman & Reed 1983). According to research conducted by Sinaga (2016), it was explained that the adjustment of activities in DIPA that were not in accordance with the needs of budget users and the length of the revision process resulted in delayed budget execution.

Based on the results of the distribution of questionnaires, it shows that budget planning or expenditure needs must be realistically determined and can be achieved before budget revisions are made to have the highest score. This is in accordance with the practice in budget revision, where according to PMK Number 206/02/2018 concerning Procedures for Revision of the 2019 Budget Article 1 paragraph (16) states that a review of the budget revision is carried out by the Ministry of Finance and K/L to ensure the suitability of the proposed budget changes. with the achievement of the targets set in the DIPA and their budget allocations. The results of this study are in accordance with previous research conducted by (Akadira 2010; Fitriany et al. 2015; Herriyanto 2012; Murtini 2009; Siswanto & Rahayu 2010; Sinaga 2016).

### *3.5.3 The influence of budget politics on accumulation of budget realization*

The results of this study support the stakeholder theory which explains that a group or individual can have an impact on the achievement of organizational goals. In this case, the work unit as a stakeholder who has a considerable influence on the achievement of the government's economic goals through the realization of the expenditure budget is constrained by various political processes in it (Ramadhani & Setiawan 2019).

Based on the results obtained from the distribution of questionnaires, it shows that the nominal difference in the allocation of funds in DIPA with the number of work units needed in implementing the budget is one of the obstacles to budget absorption in getting the highest score. This is like what happened to the problem of the allocation of the education budget in Indonesia, based on the 1945 Constitution that the minimum education budget allocation is 20% of the APBN. However, the reality on the ground is that there are only seven local governments in Indonesia that can allocate a minimum of 20% of the APBN for education in the 2019 fiscal year (Beritasatu.com 2019). For 2019, the education function budget is allocated Rp 429.5 trillion spread across 19 ministries/agencies, then the largest allocation is for regional transfers 62.6% of the total APBN allocation for education. Although the amount disbursed from the APBN is quite large, there are still many regions that allocate funds for education below 20% of the APBN allocation. This can trigger delays in the absorption of budget expenditures, budget implementing agencies will certainly experience difficulties in realizing activities that are in accordance with their needs. The results of this study are in line with research conducted by Arif (2011) and Sanjaya (2018), research conducted by Bostashvili & ujhelyi (2019) also shows that the political budget cycle affects spending in the US.

## 4 CONCLUSION

This study aims to examine the effect of regulation, budget revision, and budget politics on the Accumulation of Work Unit Expenditure Budget realization at the end of the year in the KPPN Malang area. Changes in budget implementation regulations make budget users are required to adapt to the latest regulations, so that the time for budget execution is disrupted. This indicates that the more changes in regulations related to budget implementation, the higher the accumulation of budget realization.

The high intensity of budget revisions carried out by the satker will also delay the realization of the expenditure budget that must be implemented. The list of activities in DIPA that are not in accordance with the needs requires the work unit to revise it again so that it is appropriate, and the budget can be implemented. In addition, you have to wait for the revision process to finish then the new budget can be implemented.

Likewise, the high conflict of political interest that occurs in determining the budget allocation, the higher the accumulation of budget realization. This is due to the tug-of-war between the interests of political power in institutions to determine which activities are allocated more budget, but on the one hand it is only beneficial for one party.

## REFERENCES

- Akadira & Tora. 2010. *Faktor-faktor yang mempengaruhi penyerapan anggaran di direktorat jenderal manajemen pendidikan dasar dan menengah*. Tesis. Jakarta: FISIP Universitas Indonesia.
- Alim & Nizarul, M. 2008. Efektivitas Perpaduan komponen anggaran dalam prosedur anggaran: Pengujian kontinjensi matching. *Jurnal Akuntansi Dan Keuangan* 10(2): 69–76.
- Arif & Emkhad. 2011. Identifikasi faktor-faktor penyebab minimnya penyerapan anggaran pendapatan dan belanja daerah (APBD) Kabupaten/Kota Provinsi Riau Tahun 2011. *Jurnal Ekonomi, Manajemen, dan Akuntansi* 11(2): 41–61.
- Arniati, Imelda & Ely, K. 2015. Pengaruh Kapasitas sumber daya manusia, politik penganggaran, perencanaan dan informasi pendukung terhadap sinkronisasi dokumen apbd dengan dokumen kua-ppas di lingkungan pemerintah kota Tanjungpinang. *Simposium Nasional Akuntansi XIII* 7(11): 956–963.
- Aziz, A., Riza, A. & Anwar. 2016. Pengaruh evaluasi anggaran dan kejelasan sasaran anggaran terhadap kinerja pengelolaan keuangan daerah pada satuan kerja perangkat di pemerintah Aceh. *Jurnal Ekonomi Dan Bisnis* 16(1): 1–10.
- Bostashvili, D. & Ujhelyi, G. 2019. Political budget cycles and the civil service: evidence from highway spending in US States. *Journal of Public Economics* 175: 17–28.
- Cristea, A., Academy, R., Zaman, G. & Academy, R. 2011. EU structural funds absorption in romania: obstacles and issues. *Revista Romana de Economie* 32(1): 60–77.
- Fitriany, N. 2015. Exploring the factors that impact the accumulation of budget absorption in the end of the fiscal year 2013: A case study in Pekalongan City of Central Java Indonesia. *Southeast Asia Journal of Contemporary Business, Economics and Law* 7(3): 1–8.
- Freeman, R. E. & David, L. R. 1983. Stockholders and stakeholders: A New perspective on corporate governance. *California Management Review* 25(3): 88–106.
- Handayani, C. H. & Muda, I. 2015. Analisis faktor faktor yang SKPD di Provinsi Sumatera Utara Tahun 2014-2015 Dengan Silpa Sebagai Variabel Moderating. *Simposium Nasional Akuntansi XX* September: 1–19.
- Herriyanto, H. 2012. *Faktor-faktor yang mempengaruhi keterlambatan penyerapan anggaran belanja pada satuan kerja kementerian/lembaga di wilayah Jakarta*. Tesis. Jakarta: Universitas Indonesia.
- James, O. 2005. The rise of regulation of the public sector in the United Kingdom. *Sociologie Du Travail* 47(3): 323–339.
- Juliani, D. & Sholihin, M. 2014. Pengaruh faktor-faktor kontekstual terhadap persepsian penyerapan anggaran terkait pengadaan barang/jasa. *Jurnal Akuntansi Dan Keuangan Indonesia* 11(2): 177–199.
- Kaharuddin & Halim, A. 2013. Analisis faktor-faktor yang mempengaruhi pendidikan di kabupaten sumbawa tahun anggaran 2010. *Jurnal Akuntansi dan Manajemen* 24(1): 35–44.
- Muchsin, M. & Andi Sofan. N. (2011). Fenomena penyerapan anggaran: kenapa akselerasi di akhir tahun. *Paris Review*. 1–56.

- Murtini. 2009. *Faktor-faktor yang mempengaruhi rendahnya penyerapan realisasi anggaran departemen perindustrian republik indonesia periode 2008*. Tesis. Jakarta: Universitas Bina Nusantara.
- Peraturan Menteri Keuangan. 2018. Tentang tata cara revisi anggaran tahun anggaran 2019. Jakarta. Nomor 206/PMK.02/2018.
- Ramadhani, R. & Setiawan, M. A. 2019. Pengaruh regulasi, politik anggaran, perencanaan anggaran, sumber daya manusia dan pengadaan barang/ jasa terhadap penyerapan anggaran belanja pada OPD Provinsi Sumatera Barat. *Jurnal Eksplorasi Akuntansi* 1(2): 710–726.
- Rifai, A., Inapty, B. A., & Pancawati M., R. S. 2016. Analisis faktor–faktor yang memengaruhi keterlambatan daya serap anggaran (Studi Empiris Pada SKPD Pemprov NTB). *Jurnal Ilmiah Akuntansi Dan Bisnis* 11(1): 1–10.
- Ríos, A. M., Benito, B. & Bastida, F. 2017. Factors explaining public participation in the central government budget process. *Australian Journal of Public Administration* 76(1): 48–64.
- Rozai, Muhrom A. & Lilik, S. (2015). Optimalisasi penyerapan anggaran dalam rangka pencapaian kinerja organisasi (studi kasus pada inspektorat Kabupaten Boyolali). *Jurnal Manajemen Sumberdaya Manusia* 9(1): 72–89.
- Ruwaída, Darwanis, & Abdullah, S. 2015. Faktor-faktor yang mempengaruhi anggaran belanja pendidikan di Provinsi Aceh. *Jurnal Magister Akuntansi Pascasarjana Universitas Syiah Kuala* 4(4): 101–110.
- Sanjaya, T. 2018. Pengaruh regulasi keuangan daerah, politik anggaran, dan pelaksanaan pengadaan barang/jasa terhadap penyerapan anggaran pada OPD Provinsi Sumatera Barat. *E- Journal Universitas Negeri Padang* 6(3): 1–15.
- Sembiring, J. H. 2017. *Faktor-faktor yang memengaruhi keterlambatan penyerapan anggaran belanja direktorat jenderal pendidikan anak usia dini dan pendidikan masyarakat*. Tesis. Medan: Universitas Sumatera Utara.
- Sinaga, E. J. 2016. Analisis rendahnya penyerapan anggaran kementerian/lembaga (k/l) dan pemerintah daerah. *Media Pembinaan Hukum Nasional* 5(2): 261–274.
- Siswanto, A. D. & Rahayu, S. L. 2010. Faktor-faktor penyebab rendahnya penyerapan belanja kementerian/lembaga TA 2010. *Policy Paper Kementerian Keuangan* 2010: 1–12.
- Sudarwati, N., Karamoy, H. & Pontoh, W. 2017. Identifikasi faktor-faktor penumpukan realisasi anggaran belanja di akhir tahun (studi kasus pada balai penelitian dan pengembangan lingkungan hidup dan kehutanan Manado). *Jurnal Riset Akuntansi Dan Auditing “Goodwill,”* 8(1): 129–138.
- Widianingrum, D., Kustono, A. S. & Suryaningsih, I. B. 2017. Faktor- faktor yang memengaruhi penyerapan anggaran satuan kerja perangkat daerah di Pemerintah Kabupaten Situbondo. *Jurnal Bisnis dan Manajemen* 11(2): 194.
- Zarinah, Monik., Darwanis. & Syukriy, A. 2016. Pengaruh perencanaan anggaran dan kualitas sumber daya manusia terhadap penyerapan anggaran satuan kerja perangkat daerah di Kabupaten Aceh Utara. *Jurnal Magister Akuntansi Universitas Syiah Kuala* 5(1): 90–97.
- Zulaikah, B. & Burhany, D. I. 2019. Faktor-faktor yang mempengaruhi penumpukan penyerapan anggaran pada triwulan IV di Kota Cimahi. *Prosiding Industrial Research Workshop and National Seminar* 10(1): 1221–1234.

## The creativity of creative industry players based on Malay culture facing the industrial revolution 4.0 in Riau Province

Nurdin\*, M. Badri, D. Sukartik & H. Kurniadi

*Universitas Islam Negeri Sultan Syarif Kasim, Pekanbaru, Riau, Indonesia*

**ABSTRACT:** Industrial revolution 4.0 encourages the creative industry to increase competitiveness to adapt the market tastes using digital platforms. The study aims to observe the creativity carried out by creative industry in facing industrial revolution 4.0 based on Malay culture in Riau. The research is qualitative with case study method. The sources of data base on creative industry players, Riau Creative Network Agency and Riau Tourism Office. The results showed that Riau creative industry drives, develops and maximizes their respective creativity without assistance by the government, because the maximum desired role of government is limited to ease of licensing and promotion. Creative industry players modified Malay cultural products in terms of taste, shape, place, and packaging to be contemporary or following the market tastes. In the aspect of information dissemination and promotion, creative industry players maximize the use of digital platforms, such as social media, e-commerce, Android/ iOS-based application, and websites.

### 1 INTRODUCTION

Many countries have even begun to place it as the main model for future economic development. The creative economy is a new capital for Indonesia's economic growth (Pangestu 2014). The results of joint research conducted by the Central Statistics Agency (Badan Pusat Statistik) and the Creative Economy Agency (Badan Ekonomi Kreatif) in 2019 for the creative economy sector have contributed around 5.10% of Indonesia's total GDP (Gross Domestic Product) and absorbed 19.01 million workers. The creative economy sector in 2019 is also known to have succeeded in contributing an export value of 22.07 billion USD (Badan Ekonomi Kreatif Indonesia 2020).

The advancement of the creative economy is important because of its role in making its contribution to the economy, presenting good business conditions, enhancing national image and identity, operating based on resources, innovation, and creativity, all of which are the advantages of the creative economy in a national competition which has a positive impact to society (Sulandjari 2018). Sumar'in et al. (2017) found a creative economy development model through efforts to improve the quality of human resources, especially the creative industry based on the culture that comes from micro and medium industrial groups with privileges and selling power. Furthermore, efforts that can be made to develop the creative economy are through increasing the selling value of cultural tourism, especially local culture.

Riau Province is known as the center of Malay culture in Indonesia. This province is geographically, geoeconomically and geopolitically also located on a very strategic route in regional and international trade. Riau is part of the Indonesia-Malaysia-Thailand *Growth Triangle* (IMT-GT) cooperation which aims to improve the welfare and economic growth of the people in the border areas of the three countries. This cooperation encourages the private sector which then develops into an *engine of growth*". In this context, the creative economy takes a strategic role in national economic growth in border areas. The creative economy is expected to be able to increase its

---

\*Corresponding Author: [nurdin@uin-suska.ac.id](mailto:nurdin@uin-suska.ac.id)

contribution to economic advancement and the competitiveness of border areas. This condition indicates that there will be a lot of cultural and tourism potential that can be utilized for this creative economy sector.

Analyzing the importance of the creative economy that reflects the concept of the creative industry and culture is an interesting thing to do. This is because the creative and cultural industries are the driving factors for economic growth and regional development (Boccella & Salerno 2016). The practice of knowledge exchange in the creative economy is interesting to study further because it involves many actors (Munro 2016). In-depth research on the creative industry is important because the creative industry has a role as the core of the creative economy that has the potential to create wealth and employment opportunities, including the creative economy that comes from a cultural context (Veselá & Klimová 2014).

However, Dahlan (2004) takes issue with the waning of Riau Malay culture due to globalization. The findings of his research explain that the style of Malay culture must be fostered and developed further so that it does not fade due to globalization. Zainuddin (2018) examines the mechanism of the Riau Malay Customary Institution (Lembaga Adat Melayu Riau) in preserving Malay culture which is one of the tourist destinations in Riau. In this case, Riau Malay Customary Institution carries out a mechanism for inculcating Malay cultural values, practicing Malay cultural values in society, and implementing Malay building architecture. However, the efforts are only limited to recommendations that have not yet reached the policy level. Firdausy (2017) found that cultural diversity and regional potential are specific and very diverse. This effort was found to have been able to encourage people to try and produce creative goods. Romarina (2016) describes efforts to answer the challenges and problems of the creative industry by forming spaces that can become centers of activity and interaction for creative economy actors, such as the government, business/industry players, academics and creative communities/forums. Creative space is designed to form a comprehensive, conducive, participatory and inclusive creative economy climate and ecosystem. Hutabarat (2012) in his study examined the creative industry in Riau and found that the creative industry has not been implemented through the Triple Helix concept collaboration between the government, the business world, and academia. Saksono (2012) found that most local governments are not aware of the existence of the creative economy as a new talent that can generate added value and trigger regional competitiveness.

Previous research that examined the creative economy generally discussed the creative economy in general in terms of actors and policies. Meanwhile, research on Malay culture only discusses cultural issues. Therefore, the researcher sees a research gap between the advancement of the creative industry and Malay culture, where research that brings the two together has never been done before. In fact (Greffé 2016) explains that the cultural economy thinking approach that is adapted to the creative economy requires a more dynamic approach which is not enough to only use an analysis of the production, distribution, and acceptance of symbolic content which is dominated by economic welfare. For that, we need a touch of artistic markets, artistic skills, and macro-cultural policies that show how the cultural economy and the creative economy must combine for mutual benefit.

In this study, researchers researched the creativity of creative economy actors based on Malay culture in Riau Province in facing the Industrial Revolution 4.0. Researchers have a scientific assumption that the Industrial Revolution 4.0 provides significant changes to the local creative industry. The Industrial Revolution 4.0 is marked by artificial intelligence, supercomputers, genetic engineering, nanotechnology, automatic cars, and innovation. These changes occur at an exponential rate that will have an impact on the economy, industry, government and politics. In this era, it is increasingly visible that the world has become a global village (Satya 2018). The Industrial Revolution 4.0 does not only have extraordinary potential in overhauling industry, but also in changing various aspects of human life. We have seen many countries, both developed and developing countries, which have included this movement in their national agenda as a method to increase competitiveness in the global market (Kementrian Perindustrian Republik Indonesia 2018). The concept of Industry 4.0 aims to increase the competitiveness of each country's industry in facing a

very dynamic global market. This condition is affected by the rapid development of the application of digital technology in various fields (Prasetyo & Sutopo 2018). The emergence of marketplace applications in this situation also encourages the growth of the creative industry considering the advantages of digital marketing that can increase the market reach of creative products. The emergence of online transportation applications also encourages the growth of a culinary-based creative economy. Meanwhile, the development of open source-based applications has also been recognized to have boosted the growth of technology-based creative industries.

## 2 METHODS

This research was conducted qualitatively with the case study method. Data collection techniques are by conducting interviews, observation and documentation. Interviews were conducted with creative economy actors in Riau (Rumah Kue Viera, Rumah Tenun Kampung Bandar, Rumah Budaya Sikukeluang and Tenun Siak Bu Atun Mekar Permai), the Riau Creative Network Agency (Badan Riau Kreatif Network) and the Riau Province Tourism Office. The data analysis technique used is an interactive model (Denzin & Lincoln 2011). In qualitative research, data collection and data analysis activities are not separated from each other but are cyclical rather than linear.

Data collection itself is also placed as a component that is an integral part of data analysis activities. Both take place simultaneously or simultaneously (Bungin 2007). This model consists of three research steps, namely (1) data reduction or sorting the data obtained into certain categories, concepts, and themes according to the discussion plan; (2) data display, which is where the data that has been grouped is then arranged into narratives with logical and systematic sentences; and (3) conclusion drawing and verifying, namely the presentation of the results of research and analysis as well as confirmation of the conclusions.

## 3 RESULTS AND DISCUSSION

### 3.1 Culture-based creativity

Riau Province is currently focusing on developing five sub-sectors of the creative economy. The five sub-sectors include culinary, performing arts, crafts, fashion, music, and film (Fakhruddin, 2021). Riau's creative economy advancement has also been integrated into the Riau Province's Regional Medium-Term Development Plan for 2019-2024 (Utama 2020). This is a reflection of the seriousness of all interested parties in advancing the sector that the Creative Economy Agency (Badan Ekonomi Kreatif) aspires to become a source of the national economy (Badan Ekonomi Kreatif Indonesia 2020). To deal with this change, the Riau Provincial Government has established the Riau Creative Network Agency (Badan Riau Creative Network) on August 30, 2019, as one of the efforts to prepare it.

*“The Riau Creative Network agency aims to accommodate and develop the creative economy to remote areas in Riau and find focal points of the sub-sector that must be developed by all creative economy stakeholders in Riau Province”* (interview with Riau Creative Network Agency).

Riau Province is known as one of the centers of Malay culture in Indonesia. Malay culture has the potential to be developed as a source of creative economic energy. Malay culture is adaptive to change and contributes to the national culture. Malay culture has the potential for creative economy sub-elements such as Malay culinary, Malay fashion, Malay architectural design, Malay crafts, Malay performing arts, including popular culture sub-sectors such as photography and cinematography. Viewed from a cultural perspective, such as Malay crafts in this context, it is not just a product created by skilled hands, but because it transmits the history, culture, customs, artistic values, and experiences of the people in which they do the creative work (Aguirre & López 2017). This focus on local styles is gradually becoming a trend in industrial development strategies in promoting cultural and creative industries (Luo 2021).

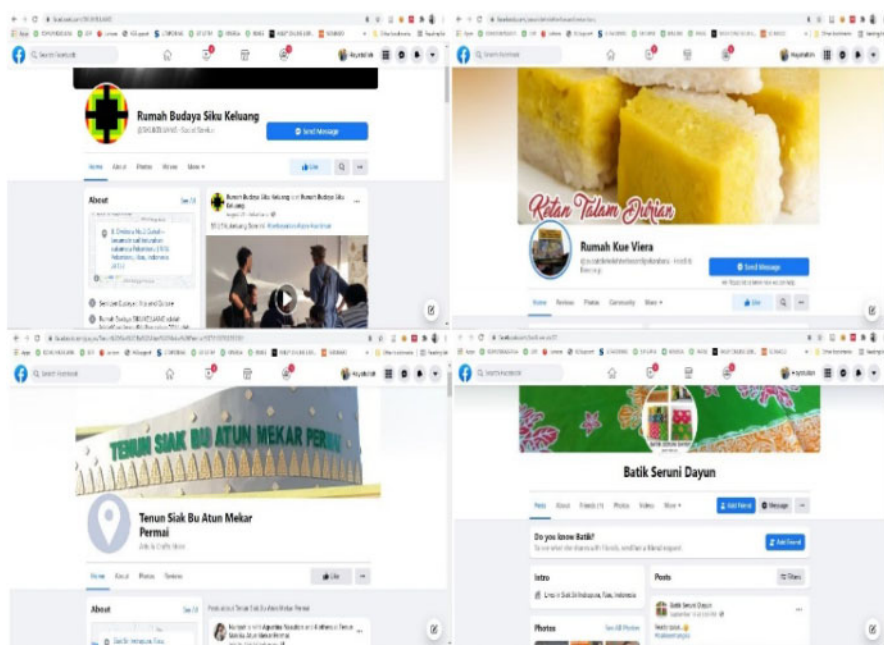


Figure 1. Creative economy based on Riau Malay cultural products.

Culture is globally recognized as an important force driving a sustainable creative economy. In the Indonesian context, it is very important to distinguish between ‘innovative’ creative industries and ‘traditional culture’ industries. The first category represents those who exploit new knowledge and intellectual property, while the second category tends to retain legacy values and selling points. These values are much more significant from an economic point of view than the creative industries and should therefore be delivered into account. The spatial pattern of the two industries is also different. Creative industries tend to concentrate in large urban areas, where innovation and cross-fertilization of ideas can occur with the support of talent pooling and linkages among specialized producers. Meanwhile, the traditional culture industry is less reliant on human capital and the urbanization economy (Fahmi et al. 2016).

Creative economy actors in Riau Province in this case have tasks such as running, developing, and maximizing their creative economy with their own (independent) creativity. With maximum creativity, creative economy actors do not rely too much on upon/ expect more roles from local governments. The role/contribution expected by creative economy actors in Riau is only limited to the ease of licensing and promotion. The following are the interview results:

*“Rumah Kue Viera and other creative business actors want to get concerned in the form of introducing products (promotions), in addition to assisting in licensing arrangements such as P-IRT, BPOM, halal, permits and other certificates to run this creative business legally” (interview with Rumah Kue Viera).*

Creativity in the production and marketing of products based on Malay culture carried out by creative economy actors in Riau Province is following the latest trends, namely on popular things (according to market demand). Make efforts to change/ modify the product by not eliminating the cultural identity contained in the product. Creative industry players modify Malay cultural products in terms of taste, shape, place and packaging so that they become more contemporary/ follow market tastes.

*“In shaping the branding of cultural identity, the creativity of the Sikukeluang Cultural House does so by expressing it in various ways such as alternative performances, music festivals, services to the jungle (ecotourism trips). Traditional cultural products are modified in different shapes and tastes,*

such as the traditional performance which is packaged in the form of a music festival which is then shown in the form of videos on social media. Performing arts can not only be enjoyed in the theater but also packaged in the form of alternative performances in places that have messages of cultural value, such as in the forest area of the Bukit Rimbang Bukit Baling Wildlife Reserve” (interview with Rumah Budaya Sikukeluang).

*“The culinary creative industry of Rumah Kue Viera modifies its products in terms of taste and packaging. The talam cake which only had srikaya and pandan flavors has now been transformed with the addition of durian flavor. In terms of packaging, it was originally only wrapped in clear plastic, but now it is packaged in a box that has a luxurious feel. Rumah Kue Viera emphasizes Malay ornaments by applying them to product aspects such as taste, color, aroma, and packaging. On the personal aspect, this product is reflected in the practice of Tanjak, Malay language, and clothes, while on the packaging side, it uses traditional symbols and Malay music”* (interview with Rumah Kue Viera).

The functions of the creative industry include regulating, managing, and appreciating creativity and creative work in the cultural production process (Duff & Sumartojo 2017). The creative economy demands high creativity from the perpetrators. This creativity is a product of a person’s ability to think metaphorically, associate separate elements, seek new information and understand thoughts (Greffé 2016). Creative humans can create goods that are initially of low value to become high and have selling power. This creative power is based on a way of thinking that is advanced and full of new ideas that are different from those that already exist (Noviyanti 2017).

### 3.2 Use of digital technology

Digital technology is one of the main assets in the 4.0 industrial revolution that is needed by industry players to develop their business. The creative industry is one of the five industrial sectors (financial sector, cultural sector, tourism, and creative economy, agriculture sector, and agro logistics sector) that has the potential to develop along with the advancement of the digital economy (Sukma 2019). The digital revolution is fundamentally reshaping the way individuals live and work (Ghobakhloo 2020).

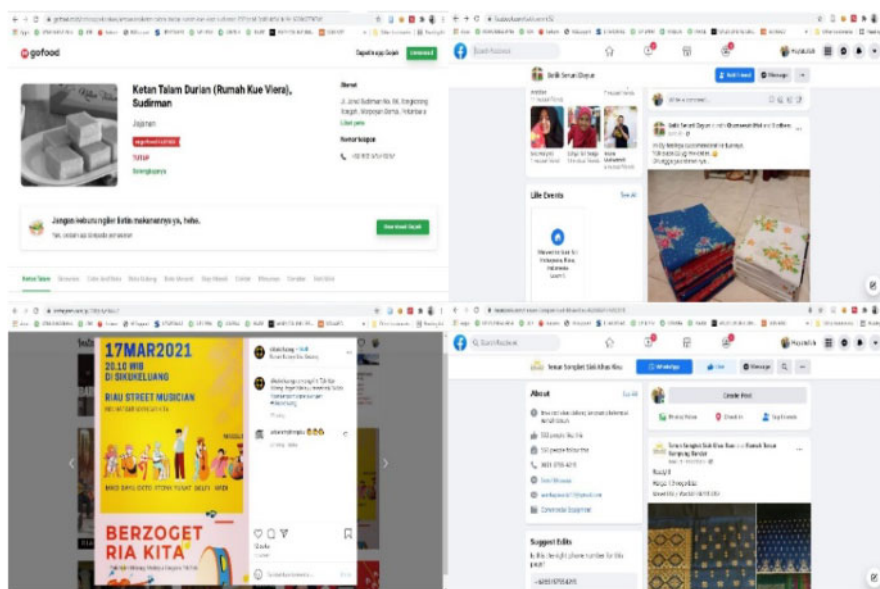


Figure 2. Product marketing through social media and e-commerce.

Digital technology has facilitated widespread change in the creative industry model and several significant trends have emerged from the use of this technology (Li 2020). The production of creative



industry products based on local cultural potential can be packaged in the form of digital technology in photos and videos. Utilizing sophisticated software in the photo and video production process” (interview with Rumah Budaya Sikukeluang), while Rumah Kue Viera utilizes digital technology in the production process of its culinary products and sales, such as digital scales, open digital, digital mixers and the use of the Quinos application for operations, financial and sales reports” (interview with Rumah Kue Viera).

The creative instincts of these industry players are indirectly formed because of the disclosure of information. Creative economy actors utilize digital technology to obtain information for further study so that they can develop and market products, especially through social media and other sources of information such as websites. The Internet is bringing about major changes through the creation of various digital marketing tactics (Olson et al. 2021). Therefore, there are now various forms of digital-based marketing used by creative industry players. The use of the internet and social media has changed consumer behavior and the way companies do business.

Creative industry players in Riau almost all use the latest social media, ranging from *Facebook*, *Instagram*, *Youtube*, *Tiktok* and also applications that can be installed on Android or iOS and are website-based. The use of online transportation applications such as *Gojek/Grab* and marketplace/e-commerce such as *Shopee/Tokopedia* also contributes greatly to the advancement of the creative industry. This is because marketing and information dissemination by using these kinds of digital platforms can increase the market reach of creative products without being limited by geographical barriers. This is an excellent opportunity for companies with lower costs and better brand awareness coupled with increased product sales. (Dwivedi et al. 2021).

#### 4 CONCLUSION

Efforts made by creative economy actors in Riau Province are based on Malay culture which is an effort to face the industrial revolution 4.0. This is shown in three things. The first is to maximize their creativity and not rely too much on local governments. The expected role of the government is limited to the ease of licensing and promotion. Second, modify the product which incidentally is a product of Malay culture. This modification can be applied to aspects of taste, shape, place, and packaging that are more contemporary and follow market tastes. The third is the aspect of information dissemination/promotion/marketing, where creative economic actors maximize various digital platforms, such as social media, e-commerce, Android/ iOS-based applications, and websites to promote products.

#### ACKNOWLEDGEMENT

The author would like to thank the Directorate General of Islamic Education, Ministry of Religion of the Republic of Indonesia, who has funded this research through the applied research cluster of national strategic studies, State Islamic University of Sultan Syarif Kasim Riau.

#### REFERENCES

- Aguirre, J. L. S. & López, M. L. 2017. Ecuadorian artisanal production and its future projection from the cultural and creative Industries perspective (CCI). *City, Culture and Society* 10: 26–32.
- Badan Ekonomi Kreatif Indonesia. (2020). *Laporan kinerja badan ekonomi kreatif tahun 2019*.
- Boccella, N. & Salerno, I. 2016. Creative economy, cultural industries and local development. *Procedia - Social and Behavioral Sciences* 223:291–296.
- Bungin, B. 2007. *Analisis data penelitian kualitatif*. Depok: Rajawali Pers.
- Dahlan, S. 2004. Budaya melayu riau pada era globalisasi. *Jurnal Ilmu Budaya* 1(1): 11–20.
- Denzin, N. K. & Lincoln, Y. S. 2011. *The Sage handbook of qualitative research*. California: Sage Publication.

- Duff, C. & Sumartojo, S. 2017. Assemblages of creativity: Material practices in the creative economy. *Organization* 24(3): 418–432.
- Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A. S., Kumar, V., Rahman, M. M., Raman, R., Rauschnabel, P. A., Rowley, J., Salo, J., Tran, G. A. & Wang, Y. 2021. Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management* 59: 102168.
- Fahmi, F. Z., Koster, S., & van Dijk, J. 2016. The location of creative industries in a developing country: The case of Indonesia. *Cities* 59: 66–79.
- Fakhrudin, M. 2021. *Riau fokus kembangkan lima subsektor ekonomi kreatif*.
- Firdausy, C. M. 2017. *Strategi pengembangan ekonomi kreatif di Indonesia*. Yayasan Pustaka Obor Indonesia.
- Ghobakhloo, M. 2020. Industry 4.0, digitization, and opportunities for sustainability. *Journal of Cleaner Production* 252: 119869.
- Grefe, X. 2016. From culture to creativity and the creative economy: A new agenda for cultural economics. *City, Culture and Society* 7(2): 71–74.
- Hutabarat, Z. 2012. The Potential growth of creative industries in Province of Riau. *Procedia-Social and Behavioral Sciences* 65: 839–844.
- Kementrian Perindustrian Republik Indonesia. 2018. *Making indonesia 4.0*.
- Li, F. 2020. The digital transformation of business models in the creative industries: A holistic framework and emerging trends. *Technovation* 92–93: 102012.
- Luo, F. 2021. Visual design of cultural and creative product based on microprocessing system and computer-human interaction. *Microprocessors and Microsystems* 80: 103622.
- Munro, E. 2016. Illuminating the practice of knowledge exchange as a ‘pathway to impact’ within an arts and humanities research council ‘creative economy knowledge exchange’ project. *Geoforum* 71: 44–51.
- Noviyanti, R. 2017. Peran ekonomi kreatif terhadap pengembangan jiwa entrepreneurship di lingkungan pesantren: Studi kasus di pondok modern darussalam gontor putri 1. *INTAJ: Jurnal Penelitian Ilmiah* 1(1 SE-Articles): 77–99.
- Olson, E. M., Olson, K. M., Czapski, A. J. & Key, T. M. 2021. Business strategy and the management of digital marketing. *Business Horizons* 64(2): 285–293.
- Pangestu, M. E. 2014. *Ekonomi Kreatif: Kekuatan Baru Indonesia Menuju 2025*.
- Prasetyo, H., & Sutopo, W. 2018. Industri 4.0: Telaah klasifikasi aspek dan arah perkembangan riset. *Jati Undip: Jurnal Teknik Industri* 13(1): 17–26.
- Romarina, A. 2016. Economic Resilience pada industri kreatif gunamenghadapi globalisasi dalam rangka ketahanan nasional. *Jurnal Ilmu Sosial* 15(1): 35–52.
- Saksono, H. 2012. Ekonomi kreatif: Talenta baru pemicu daya saing daerah. *Jurnal Bina Praja: Journal of Home Affairs Governance* 4(2): 93–104.
- Satya, V. E. 2018. Strategi Indonesia menghadapi industri 4.0. *Info Singkat Bidang Bidang Ekonomi Dan Kebijakan Publik: Kajian Singkat Terhadap Isu Aktual Dan Strategis* X(09): 19–24.
- Sukma, Y. A. A. (Ed.). 2019. *Perkembangan ekonomi digital di indonesia: Strategi dan sektor potensial*. Pusat Penelitian dan Pengembangan Aplikasi Informatika dan Informasi dan Komunikasi Publik Badan Penelitian dan Pengembangan SDM Kementerian Komunikasi dan Informatika.
- Sulandjari, R. 2018. Strategi komunikasi pemasaran pada minat berwirausaha produk lokal (kerajinan bambu) di kwd Kelurahan Pulutan Kecamatan Sidorejo Kota Salatiga. *Jurnal Egaliter* 2(03).
- Sumar'in, S., Andiono, A., & Yuliansyah, Y. 2017. Pengembangan ekonomi kreatif berbasis wisata budaya: studi kasus pada pengrajin tenun di Kabupaten Sambas. *Jurnal Ekonomi Bisnis Dan Kewirausahaan (JEBIK)* 6(1): 1–17.
- Utama, P. 2020. *Gubri paparkan sektor ekonomi kreatif Riau Kepada Menparekraf Wishnutama*.
- Vesela, D., & Klimova, K. 2014. Knowledge-based economy vs. creative economy. *Procedia - Social and Behavioral Sciences* 141: 413–417.
- Zainuddin, M. 2018. Mekanisme lembaga adat melayu riau dalam melestarikan wisata budaya di Provinsi Riau. *Jurnal Agregasi: Aksi Reformasi Government Dalam Demokrasi* 6(1): 92–107.

## COVID-19 versus the Health, Safety, and Environment (HSE) norm law in Indonesia

H.E. Bagijo

*Wisnuwardhana University of Malang, Indonesia*

*Government of Manpower and Transmigration of East Java Province, Indonesia*

H.D. Santoso\*, N.T. Yuliati, S. Priyanto, H. Mangalle, V.A. Purwanto, P. Marsiti & M.D. Susanti

*Government of Manpower and Transmigration of East Java Province, Indonesia*

L. Kurniawati

*Ministry of Manpower of The Republic of Indonesia*

**ABSTRACT:** The novelty of this paper is the purpose of research that outlines employment policies, especially the norms of the Health, Safety, and Environment (HSE) from the point of view of the central government of the Ministry of Manpower of the Republic of Indonesia up to the provincial level by labor inspectors. The research method uses descriptive qualitative and quantitative methods sourced from primary and secondary data. The descriptive qualitative method describes the development and supervision of the HSE norm policy, the stages of hazard control, and the formation of the HSE advisory committee in the workplace. The results quantitative method of the one-way ANOVA calculation concluded that there is no influence on the location of the company on the formation of the HSE advisory committee by the company in dealing with the COVID-19 era of the industrial revolution 4.0 from companies in Lamongan Regency, Surabaya City, and Sidoarjo Regency.

### 1 INTRODUCTION

Coronavirus is contagious in animals and can cause disease in both animals and humans. This virus can be transmitted to humans, which in some cases causes respiratory tract infections, such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Coronavirus is now better known as COVID-19. In June 2019, when COVID-19 was first discovered, the International Labor Organization (ILO) wrote that safe and healthy conditions in the workplace are supportive for decent work. The ILO also mentions that guarantee during worker interactions on HSE are needed in the workplace for the management of the COVID-19 pandemic (International Labour Organization 2020).

The statement from the ILO encouraged several countries to develop strategies to handle and manage all cases of COVID-19. In Singapore, for example, the government is tracking hospital workers to identify hazards, isolate health workers who are infected by contact with patients, and monitor the progress of the spread of COVID-19. The Singapore government considers employment to be a real problem along with the spread of the virus, so it needs to be handled comprehensively and decisively (Wee Hoe Gan et al. 2020). Meanwhile, the government of the Republic of Indonesia also implements the norms of Health, Safety, and Environment (HSE) in the scope of health based

---

\*Corresponding Author: hendrawandendy@gmail.com

on Law Number 1 of 1970 concerning Occupational Safety and Law Number 36 of 2009 concerning health. Occupational health and safety are needed in both formal and informal sector companies (Prihastini & Haryawan 2020).

The COVID-19 pandemic in the Republic of Indonesia has been declared a non-natural disaster that does not occur naturally (Helmi et al. 2021). Article 1 paragraph (3) of Law Number 24 of 2007 on Disaster Management states that non-natural disasters are forms of disasters caused by non-natural disasters, events, or series of events that include technological failures, modernization failures, epidemics, and disease outbreaks. Indonesia has regulated disaster management both natural and non-natural into legislation (Helmi et al. 2021). The condition of the spread of COVID-19 has been worrying for the community; the government's efforts continue to be made in controlling and overcoming the COVID-19 pandemic. As per data from November 2020, there were 412,784 Indonesians infected with COVID-19 and 13,943 people died from this virus (Armeilia 2010). COVID-19 has even spread to the employment clusters, various reports have come out on containing the spread of COVID-19 in the workplace (Jelita 2020). The spread of COVID-19 in the employment cluster is caused by social interactions between workers in the workplace. Workers become vulnerable to infection when working together with COVID-19 positive persons (Helmi et al. 2021). The general step in the form of tracking the spread of the virus is controlling this infectious disease (Hannah van Klf schooten & Anniek de Ruijter 2020). The spread of the virus occurs in companies in all business sectors. The existing rules on employment use the term norm (<https://kbbi.web.id/norma>), which is the rule for the assessment benchmark. Norms are divided into two types, namely work norms and occupational, safety, and health (HSE) norms.

First, work norms are related to the impact that occurs in the labor cluster, such as workers being terminated, some workers being laid off for an indefinite period of time as an effort from employers to reduce the burden of wage costs, the amount of production decreases, and market demand is also sluggish due to the decline in people's purchasing power (Astuti 2020). Data in Indonesia (Ketenagakerjaan Dalam Data 2020) until August 30, 2020 recorded 2,146,667 workers affected by COVID-19 with the following details: 386,877 workers were terminated; 1,155,630 workers were laid off; 633,411 informal workers lost their jobs.

The second is occupational safety and health norms. One study on the application of HSE norms to employment clusters due to the spread of COVID-19 in the informal sector stated that workers wearing masks, face shields, and gloves were still effective in preventing the transmission of this virus even though certain conditions of workers were constrained when using personal protective equipment thoroughly (Soeratinoyo et al. 2021). The use of personal protective equipment for workers is an application of occupational safety and security norms. Protection of workers' health status due to fatigue, limited rest time, health protocols are the scope of occupational safety and health norms (Helmi et al. 2021). The risk of contracting this virus is always there, therefore workers experience the fear of contracting infection and discomfort at work. Government action is very necessary in protecting workers in terms of safety and health at work even when working from home (Dennerlein et al. 2020).

Government policies in various countries in an effort to contain the spread of COVID-19 continue to be implemented even now. For example, the Hong Kong government, which previously announced cases of the COVID-19 pandemic on January 23, 2020, saw an increase of 129 cases. The government raised the level of emergency response since January 26, 2020. During the COVID-19 emergency response conditions, a series of strict policies and guidelines were implemented, such as closing transportation routes, border checkpoints, restrictions on activities in public places, and quarantine policies for suspected cases or close contact with patients (Eliza Lai-y Wong et al. 2020).

Indonesia formulated policies related to the spread of COVID-19 to labor clusters in the form of labor laws during the Industrial Revolution 4.0 during the pandemic. In Indonesian labor law, the term worker originally used the word labor, labor law itself comes from *arbeidsrecht*, which means part of the applicable law or which basically regulates relationships (Agus 2011). Article 1 paragraph (16) of Law Number 13 of 2003 concerning manpower states that industrial relations are a system of relations formed between actors in the process of producing goods and/or services consisting of elements of entrepreneurs, workers/laborers, and the government based on the values

of Pancasila and the 1945 Constitution of the Republic of Indonesia. Employment law regulates rights and obligations as workers. Rights are inherent to humans, the existence of these rights requires rules to maintain their existence in society and these rules are created by law. Examples of employment cases (Tugu Malang 2020) of Industrial Revolution 4.0 during the COVID-19 pandemic are news about PT. X There was a demonstration or strike because employers did not provide masks for workers at work.

The law can develop according to the conditions that exist in society; this is regulated in Law Number 12 of 2011 with the Formation of Legislation. During the current pandemic, of course, changes, additions, replacements are needed to summarize several laws. The process is called omnibus law as the formation of a law. The new law passed through the omnibus law process is Law Number 11 of 2020 concerning job creation for labor clusters. The formation of good legislation has several principles, including (Hartomo n.d.) clarity of purpose; the appropriate forming institution or official; suitability between types, hierarchies, and payload materials; can be implemented; usability and effectiveness; clarity of formulation; and openness.

## 2 METHODS

Legal studies can change according to the development of society, because sometimes it is no longer relevant to the conditions of society. The change can be a part of the article or the whole

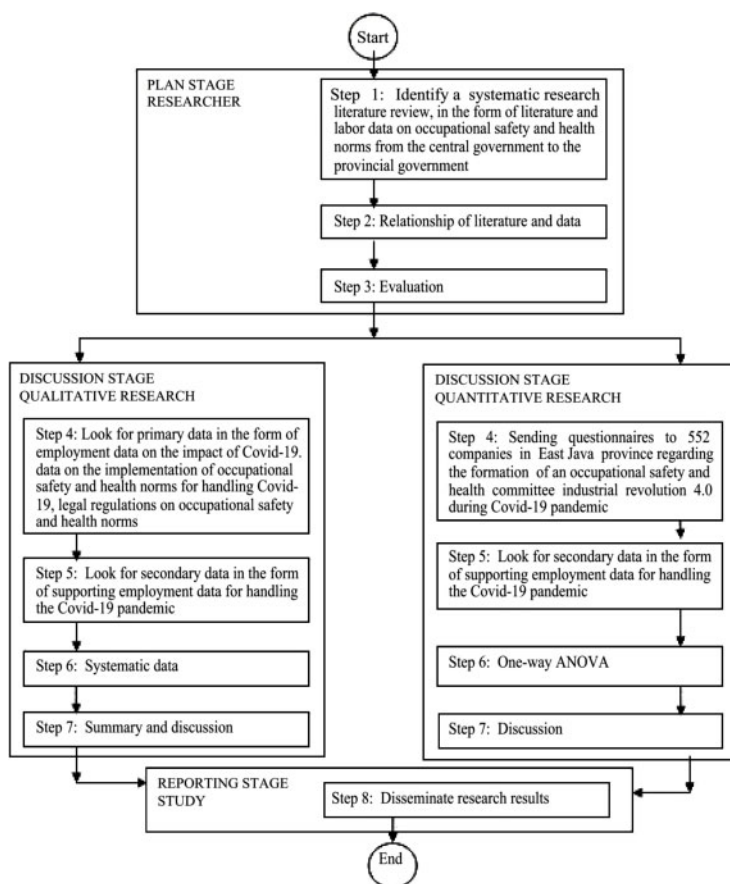


Figure 1. Systematic diagram of qualitative and quantitative research methods.

rule (Nurhayati et al. 2021). It is important to conduct legal studies to discuss the close relationship between legal research and legal products from the government. This legal review comes from the literature found from data relevant to the research topic. The selection of research sources uses keywords in accordance with the research as a condition for the suitability of the literature review (Surya et al. 2021).

Research on implementing of policies of the government of the Republic of Indonesia regarding the HSE norm law in tackling the spread of the coronavirus in various companies in East Java province, the industrial revolution 4.0 during the COVID-19 pandemic is ongoing. Officers who foster the implementation of labor norms in the regions are labor inspectors stationed in the provinces. The literature study framework is summarized based on several relevant literature reviews for the systematic of this study.

Table 1. Qualitative research question (RQ).

ID	Research Question	Motivation
RQ1	Is COVID-19	Hazard identification
RQ2	Since when was the founding committee formed?	Identify when workers and employers understand COVID-19
RQ3	Is there a policy for handling the COVID-19 pandemic?	Identify the understanding of workers and employers about COVID-19
RQ4	The relationship between HSE norms and COVID-19	Identify the implementation of HSE norms in the company.
RQ5	The role of the government in the field of employment regarding COVID-19	Identification of guidance and supervision of HSE norms.
RQ6	Expected employment conditions	Identify the motivations of workers and employers regarding labor conditions after the end of the COVID-19 pandemic.

Table 2. Quantitative research question (RQ).

ID	Research Question	Motivation
RQ1	Company location	Company area identification
RQ2	Has the company formed a coaching committee?	Identification of the formation of the HSE advisory committee

The theoretical framework of qualitative and quantitative researchers uses a conceptual model of the implementation of HSE norms by the supervisory committee in the company. This conceptual framework has also been discussed about the central role of company personnel by approaching and understanding the behavior of individual workers (G. Sorensen et al. 2016). The framework for understanding the importance of implementing HSE norms during a pandemic is divided into several steps. The steps taken in the research are to determine the key characteristics of implementing HSE protection in the workplace, namely (Jack T. Dennerlein et al. 2020; G. Sorensen et al. 2016; D. McLellan et al. 2017):

1. Commitment of the company’s leadership in preparing safety and health norms for its workers. Company leaders must be able to make policies that are openness and availability of resources in the work environment to encourage the realization of good conditions.
2. Policies, work programs, and implementation within the company in the form of an occupational safety and health committee.
3. Participation of institutional personnel of the HSE coaching committee in efforts to protect workers.

4. Compliance on the part of workers and employers regarding occupational safety and health norms.
5. Evaluation and change for continuous improvement so that security and welfare can be realized in the company.

The implementation of HSE norms in the workplace requires someone who is in charge of supervising the implementation of government regulations. Labor inspectors who are recommended by the ILO, WHO, or others to come to the workplace to prevent exposure to COVID-19 and protect the health of workers (L. Burke et al. 2020).

### 3 RESULTS AND DISCUSSION

In 2020, WHO stated that there had been a new variant of the coronavirus in Hubei Province, China, therefore a health emergency of international concern (International Labour Organization 2020). The condition raises concerns from workers, because workers in the Industrial Revolution 4.0 era during the COVID-19 pandemic are industrial players in global trade.

The Republic of Indonesia also relates to other countries in global trade, so it is necessary to formulate policies when carrying out a project or program. Stakeholders of the Industrial Revolution 4.0 era in the Republic of Indonesia must be able to play a role and try to make legal decisions for mutual benefit (Randi et al. 2020). The need for the protection of HSE norms is the need for workers in the industrial revolution 4.0, both for outdoor and indoor work. Safety and health norms contain aspects of guarantees for safety for workers who can threaten themselves, both from humans and from the work environment (Prihastini & Haryawan 2020). The implementation of HSE norms needs to be observed and monitored, because the results of several studies show that workers' knowledge is not significantly related to worker behavior in the workplace. There are workers who have sufficient knowledge about occupational safety and health norms, but they are still careless in taking precautions (Soeratinoyo et al. 2021). Indonesia, especially in East Java Province, where data on the distribution of workers exposed to the COVID-19 virus has been recorded, is enlisted in the following table:

Table 3. Workers exposed to COVID-19 in East Java Province.

No.	Item	Critical	Essential	Non-Essential	Total
1.	Number of workers in export-oriented companies	3.096	5.347	483	8.926
2.	Number of workers in labor-intensive companies	6.362	5.528	544	12.434
3.	Number of workers in export-oriented and labor-intensive companies	2.534	5.267	472	8.273
4.	Number of workers in non-export-oriented and non-labor-intensive companies	1.970	187	165	2.322

Source: Government of Manpower and Transmigration of East Java Province

The purpose of the HSE norm is to prevent, reduce, and even eliminate the level of risk of work accidents and occupational diseases. It is wrong to assume that the norms of safety and health are expenses at the expense of the company, but the HSE norm is a long-term investment that can reduce losses from occupational diseases (Agustin et al. 2020). The cost of treating COVID-19 patients reaches about 200 dollars just for the cost of testing, reporting, downloading the administration of the treatment system. Costs reach 3.6 billion dollars when workers reach thousands (Brook & Das 2020; Crystal Watson et al. 2020). The estimated amount of costs borne by the company if workers who are tested COVID-19 positive is an illustration of the comparison of the costs of implementing

HSE norms with the costs of workers' medical treatment. Workers infected with COVID-19 also need quarantine breaks and do not come to work to prevent transmission to other workers. However, workers sometimes still intend to continue working even though they are COVID-19 positive, because workers need finance to meet their daily needs, research shows that the workplace and aspects of protection for workers are the center of attention in dealing with the COVID-19 pandemic (Tilchin et al. 2021). Many companies such as tourism, hotel, education, finance, transportation, construction, retail, and so on have the impact of slowing down until they stop the company's operations (Shari et al. n.d.).

Government institutions in law enforcement in the Republic of Indonesia include the police, prosecutors, district courts, state institutions for dispute resolution. The law to provide this protection must be supervised by law enforcement agencies, the protection is preventive and enforcement. The aim is to prevent disputes (Armeilia 2021). Norm law HSE for the fulfillment of welfare is in the spotlight during the COVID-19 pandemic (Dennerlein et al. 2020). Special state officials tasked with enforcing labor law are labor inspectors. Currently, the government has also issued a policy, which includes the efforts and handling of the government, especially the ministry of manpower that deals with cases related to COVID-19, namely: labor inspectors must be able to provide guidance and supervision on the HSE legislation which is narrowed down to COVID-19; labor inspectors disseminate appropriate information to related parties, especially the labor side in this case the employers and workers; the task of the labor inspector is to record and report to the relevant agencies if they find suspected cases of COVID-19, labor inspectors along with employers and workers must be prepared to face the spread of COVID-19 to minimize the risk of transmission in the workplace.

The labor inspector checks the HSE norms. This action is very important (Waleleng et al. 2020). The results of the inspection report by the labor inspector can be used as written evidence of violations of the law and a form of guidance related to labor regulations. Written evidence is called an examination note. In the event of a dispute, an examination note will be requested by the judge in court. The function of judicial power is one of the authorities in Article 24 paragraph (1) and paragraph (2) of the 1945 Constitution of the Republic of Indonesia, which states that judicial power is an independent power to administer justice to enforce law and justice is carried out by the supreme court and judicial institutions under the general courts, religious courts, military courts, and state administrative courts, and the Constitutional Court (Rahmah et al. 2021).

The contents of the inspection note made by the labor inspector include findings of violations of work norms and HSE norms committed by employers. One of the legal rules regarding HSE norms is the provision of Article 14 letter c of Law Number 1 of 1970, which stipulates that the management is required to provide free of charge, all required personal protective equipment for workers under their leadership and provide for each employee. Other people who enter the workplace comply with the necessary instructions according to the instructions of supervisory employees or work safety experts. The laws and regulations also stipulate sanctions for violators in Article 15 paragraph (1), which can provide criminal threats for violating the regulations with a maximum imprisonment of 3 months or a maximum fine of one hundred thousand rupiahs. The contents of these labor regulations are used as guidelines for employers.

Employers are also required to follow the established HSE norms, avoid the risk of transmission to others, and appoint workers to participate in HSE training provided by the employer; carry out health protocols; wearing, using, removing, and disposing of personal protective equipment properly; honestly report health conditions to managers. Any situation where there is an indication of exposure to the coronavirus in the company can pose a danger so that there will be a serious reaction in the workplace (World Health Organization 2020). Control of the dangers can be done externally and internally.

Policies for the general public aimed at restricting the movement of people are large-scale social restrictions (Sudiarno et al. 2021). This policy is a form of administrative control embodiment of the government's strategy to prevent and control transmission of sick people with other people (Jannah et al. 2021). WHO stressed that every country must carry out restrictions to prevent the spread of the virus. Health workers can prepare their abilities to focus on treating infected patients and so



that case rates can be reduced (Helmi et al. 2021). Previous research on administrative control of health workers who are very vulnerable to contracting COVID-19 to minimize the risk of exposure in the workplace, the care team was separated in two places. Doctors are regulated, treatment is limited, medical staff members are limited in presence. Teams are also made small to reduce the impact of direct on-the-job contact that accidentally is exposed to people with COVID-19. These measures, although uncomfortable and sometimes painful, are still quite effective as part of risk mitigation and to maintain hospital business continuity (Wee Hoe Gan et al. 2020).

The government makes a policy of maintaining distance, a policy of dividing workers into the Work from Home (WFH) system where all work activities are carried out from home (Helmi et al. 2021). The government has taken a quick step through the formulation of labor law through the omnibus law of labor clusters. The wage system with an element of agreement, setting the type of business in the application of WFH, status of workers, severance pay arrangements are formulated in Law Number 11 of 2020 concerning Job Creation. At first, glance the work administration control policy includes work norms, even though in the HSE norm there is already a hazard control hierarchy term. The stages of the hazard control hierarchy based on external crocodile theory are ([https://en.wikipedia.org/wiki/Hierarchy\\_of\\_hazard\\_controls](https://en.wikipedia.org/wiki/Hierarchy_of_hazard_controls)):

1. Identification and elimination are the initial steps that need to be done when encountering dangers, such as the danger of COVID-19. The danger referred to in this case is likened to the danger of a crocodile. When someone sees a crocodile, what needs to be considered is the identification of the dangers caused by the crocodile. If applied in the workplace, the identification of these hazards includes the understanding of COVID-19: the name of the COVID-19 hazard object; the form of the hazard object is in the form of a virus; the impact of the disease caused; exposure process for and for workers. After identifying COVID-19, the next step is to eliminate the source of the danger that appears. This elimination stage is needed after the stage of identifying the source of the COVID-19 danger in detail, so that it is not wrong in handling it.
2. Substitution is the stage of replacing an existing hazard with something of a lower level of risk. If in crocodile theory, then this stage can be described as a very dangerous crocodile replaced with a cat with a lower risk level.
3. Administration controls are a form of activity in dealing with sources of danger, such as giving vaccines to workers if the source of danger in question is a contagious virus and the application of labor rules, such as division of work time and division of the quantity of workers so that the intensity of exposure time can be reduced to a minimum. The previous policy discussion was limiting the spread of COVID-19 on human activities outside the home (Rahmatullah 2020).

Stages of the hierarchy of hazard control based on crocodile theory internally: washing hands with soap using running water, or using hand sanitizer if water is not available; not touching the face especially the mouth, nose, and eyes after washing hands; use personal protective equipment in the form of masks when at work; maintain a distance of about one meter when there is a crowd at work; stay away from direct boxes with people infected with the virus; maintain health and hygiene; do positive activities to avoid stressful thoughts; contact paramedics if you feel symptoms of COVID-19 and isolate at home. The incubation period for the virus is 1–14 days. All health protocols internally by oneself are aimed at breaking the chain of transmission of the COVID-19 pandemic (Sinar Rizky A et al. 2020). In particular, the completion of personal protective equipment that can be used by workers in the form of masks has been widely studied. Personal protective equipment is protective equipment in the form of masks worn by workers to prevent sources of danger from entering through the nose and mouth. The use of this mask is the last stage and the easiest to apply because the implementation is immediately visible. For example, if the source of danger is the COVID-19 virus, then masks must be worn by the public in general and workers in particular (Yudhastuti 2020).

The legal basis of the Republic of Indonesia regarding the use of masks for workers has been written since 1970, namely *Article 14 letter c of Law Number 1 of 1970 which regulates that management is required to provide free of charge all personal protective equipment required for*

workers. who is under his leadership and provides for every other person who enters the workplace, accompanied by the necessary instructions according to the instructions of supervisory employees or work safety experts. The application of the rules for personal protective equipment has been applied in various industrial sectors, such as the construction service sector (Luthfi Parinduri & Taufik Parinduri 2020). Meanwhile, in the service sector, paramedics use personal protective equipment with more complete and detailed, consisting of gloves, masks, eye protection, face shields, head coverings, protective gowns, and closed foot protection. In fact, small-scale companies, such as coffee shops, also apply occupational safety and health norms. Workers have used food grade handsoons while touching food and drinks; always wear masks and always wash their hands after and before using food grade handsoons, and use an apron (Prihastini & Haryawan 2020). In general, employers exchange information about the application of personal protective equipment, thus increasing compliance during the COVID-19 pandemic era of the Industrial Revolution 4.0 (Sudiarno et al. 2021).

Table 4. Summary of the demographics of the companies that make up the HSE in Indonesia.

No.	Province	2018	2019	2020
1.	Bali	2.331	5.734	1.423
2.	Bangka Belitung	130	1.133	249
3.	Banten	4.112	13.698	2.936
4.	Bengkulu	250	120	157
5.	DI Yogyakarta	489	3.553	657
6.	DKI Jakarta	23.509	46.476	10.719
7.	Gorontalo	83	633	89
8.	Jambi	539	2.290	509
9.	West Java	13.174	29.289	5.517
10.	Central Java	3.189	16.372	2.505
11.	East Java	2.881	24.275	2.875
12.	West Kalimantan	545	3.821	469
13.	South Kalimantan	350	3.485	638
14.	Central Kalimantan	407	2.004	356
15.	East Kalimantan	764	6.105	1.000
16.	North Kalimantan	73	693	127
17.	Riau Island	954	4.719	997
18.	Lampung	386	3.379	529
19.	Maluku	1.189	1.071	238
20.	North Maluku	34	659	90
21.	Nanggroe Aceh Darussalam (NAD)	226	3.078	488
22.	Nusa Tenggara Barat (NTB)	221	1.911	293
23.	Nusa Tenggara Timur (NTT)	120	1.313	199
24.	Papua	86	689	228
25.	West Papua	72	716	122
26.	Riau Province	760	6.233	1.340
27.	West Sulawesi	26	459	83
28.	South Sulawesi	684	3.590	816
29.	Central Sulawesi	179	1.417	256
30.	Southeast Sulawesi	98	1.354	255
31.	North Sulawesi	206	1.555	320
32.	West Sumatera	660	2.701	510
33.	South Sumatera	421	3.385	708
34.	North Sumatera	1.257	9.533	1.733

Source: Ministry of Manpower of the Republic of Indonesia

Previous research has also concluded that the HSE advisory committee is also oriented toward the complexity of interactions involving each individual worker as seen from their behavior at work (Dennerlein et al. 2020; Sorensen, et al. 2018). The discussion of the behavior of workers in the industrial revolution uses quantitative research methods with testing—one-way ANOVA statistics. Our hypothesis is that there is difference in the influence of the workplace on the formation of the HSE norm advisory committee by companies that have reported employment conditions in the Government of Manpower and Transmigration of East Java Province sent online questionnaires to companies in all districts and cities in East Java as 851 companies.

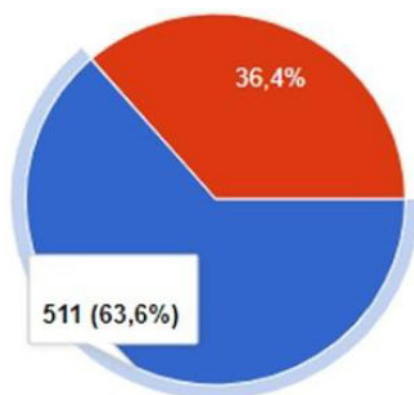


Figure 1. Companies that have formed an HSE committee.

The responsibility for controlling COVID-19 in the company is carried out by HSE committee, companies in East Java Province which have formed as many as 115 companies or 63.6% and which have not formed 36.4%. The data were filtered to eliminate duplication of data and relevance to the research hypothesis. Respondents obtained as many as 552 respondents from Lamongan Regency 202 companies, Surabaya City 204 companies, and Sidoarjo Regency 146 companies. Ownership of the three regions, because the area is the third most reported employment condition until August 18, 2021.

Table 5. Recapitulation of one-way ANOVA on companies that have formed HSE norm advisory committees in East Java Province.

No	Respondent's Category	Degree of Freedom	Sum Square	Mean Square	F	Ftable
1.	Treatment (Tr)	2	$SST_r=722,67$	$MST_r=361,33$	92,91	$F_{(0,05;2;6)}= 5,14$
2.	Error (E)	6	$SSE=23,33$	$MSE=3,89$		
3.	Total (T)	8	$SST=746,00$			

One-way ANOVA hypothesis test level with 95% confidence in the initial hypothesis that there is no significant difference in the effect of company location on the formation of the HSE advisory committee by the company in the face of COVID-19. When the data has a significant value greater than error or 0.05 then the hypothesis is accepted and vice versa. Table 2 shows that the value is significantly greater than the table for all categories of respondents. The results of the one-way ANOVA calculation can be concluded that there is no influence on the location of the company on the formation of the HSE advisory committee by the company in dealing with the COVID-19 era of the industrial revolution 4.0 from companies in Lamongan Regency, Surabaya City, and Sidoarjo

Regency. The company has understood that the COVID-19 pandemic has spread to the labor cluster, so that parties in industrial relations are motivated to comply with HSE norms (Sudiarno et al. 2021).

The implementation of compliance with HSE norms has been regulated in several legal rules, including article 10 paragraph (1) of Law Number 1 of 1970 concerning work safety it is stated that the Minister of Manpower has the authority to form an Occupational Safety and Health Committee to develop cooperation, mutual understanding, and effective participation of entrepreneurs or administrators and workers in workplaces to carry out joint duties and obligations in the field of occupational safety and health, in the context of launching production business. In accordance with health regulations, namely *Article 166 paragraphs (1) and (2) of Law Number 36 of 2009 concerning Health which states in paragraph (1) that employers or employers are obliged to ensure the health of workers through prevention, improvement, treatment and recovery and must bear all the costs of maintaining the health of workers. And paragraph (2) The employer or entrepreneur bears the costs for the work-related health problems suffered by the workers in accordance with the laws and regulations. Article 35 paragraph (3) of Law Number 13 of 2003 concerning Manpower states that employers in employing workers are obliged to provide protection that includes the welfare, safety, and health of both mental and physical workers* (Rahmatullah 2020).

#### 4 CONCLUSION

This literature is based on policy issues from the government, through the guidance and supervision of HSE norms that workers can apply to fight the spread of COVID-19 in the Industrial Revolution 4.0 in the workplace. Employers and workers have understood the stages of hazard control, administrative control, health protocols, and the use of personal protective equipment while working. With this understanding, the workforce complies with the legal rules of HSE norms and minimal violations occur. Manpower inspectors carry out guidance and supervision to apply labor regulations in the workplace. The results of the one-way ANOVA calculation  $SST_r = 722.67$ ;  $SSE = 23.33$ ;  $SST = 746.00$ ;  $MST_r = 361.33$ ; and  $MSE = 3.89$  can be concluded that there is no influence on the location of the company on the formation of the HSE advisory committee by the company in dealing with the COVID-19 era of the Industrial Revolution 4.0 from companies in Lamongan Regency, Surabaya City, and Sidoarjo Regency. Government policy aims to protect workers wisely for all parties in industrial relations and can work effectively and efficiently in services when workers are needed by the community (Riguzzi & Gashi 2021, Wibawa & Putri 2021). Currently, 188,483 workers have been vaccinated in East Java province under a mutual cooperation program or in collaboration with the government to create healthy, safe, and comfortable workers.

#### REFERENCES

- Agus, D. 2011. *Hukum ketenagakerjaan*. Banten: Dinas Pendidikan Provinsi Banten.
- Agustin, P. I. S., Askafi, E. & Daroini, A. 2020. Pengaruh keselamatan kerja, kesehatan kerja dan insentif terhadap kinerja karyawan DLHPK bidang pertamanan Kota Kediri dimasa pandemi covid-19. *Otonomi* 20(2): 424–436.
- Astuti, S. A. D. 2021. Dampak covid-19 terhadap ketenagakerjaan dan UMKM di Mojokerto. *Jurnal Inovasi Penelitian* 1(9) 1775–1778.
- Armeilia, D. 2021. Perlindungan hukum dan hak memperoleh keselamatan kerja bagi tenaga kesehatan akibat pandemi Covid-19. *Al'Adl: Jurnal Hukum* 13(2): 303–319.
- Brook, Z. C. & Das, S. 2020. COVID-19 testing impact of prevalence, sensitivity, and specificity on patient risk and cost. *American Journal of Clinical Pathology* 154(5): 575–584.
- Burke, L. et al. 2020. *Harvard T.H. Chan school of public health center for work health and well- being coronavirus (COVID-19)*.
- Data Dinas Tenaga kerja dan transmigrasi Provinsi Jawa Timur 2021.
- Dennerlein, J. T. et al. 2020. An integrative total worker health framework for keeping workers safe and healthy during the covid-19 Pandemic. *HUMAN FACTORS* 63(5) 689–696.

- Eliza Lai-y Wong et al. 2020. Workplace safety and coronavirus disease (COVID-19) pandemic: survey of employees. *Bull World Health Organ* 2020 98:150.
- Firmansyah, R., Sismulyanto & Nurwijayanti. 2020. Analysis of factors that affect employee work accidents at PT. Windu Blambangan Sejati (WBS) Banyuwangi Regency 2018. *Journal for Quality in Public Health* 3(2): 300–308.
- Gaffar, S. Karsona, A. M., Pujiwati, Y. & Perwira, I. 2021. The concept of procedural law regarding the implementation of collective agreements with legal certainty in termination of employment in Indonesia. *Heliyon* 7(2021): e06690.
- Gan, W. H., Lim, J. W. & Koh, D. 2020. Preventing intra-hospital infection and transmission of coronavirus disease 2019 in health-care workers. *Safety and Health at Work* 11(2).
- Hartomo A. P. n.d. *Tinjauan yuridis tentang omnibus law ketenagakerjaan dalam situasi pandemi covid-19*. Fakultas Hukum, Jurusan Ilmu Hukum Universitas 17 Agustus 1945 Samarinda, Indonesia.
- Helmi, Hafrida & Kusniati, R. 2021. Health workers' legal protection policy to the coronavirus disease 19 (Covid-19). *FIAT JUSTISIA Jurnal Ilmu Hukum* 15(1): 51–74. [https://en.wikipedia.org/wiki/Hierarchy\\_of\\_hazard\\_controls](https://en.wikipedia.org/wiki/Hierarchy_of_hazard_controls). <https://id.wikipedia.org/w/index.php?search=arbeidsrecht&title=Istimewa%3APencarian&go=Lanjut&ns=1>. <https://kbbi.web.id/norma>.
- International Labour Organization. 2020. *In the face of a pandemic: Ensuring safety and health at work*. Geneva: International Labour Organization.
- Ismiyati A. & Lestari F. 2020. Analysis on emergency and disaster preparedness level of hospitality industry in Palu and Gorontalo Cities. *International Journal of Safety and Security Engineering* 10(5): 671–677.
- Jannah, U., et al. 2021. Gambaran persepsi pasien tentang pencegahan dan pengendalian infeksi dalam implementasi pelayanan kesehatan selama masa pandemi Covid-19 Tahun 2020. *Jurnal Ilmu Kesehatan Masyarakat (The Public Health Science Journal)* 10(1): 8–13.
- Jelita, I. N. 2020. *Awas, lingkungan kerja jadi klaster penularan Covid-19*.
- Jenrivo, F., Indasah & Nurwijayanti. 2020. Analysis of the application of safety and health management system work against a work behavior and conditions of the work environment in the dr. harjono general hospital of Ponorogo. *Journal for Quality in Public Health* 3(2): 207–215.
- Jiee, S. F., Bondi, M. E., Emiral, M. E. & Jantim, A. 2021. Polio supplementary immunization activities during covid-19 pandemic: Experience from Penampang District, Sabah, Malaysia. *Journal of Primary Care & Community Health* 12: 1–9.
- Kementerian Ketenagakerjaan Republik Indonesia. 2020. *Ketenagakerjaan Dalam Data 2020 Edisi 3*.
- Kolfschooten, H. V. & Ruijter, A. D. 2020. COVID-19 and privacy in the European Union: A legal perspective on contact tracing. *Contemporary Security Policy* 41(3): 478–491.
- Marpi, Y., Erlangga, Endaryono, B. T. & Noviani, K. 2020. Legal effective of putting “business as usual” clause in agreements. *International Journal of Criminology and Sociology* 10: 58–70.
- McLellan, D. et al. 2017. *Implementing an integrated approach: Weaving worker health, safety, and well-being into the fabric of your organization*.
- Menteri Ketenagakerjaan Republik Indonesia. Surat Edaran No. M/3/HK.04/III/2020 *tentang Perlindungan Pekerja/ Buruh dan Kelangsungan Usaha Dalam Rangka Pencegahan dan Penanggulangan Covid-19*.
- Nurhayati, Y., Irfani & Said, M. Y. 2021. Metodologi normatif dan empiris dalam perspektif ilmu hukum. *Jurnal Penegakan Hukum Indonesia (JPHI)* 2(1): 1–20.
- Parinduri L. & Parinduri, T. 2020. Implementasi manajemen keselamatan konstruksi dalam pandemi covid-19. *Buletin Utama Teknik* 15(3): 222–228.
- Prihastini, K. A. & Haryawan, I. G. A. 2020. Implementasi kesehatan dan keselamatan kerja lingkungan kerja pada masa pandemi covid-19 di kedai kopi XX. *Bali Health Journal* 3(2-2): S75–S81.
- Priambodo A. & S. Kumar. 2021. Energy use and carbon dioxide emission of Indonesian small and medium scale industries. *Energy Conversion and Management* 42(11):1335–1348.
- Rahmah A. N., Ridha M. R. & Kamriani N. 2021. The impact of job creation act against the participatory principle in environmental law. *International Journal of Law, Environment, and Natural Resources INJURLENS* 1(1): 22–28.
- Rahmatullah, I. 2020. Jaminan hak kesehatan pekerja work from office selama masa psbb covid-19. *Adalah: Buletin Hukum dan Keadilan* 4(1): 57–62.
- Randi, Mulyanto, Taqwa, R. & Junaidi. 2020. Potential candidates for village youth labor in era of industrial revolution 4.0 and covid'19 pandemi (Study on Tanjung Medang Village Youth). *The 3rd International Conference on Technology, Education, and Social Science 2020 (The 3rd ICTESS 2020)*.
- Riguzzi M. & Gashi, S. 2021. Lessons from the First Wave of COVID-19: Work-Related Consequences, Clinical Knowledge, Emotional Distress, and Safety-Conscious Behavior in Healthcare Workers in Switzerland. *Frontiers in Psychology* 12:1–21.

- Shari, N. S., Yazid, M. F. M. & Shamsudin, M. F. 2020. The strengthen strategies during post Covid 19 after the virus crisis hit hotel industry in Malaysia. *Journal of Postgraduate Current Business Research* 1(1): 1–5.
- Sinar Rizky A, et al. 2020. Menumbuhkan kesadaran masyarakat indonesia untuk memutus rantai penyebaran wabah covid-19. *Jurnal Global Citivzen Jurnal Ilmiah Kajian Pendidikan Kewarganegaraan JGC IX* 1(2020): 51–62.
- Soeratinoyo, D. K., Doda V. D. D. & Warouw, F. 2021. Hubungan antara pengetahuan dan sikap dengan tindakan pencegahan penyebaran covid-19 pada Perusahaan Produsen Air Minum Dalam Kemasan. *Jurnal Biomedik (JBM)* 13(3): 1–5.
- Sorensen, G., et al. 2016. Integrating Worksite health protection and health promotion: a conceptual model for intervention and research. *Preventive Medicine* 91: 188–196.
- Sorensen, G., et al. 2018. Measuring best practices for workplace safety, health, and well-being: the workplace integrated safety and health assessment. *Journal of Occupational and Environmental Medicine* 60(5): 430–439.
- Sudiarno A. et al. 2021. Health and safety implementation in Indonesia and risk of COVID-19. *International Journal of Public Health Science (IJPHS)* 10(1): 68–76.
- Surya, P. A. et al. 2021. Literature review: Occupational safety and health risk factors of healthcare workers during covid-19 pandemic. *The Indonesian Journal of Occupational Safety and Health* 10(1): 144–152.
- Tilchin, C., Dayton, L. & Latkin, C. A. 2021. Socioeconomic Factors associated with an intention to work while sick from covid-19. *Journal of Occupational and Environmental Medicine* 63(5): 363–368.
- Tugu Malang. 2020. *Kerja berdempetan, apd tak ada, buruh pabrik rokok di malang mogok kerja.*
- Undang-Undang Dasar Negara Republik Indonesia Tahun 1945
- Undang-Undang Nomor 1 Tahun 1970 tentang Keselamatan Kerja
- Undang-Undang Nomor 13 Tahun 2003 tentang Ketenagakerjaan.
- Undang-Undang Nomor 24 Tahun 2007 tentang Penanggulangan Bencana.
- Undang-Undang Nomor 36 Tahun 2009 Tentang Kesehatan
- Undang-Undang Nomor 11 Tahun 2020 tentang Cipta Kerja
- Waleleng, V., Doda, V. D. & Manampiring, A. E. 2020. Hubungan antara promosi kesehatan dan keselamatan kerja (k3) dengan tindakan pencegahan covid-19 pada pegawai di salah satu RS di Provinsi Sulawesi Utara. *Sam Ratulangi Journal of Public Health* 1(2): 52–60.
- Watson, C. et al. 2020. *A national plan to enable comprehensive COVID-19 case finding and contact tracing in the US. Johns Hopkins University.*
- Wibawa, P. A. C. C. G., & Putri, N. K. C. A. 2021. Kebijakan Pemerintah dalam menangani covid-19. *ganesha civic educational journal* 3(1): 10-18.
- World Health Organization. 2020. *Coronavirus disease (covid-19) outbreak: Rights, roles and responsibilities of health workers, including key considerations for occupational safety and health.*
- Yudhastuti, R. 2020. The use of cloth face mask during the pandemic period in indonesian people. *Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)* 15(2): 32–36.

## Relationship between nutrition intake, education facilities, and unemployment and Indonesia's development

D.P.P. Tyas & F. Rahmawati\*

*Department of Economic Development, Universitas Negeri Malang, Malang, Indonesia*

N.Y.B.M. Bani

*Sekolah Perniagaan dan Ekonomi, Universiti Putra Malaysia, Malaysia*

**ABSTRACT:** The purpose of the research is to analyze the effect of nutrition intake, education facilities, and unemployment on economic development in Indonesia. This research uses a multiple linear regression method using panel data consisting of time series data for 5 years and cross-section data consisting of 34 provinces. The results exhibited that nutrition intake and educational facilities have a significant positive effect on economic development, but unemployment has a significant negative effect on economic development in Indonesia. In addition, nutrition intake, education facility, and unemployment have a simultaneous influence on economic development in Indonesia during 2014–2018. Economic development can be implemented by increasing nutrition intake to improve health quality, reduce mortality, and increase life expectancy. Economic development must be followed by a decrease in unemployment to improve socioeconomic conditions in the form of income distribution and reduce poverty to improve decent living standards.

### 1 INTRODUCTION

Development is a process of change toward better than the current situation. The development process consists of a variety of fundamental changes such as social status, society attitudes, and national institutions, which pursue economic growth, resolve income inequality, and create poverty alleviation programs. Economic development has a goal to prosper the people because the people contribute to the progress of the region and the country. Economic development is influenced by human development because people play an important role in economic development.

The meaning of economic development is human development because development is not only seen from high income, but also from the level of health and education as an input in the component of human capital whose function acts as a factor of national production (Todaro 2003). Economic development is the development of quality human resources. The Human Development Index (HDI) is a benchmark in assessing the success of a country's development. Human development is related to what is considered a basic development idea. This consists of the advancement of the wealth of human life, rather than economic wealth in an area that is only part of humans (Khodabakhshi 2011). According to the Central Bureau of Statistics (2019) human development consists of all issues in society such as economic growth, health, education, trade, employment, and political freedom or cultural values from a human perspective.

Improved economic development will occur due to an increase in health capital and an increase in a long life (Razmi 2012). Economic development is not only followed by improving health but also followed by improving the quality of education that must be developed through the education policies of each country. Educational priorities aim to introduce the development of knowledge

---

\*Corresponding Author: [farida.rahmawati.fe@um.ac.id](mailto:farida.rahmawati.fe@um.ac.id)

levels for society through access to education and continuing education reform (Dumciuviene 2014). The development of the times has made science a renewal that has accelerated development. Substitution of production processes using human labor into technology for efficient productivity causes a reduction in labor to increase unemployment (Maulana 2013).

Improvement of development must occur in all aspects of life, whether economic, social, political, cultural, or environmental. Human development is one of the important factors in national development. The success of human development can be measured using the HDI. The HDI is a benchmark for an area and even a country to see the achievement of higher quality human development.

Table 1. Human development index (HDI) of Indonesia by components in 2014–2018.

Components	Unit	2014	2015	2016	2017	2018
Life Expectancy at Birth	year	70.59	70.78	70.90	71.06	71.20
Expected Years of Schooling	year	12.39	12.55	12.72	12.85	12.91
Mean Years of Schooling	year	7.73	7.84	7.95	8.10	8.17
Expenditure–Per Capita	Rp 000	9.903	10.150	10.420	10.664	11.059
HDI		68.90	69.55	70.18	70.81	71.39
HDI Growth	%	—	0.94	0.91	0.90	0.82

Source: Central Bureau of Statistics 2019.

The HDI has four indicators, namely life expectancy, expected years of schooling, mean years of schooling, and per capita expenditure, which are derived from the basic dimensions found in the aspects of health, education, and economics. The HDI from 2014 to 2018 continues to increase, as seen by the growth of HDI and its basic dimensions. This can be interpreted that the quality of human resources in Indonesia also continues to increase and improve every year. The HDI indicator also continues to increase in life expectancy at birth, which represents health aspects from the years 2014 to 2018. This shows that the life expectancy at birth of Indonesian people has changed positively, and people can access health services.

Regarding the school year expectations and the average length of school, which serve as indicators of the education sector continue to increase from 2014 to 2018. Indonesian people who can receive education have increased. In addition, some indicators represent economic aspects, namely expenditure per capita, which increased from 2014 to 2018 in Indonesia. This means that the ability of people to meet the needs of decent living is increasing. In this research, the dimensions of long and healthy life are represented by the variables of nutritional intake, the dimension of knowledge is represented by the variables of educational facilities, and the dimensions of a standard of living deserve to be represented by the unemployment variable. Economic development is represented by the HDI.

Efforts for the improvement of the quality of human resources lead to increased intelligence and work productivity. One effort that has a significant impact on improving the quality of human resources is improving the nutritional status of society. Lack of protein increases the risk of malnutrition that often occurs in toddlers and at risk of infant death (Andriani 2014). According to Dumciuviene (2014), the economy and welfare of citizens depend on the progress of knowledge and transformation in new processes, products, and services.

Investing in education is an important way of driving economic growth, creating new jobs, improving living standards, and developing human resources to obtain a sustainable and quality life. In addition to education and health, the socioeconomic conditions of the people who also play a role in increasing the HDI are unemployment. With an increase in the number of unemployed people in Indonesia, income inequality and poverty will increase. This results in the inability to access education and health, and low consumption in society.

Although HDI in Indonesia continues to increase, there are still problems inherent in the basic dimensions of HDI. In the HDI, problems lie in education, health, and economic sectors. Problems



in the health aspect are an indicator of life expectancy at birth, which is a reflection of the quality of health. This can be seen from the nutritional status of the people who present adverse health effects.

Table 2. Nutritional status of toddlers aged 0–59 months in Indonesia 2014–2018 (in percent).

Nutritional Status	2014	2015	2016	2017	2018
Malnutrition	5.7	3.9	3.4	3.8	3.9
Less Nutrition	13.9	14.9	14.4	14.0	13.8
Good Nutrition	75.9	79.7	80.7	80.4	79.2
Over Nutrition	4.5	1.6	1.5	1.8	3.1

Source: Ministry of Health of the Republic of Indonesia 2019.

The status of malnutrition over nutrition in Indonesia has fluctuated. However, malnutrition has increased from 2017 to 2018. This is not in line with the ideal conditions for HDI indicators namely long and healthy life that continue to increase from 2014 to 2018. The next problem is basic dimensions of knowledge that have indicators of expected years of schooling and mean years of schooling. Indicators of not attending school have increased from 2016 to 2018, which means there are still people who have not received an education that is appropriate for their age.

Table 3. Education indicators in Indonesia 2014–2018.

Formal Education Participation	2014	2015	2016	2017	2018
Not Attending School	5.47	5.90	3.90	4.62	4.38
Not Complete Elementary School	13.67	12.62	12.27	12.39	13.64

Source: Central Bureau of Statistics 2019.

Indicators of not completing primary school have also increased in 2016–2018, which means people who have dropped out of school at the elementary level are present. Although the government has made a 9-year compulsory education policy, this is inversely proportional to the expectations of old school and the average length of school that continues to increase every year. In addition, there are differences in research results from Chalid and Yusuf (2014) which have the result that the unemployment rate has a negative effect on HDI. However, the research of Noviatamara et al. (2019) had different results, namely the Open Unemployment Rate (TPT) did not significantly influence the HDI.

Based on these problems, it is necessary to carry out further research on “The Effects of Nutrition Intake, Educational Facilities, and Unemployment on Economic Development in Indonesia in 2014–2018”. This research is to analyze the effect of nutrition intake, number of schools, and unemployment on economic development in Indonesia. The results of this research can be used as a reference in making policies for Indonesia’s development.

## 2 LITERATURE REVIEW

### 2.1 *Development*

Economic development is a process of change in society in improving the welfare and prosperity that lasts in the long term and affects the improvement of a country’s institutions. Economic development is an effort to reduce poverty, overcome income inequality, and provide employment. Economic development not only occurs in the community and the government but can also occur in an area which is commonly referred to as regional development.

According to Todaro and Smith (2011), economic development is an improvement effort in society through a combination of social, economic, and institutional processes to create a better life with three basic components, namely sufficiency in meeting basic needs, having community self-esteem as human beings, and freedom to choose. The results of development can be seen from the improvement of human quality that can be seen from the index of human development because in the HDI some dimensions and indicators measure people's welfare. Human development is related to what is considered a basic development idea, namely advancing the wealth of human life, rather than economic wealth in an area that is only part of humans (Khodabakhshi 2011).

## 2.2 *Nutritional intake*

In seeing the achievement of development of health indicators which include life expectancy, nutrient deficiency level, toddler mortality rate, and estimated birth rate. Life expectancy is the average age of a child after calculating the risk of death which is common in the newborn age group. Nutritional deficiency is too little food consumption in carrying out its productivity (hunger). Malnutrition and poor health conditions in developing countries are caused by poverty and inequality in income distribution (Todaro 2003).

Nutrition is the whole process in the body to receive materials from the environment and use these materials to produce energy in supporting body activities (Beck 2011). These ingredients consist of protein, fat, minerals, vitamins, carbohydrates, and water that are absorbed by the body and used to produce energy, build and maintain tissues, and regulate life processes. In producing energy protein plays a huge role. According to Beck (2011), protein is a nutrient that is very important for the human body, and protein has a close relationship with life processes.

## 2.3 *Education facility*

Education has a role in improving people's mindsets. To survive in the during increasingly modern competition, competence is required. Education is an economic and social commodity that must be developed through the education policies of each country. Educational priorities aim to introduce the development of the level of knowledge for the community through access to education and continuing education reform (Dumciuviene 2014).

The development of educational infrastructure in the form of school infrastructure is an achievement of good economic growth, which is an allocation of government spending (Maulana 2013). Educational facilities generally include facilities that are directly used to support the educational process, such as: school buildings, classrooms, educational equipment or media, desks, chairs, and so on. Various resources need to be provided, such as teachers, school buildings, classrooms, equipment, school furniture, and textbooks.

## 2.4 *Unemployment*

Indonesia has abundant human resources, but abundant human resources do not guarantee to have quality human resources. One factor in a large number of unemployed is the lack of a competent workforce. The development of increasingly advanced times makes science and technology also continue to follow updates that make the acceleration of development, the change of production processes that initially used human labor and are now replaced by more sophisticated technology that makes the productivity more effective and efficient, this causes a reduction in human workers thus increasing unemployment (Maulana 2013).

According to Todaro and Smith (2003), this development goal is one of them by increasing living standards not only by increasing income, but also from the availability of more jobs, better education, and great attention to cultural and human values. According to Mankiw (2003), job loss resulting in unemployment is the saddest economic problem because it will reduce living standards, create anxiety regarding the future, and reduce self-confidence. The number of unemployed is also a determining factor for a more decent standard of living.

3 METHODS

This research uses quantitative methods with data on nutrient intake, educational facilities, unemployment as independent variables, and economic development as dependent variables obtained from publications from the Central Statistics Agency, the ministry of education and culture, and the ministry of health. This research uses panel data by combining time series data for five years from 2014 to 2018, as well as cross-section data from 34 provinces in Indonesia. The analytical method used in this research is the method of multiple linear regression analysis. The mathematical model used is the same for the multiple linear regression method as follows:

$$ED = f(NI, EF, UNEMPLOYMENT) \tag{1}$$

$$Edit = \beta_0 + \beta_1 Niit + \beta_2 ln EFit + \beta_3 UNEMPLOYMENTit + uit \tag{2}$$

Where:

Edit = Economic Development measured by the HDI of 34 Provinces in Indonesia I in year t (1–100)

$\beta_1 Niit$  = Nutrition intake using protein consumption data for 34 provinces in Indonesia I in the year t (gram)

$\beta_2 ln\_Efit$  = Education facilities using data on the number of schools in 34 provinces in Indonesia I in year t. (unit)

$\beta_3 UNEMPLOYMENTit$  = Unemployment seen from the open unemployment rate data of 34 Provinces in Indonesia I in t (%)

I: Shows provinces in Indonesia.

t: Shows the time series (2014 – 2018).

B o = Constanta

$\beta_1.\beta_2.\beta_3.\beta_4$  = Coefficient

$\epsilon it$  = error term

This research uses STATA analysis tools with an appropriate model in this research, namely, fixed effects which have been tested with 3 models, namely common effects, fixed effects, and random effects. In addition, this research also conducted four classic assumption tests, namely the normality test, the multicollinearity test, the homoscedasticity test, and the autocorrelation test.

4 RESULTS AND DISCUSSION

Based on the results of research containing multiple linear regression calculations using panel data to see the effect of nutritional intake, educational facilities, and unemployment on economic development with a fixed effect model has obtained results and has been tested with the classic assumption test, as follows:

Table 4. Results of multiple linear regression analysis.

Variable Fix	Effect Model
Nutritional Intake	0,1291***
ln_Educational Facilities	16,4943***
Unemployment	–0,1498**
Intersept	–74,7997***
F	183,49***
R <sup>2</sup>	0,8100
N	170

(continued)

Table 4. Continued.

Variable Fix	Effect Model
Normality Test	✓
Multicollinearity Test	✓
Heteroscedasticity Test	✓
Autocorrelation Test	X

Source: Research results 2019.

Where, ✓ = Accepted

\*\*\* = significant 1 percent

\*\* = significant 5 percent

\* = significant 10 percent

The mathematical model based on the results of the regression analysis in Table 4 is, as follows:

Economic Development =  $-74,7997 + 0,1291$  Nutritional Intake  $+16,4943$  Educational Facilities  $-0,1498$  Unemployment  $+e$ .

Based on Table 4 it can be seen that the F statistic is 183.49 with a p-value of 1 percent at a significance level of 1 percent which means that the independent variables of nutrition intake, education facilities, and unemployment together have a significant influence on the dependent variables of economic development and the data in this research is in accordance with the model, so that the independent variables together can explain the dependent variable. The coefficient of determination ( $R^2$ ) in this research of 0.8100 means that the total diversity of the independent variables of nutrition intake, educational facilities, and unemployment can explain the dependent variable of economic development by 81 percent. So, the other 19 percent can be explained and influenced by other variables not included in this research. The value of the constant or intercept in the regression equation of this research amounted to  $-74.7997$  indicating that when the independent variables of nutrient intake, educational facilities, and unemployment are equal to 0, the value of economic development is  $-74.7997$ .

The results of multiple linear regression explain that nutrient intake has a significant influence on economic development in Indonesia in 2014–2018. Besides having a significant effect, nutritional intake variables also have a positive relationship (directly proportional) to economic development. The results of this research are the same as the results of previous studies according to Ismanti (2017) entitled “The Effect of Educational Factors, Protein Consumption, Calorie Consumption, and Wages Against the Indonesian Human Development Index” explains that there is a significant effect of protein consumption on the HDI.

The results of multiple linear regression can be seen that educational facilities have a significant effect on economic development in Indonesia from 2014 to 2018. Besides having a significant effect, educational facility variables also have a positive relationship (directly proportional) to economic development in Indonesia. According to research Oluwatobi (2011) states that there is a positive relationship between government spending on human resource development and the level of real output. But the results of this research are inversely proportional to the research according to Rubiyatno (2012) titled “Relationship Status and Educational Facilities with Human Development” which explains that educational facilities have no relationship and have no influence on the HDI.

The results of multiple linear regression indicate that unemployment has a significant effect on economic development in Indonesia from 2014 to 2018. Besides having a significant effect, the unemployment variable also has a negative relationship (inversely related) to economic development in Indonesia. The results of this research indicate that there is a significant negative effect of the variable unemployment on economic development in Indonesia. Based on previous research according to Chalid and Yusuf (2014) “Effect of Poverty Rate, Unemployment Rate, Regency/City Minimum Wage and Growth Rate the Economy Against the HDI in Riau Province” unemployment rate has a negative effect on HDI.

#### 4.1 Indonesian economic development structure

Figure 1 shows the flow of research in looking at the effect of nutrition intake, number of schools, and unemployment on economic development in Indonesia in 2014–2018. This framework of thinking shows that economic development is explained by the index of human development which is a measure of human welfare because it has three basic dimensions, namely the dimensions of a long and healthy life, knowledge, and decent living standards that serve as a reference for economic development.

Long and healthy life serve as indicators in the calculation, namely life expectancy which illustrates the quality of age and public health that can be determined by looking at sub-indicators of nutritional intake of food. Nutritional intake is of several types, one of which is protein consumption. In the dimension of knowledge, there are two calculation indicators, namely expectation years of schooling and mean years of schooling. Both of these indicators have sub-indicators that can influence the expectation of school length and the average length of school that has a sub-indicator of educational facilities in the form of school buildings used as data in this study.

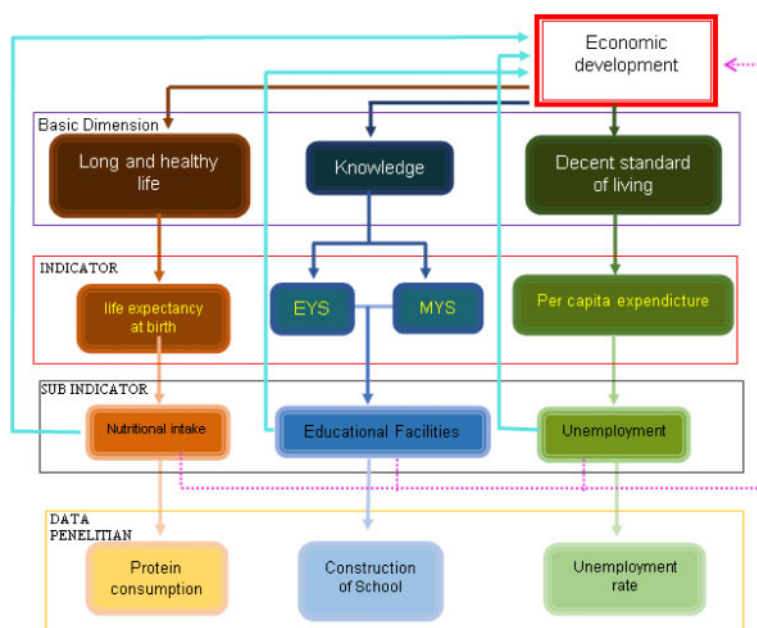


Figure 1. Flow diagram: Research article sections (Shaded) and subsections, and their main relations.

Note:

— = The line shows the partial effect of nutrition intake, educational facilities, and unemployment on economic development

----- = The line shows the simultaneous effect of nutrition intake, educational facilities, and unemployment on economic development.

The final basic dimension of economic development is a decent standard of living that can be seen with per capita expenditure indicators. Per capita expenditure can be seen from the unemployment sub-indicator because it is closely related to the income generated to meet needs. Unemployment is measured by the level of unemployment rate by comparing the percentage of the number of job seekers to the total workforce in a region. The existence of sub-indicators of nutrient intake, educational facilities, and unemployment which are used as independent variables in this study can see the relationship simultaneously and partially on the dependent variable of economic development which is described by the HDI.

The purpose of the research is to analyze the effect of nutrition intake, education facilities, and unemployment on economic development in Indonesia. Based on the results of the study it can be concluded that nutritional intake has a significant positive effect on economic development in Indonesia. Good nutrition will increase the immune system in warding off diseases that can attack the body. In addition, it can reduce mortality to increase life expectancy at birth as an indicator of long and healthy life in the economic development dimension. Educational facilities have a significant positive effect on economic development. Educational facilities are used to facilitate people accessing education from elementary to high school in improving the quality of their education. If educational facilities have been met and can be enjoyed by all levels of society, it will increase the indicator of expected years of schooling and mean years of schooling from the knowledge dimension as a reference for economic development. The unemployment variable has a significant negative effect on economic development in Indonesia. When unemployment in Indonesia rises, it will trigger the problem of income inequality and poverty which lowers the quality of society. This is due to the low per capita expenditure in Indonesia which is an indicator of the decent standard of living which in this study is a reference for economic development.

Nutritional intake has a significant positive effect on economic development in Indonesia. Nutrient intake seen from protein consumption is one of the factors in looking at human quality. Good nutrition will increase the immune system in warding off diseases that can attack the body and reduce mortality due to nutritional diseases to increase life expectancy at birth from the dimensions of long and healthy life as a reference to economic development.

In this research, nutritional intake has a significant positive effect on economic development growth. This illustrates that with the increase in the nutritional intake of Indonesian people economic development will be positively impacted. Whereas when the nutritional intake of the society goes down it will have an impact on the decline in economic development. According to Ismanti (2017) the fulfillment of nutritional intake to improve proper health for Indonesians is a form of investment in the quality of human resources which will ultimately be reflected in the rising number of Indonesian HDI.

Nutrition intake in this research is a sub-indicator of the indicators of a long and healthy life which is an important indicator of economic development. Because the success of Indonesia's economic development will be determined by the quality of human resources who have physical strength, strong mentality, good health, intelligence, and long life. Adequacy of basic food needs such as adequate nutritional intake which includes protein consumption is very important to improve nutrition. Thus, to improve economic development improvement should be made in increasing the welfare of the society in the health sector by fulfilling nutrition intake. Health improvement through nutrition must be supported by all field—fields that affect welfare.

Society's nutrition intake reflects the level of good health. A higher level of social welfare will improve the quality of human resources; which affects human development. When the nutritional intake of the society is met, it will increase the human immunity to ward off disease and reduce nutritional problems that cause death. Conversely, a high death rate symptom is a sign of the poor nutritional status of the population. High mortality rates are also caused by pregnant women not getting enough calories and protein. High nutritional problems in a country can increase mortality rates for mothers, infants, and toddlers, resulting in the decline of HDI. Mortality reduces life expectancy at birth, which is an indicator of the dimensions of long and healthy life in the HDI which, can be the basis of economic development

In this research, it is demonstrated that nutritional intake has a significant positive effect on economic development growth. This illustrates that when the nutritional intake of Indonesian people will increase it will have a positive impact on economic development. Whereas when the nutritional intake of the society declines, it will slow down the economic development. According to Ismanti (2017), the fulfillment of nutritional intake to improve proper health for Indonesians is a form of investment in the quality of human resources, which will ultimately be reflected in the rising number of Indonesian HDI.

Nutrition intake in this research is a sub-indicator of the indicators of a long and healthy life, which is an important indicator of economic development. Because the success of Indonesia's

economic development will be determined by the quality of human resources who have physical strength, strong mentality, good health, intelligence, and long life. Adequacy of basic food needs such as adequate nutritional intake, which includes protein consumption is very important in order to improve nutrition. Thus, to improve economic development improvement should be made in increasing the welfare of the society in the health sector by fulfilling nutrition intake. Health improvement through nutrition must be supported by all fields—fields that affect welfare.

Society nutrition intake reflects the level of good health. The higher level of society welfare will improve the quality of human resources; which affects human development. When the nutritional intake of the society is met, it will increase the human immunity to ward off disease and reduce nutritional problems that cause death. Conversely, a high death rate symptom is a sign of the poor nutritional status of the population. High mortality rates are also caused by pregnant women not getting enough calories and protein. With the high nutritional problems in a country that can increase mortality rates for mothers, infants and toddlers resulting decline of HDI. Because mortality will reduce life expectancy at birth, which is an indicator of the dimensions of long and healthy life of the HDI which can be the basis of economic development.

Educational facilities have a significant positive effect on economic development. Educational facilities are seen from a number of school buildings that were built to facilitate the process of learning activities in Indonesia. Educational facilities are used to facilitate people accessing education from elementary to high school in improving the quality of their education. If educational facilities are available and can be accessed by all levels of society, it will increase the number of education participation. It will increase the indicator of expected years of schooling and mean years of schooling from the knowledge dimension as a reference for economic development.

Educational facilities are educational infrastructures that support the success of the educational service process according to government and society expectations. It could be illustrated when educational facilities in Indonesia increase will have an impact on increasing economic development. Similarly, economic development will decline with decrease in education facility.

Education is a way to improve the dignity of the nation and increase the prosperity of the society supported by improving the quality of learning, developing school facilities and infrastructure, and improving the quality of education services (Rubiyatno 2012). The results of multiple linear regression can be seen that educational facilities have a significant effect on economic development in Indonesia from 2014 to 2018. But the results of this research are inversely proportional to the research according to Rubiyatno (2012) titled “Relationship Status and Educational Facilities with Human Development” which explains that educational facilities have no relationship and have no influence on the HDI.

Facilities and infrastructures are a means of supporting the success of an effort made in public services. When both of these are not available, the activities carried out will not be able to achieve the expected results according to plan (Indrawan 2012). In obtaining good educational facilities, it is necessary to allocate government spending for the development in education. The number of primary schools in Indonesia is greater than that of junior high schools, high schools, and vocational schools. And the number of schools from elementary, junior high school, high school, and vocational school continues to increase along with the changing years are expected to meet the planned educational programs

In supporting government policies in education so that it runs well, it must be supported by the construction of schools so that Indonesian people have more desire to go to school. Thus, obstacles such as school locations that are difficult to reach can be minimized to reduce the reasons for dropping out. It is undeniable that in the education process, the quality of education is supported by the facilities and infrastructure that become the standard of the school or related educational institution. Facilities and infrastructure greatly affect the ability of students to learn. This shows that the role of facilities and infrastructure is very important in supporting the quality of student learning.

Obtaining education from elementary to junior high school to high school or vocational level will ultimately improve the quality of public education. This can result in increase in school enrollment rates and the expected years of schooling and mean years of schooling. The increase in expected

years of schooling and mean years of schooling is an indicator of the knowledge dimension. That is a reference for the growth of the HDI that can show the development of economic development in Indonesia.

The unemployment variable has a significant negative effect on economic development in Indonesia. When unemployment in Indonesia rises, it will trigger the problem of income inequality and poverty, which lowers the quality of society. This causes low purchasing power and cannot reach basic needs to improve human quality. This is due to the low per capita expenditure in Indonesia, which is an indicator of the decent standard of living which in this research is a reference for economic development.

The high number of unemployed people, especially in Indonesia, leads to economic inequality, which can have an impact on the economic development. This illustrates that unemployment in Indonesia will have impact the decline in economic development. The opposite will also occur when unemployment falls, it will have an impact on increasing economic development. Economic development in this research is seen from the HDI in which there are indicators of decent living standards and have sub-indicators of expenditure per capita.

According to Maulana (2013), advancements in science and technology lead to economic development. This situation accelerates development, changing production processes from manual labor to sophisticated machines that can increase productivity. This condition can increase unemployment. Unemployment can lead to problems in social and economic aspects, such as income inequality, which can increase poverty so that it lowers the quality of education and public health. When Indonesian people experience high unemployment rate, it is directly related to poverty, which will result in low income per capita, so that they cannot meet the quality of education and health will experience difficulties to meet their productivity.

## 5 CONCLUSION

Low income makes the purchasing power of Indonesian people low and the consumption level even lower. People's purchasing power decreases and results in basic needs not being fulfilled. When the Indonesian government wants to increase economic development in Indonesia, it must continue to suppress the unemployment rates in all regions of the country. Unemployment rate in Indonesia is decreasing every year, and thus it is hoped that the prosperity of the people will also increase. This is the goal of economic development, namely the fulfillment of the needs of a decent life to improve welfare. This research only considers a span of 5 years, so the results are still not too robust in determining the relationship between variables. In addition, the nutritional intake variable only uses protein consumption; in fact nutritional intake has a lot of components that are also very important for health. In educational facilities variable there are differences in results with previous research, so it still needs further research in looking at the effect of educational facilities on economic development in Indonesia.

## ACKNOWLEDGMENT

I would like to thank Dr. Sugeng Hadi Utomo, M.S, and Dr. Dwi Wulandari, S.E, M.E, for their guidance and knowledge that proved to be very important for Economic Development students. I also thank the readers for reading the text and giving me valuable advice.

## REFERENCES

- Andriani, M. & Wiratmadji B. 2012. *Introduction to society nutrition*. Jakarta: Kencana Prenada Media Group.  
Beck & Mary, E. 2011. *Nutrition and diet*. Yogyakarta: Andi OFFSET.  
Central Bureau of Statistics. 2019a. *Human development index 2018*. Jakarta: Central Bureau of Statistics.



- Central Bureau of Statistics. 2019b. *Indonesian statistics 2018*. Jakarta: Central Bureau of Statistics.
- Chalid, N. & Yusbar, Y. 2014. The effect of poverty rate, unemployment rate, regency / city minimum wage and economic growth rate on human development index in Riau Province. *Economic Journal* 22(2).
- Dumciuviene D. 2015. The impact of education policy to country economic development. *Procedia – Social and Behavior Sciences*. 191: 2427–2436.
- Ismanti, K. 2017. The influence of educational factors, protein consumption, calorie consumption, and wages against the Indonesian human development index. *SOSIO-E-KONS* 9(1): 25–35.
- Indrawan, I. 2015. *Introduction to school facilities and infrastructure management*, Yogyakarta: Deepublish.
- Mankiw, N. Gregory., Taylor, Mark P., & Ashwin, A. 2011. *Business economics*. United Kingdom: Cengage Learning EMEA.
- Ministry of Health of The Republic of Indonesia. 2019. *Indonesia health profile data and information 2018*. Jakarta: Ministry of Health of the Republic of Indonesia.
- Khodabakhshi, A. 2011. Relationship between GDP and human development indices in India. *International Journal of Trade, Economics and Finance* 2(3).
- Machmud, A. 2016. *Post-reform Indonesian economy*. Jakarta: Erlangga.
- Maulana, R. & Bowo, P. A. 2012. The effect of economic growth, education and technology on the provincial HDI in Indonesia 2007–2011. *Journal of Economics and Policy* 6(2): 163–169.
- Noviatamara, A., Ardina, T. & Amalia, N. 2019. Effects of economic growth and open unemployment rate on the human development index (HDI) in the Special Region of Yogyakarta. *REP Journal* 4(1): 53–60.
- Oluwatobi, S. & Ogunrinola, I. O. 2011. Government expenditure on human capital development: implications for economic growth in Nigeria. *Journal of Sustainable Development* 4(3): 72–80.
- Razmi, M. J. 2012. Investigating the effect of government health expenditure on hdi in iran”, journal of knowledge management. *Economics and Information Technology* 5.
- Rubiyatno. 2012. Relationship status and educational facilities with human development. *Journal of Business and Economics* 4(1): 64–77.
- Todaro, M. P. & Smith, S. C. 2011a. *Economic development. chapter 1, 11th ed*. London: Pearson Education Limited.
- Todaro, M. P. & Smith, S. C. 2003b. *Economic development. chapter 1, 8th ed*. London: Pearson Education Limited.

## Investigation of investor behavior bias in extreme stock market situation

S.N. Maharani\*, S.A. Rahmawati & S.W. Purnamasari

*Department of Accounting, Universitas Negeri Malang, Malang, East Java, Indonesia*

M.M. Ali

*International Institute of Advanced Islamic Studies, Malaysia*

**ABSTRACT:** In economic activities do not only consist of physical elements such as technical expertise, market analysis and potential company performance, but also psychological factors which often have an impact on behavioral cognitive biases that cause capital market crises. Behavior finance believes that investors are often heuristic in processing data so as to produce biased decisions, while traditional financial theory states that investors see risk and return through a transparent and objective lens. The purpose of this study is to give important attention to the falsification and refinement of theory through investigation and analysis of cognitive bias to produce a model of active investor behavior. Through grounded theory, cognitive bias was found on investor behavior when making investment decisions to overcome the crisis. Maximum affective with minimal cognitive and affective with limited cognitive are two behaviors of investors when conditions are extreme.

### 1 INTRODUCTION

The assumption of investors maximizing utility and trade-off in the risk-return process is the basis of the theory which states that investor behavior is rational (Alquraan et al. 2016; Bakar & Yi 2016). Some of the fundamental theories in traditional finance include Modern Portfolio Theory (MPT), Capital Asset Pricing Model (CAPM), and Efficient Market Hypothesis (EMH) (Suryawanshi & Jumble 2016). MPT explain that rational investors create an optimal investment portfolio framework. The position of this theory is based on the expected return and the considered risk (Fabozzi et al. 2002). Furthermore, the CAPM theory became the beginning of the appearance of asset pricing theory (Rossi 2016) and was used by investors to estimate stock returns and stock price movements (Lee et al. 2016).

Furthermore, the EMH developed by Fama (1965) is also called the Random Walk Theory (Rossi & Gunardi 2018). An efficient market is a place where investors behave rationally where shares are traded at fair value so that investors do not buy undervalued shares and sell overvalued shares (Rossi & Gunardi 2018). The theory is a body of knowledge of traditional financial theory that supports CAPM, Option Pricing Models, and Arbitrage Pricing Theory (Maharani 2014).

The rational behavior of investors began to be debated and became the subject of debate in behavioral finance (BF) studies. This theory holds that investor behavior is irrational (Paule-Vianez et al. 2020). This is caused by psychological aspects that tend to influence the investment decision-making process by investors (Bakar & Yi 2016; Boda & Sunitha 2018). Psychology is one of the factors that stimulate errors in the analysis process for making decisions. This has an impact on the quality of investment decision. However, this situation is thought to be able to stimulate profits if investors are able to understand and control psychological biases. This reflects the importance of synergizing the concepts of finance and psychology (Selcuk 2012; Zahera & Bansal 2018).

---

\*Corresponding Author: [satia.nur.fe@um.ac.id](mailto:satia.nur.fe@um.ac.id)

The debate between BF and EMH continue to view investors behavior when making investment decisions. Both theories state that their point of view is the most correct in revealing the phenomenal of market behavior (Bloomfield 2010). It is difficult to conclude which theory is appropriate in explaining market behavior (Maharani 2014). One of the interesting theories in psychology to detect psychological factors that underlie behavior is coping theory. Coping theory explains how individuals face and resolve situations that cause stress and identify their behavior (Folkman 2010).

Coping is a cognitive and behavioral effort in managing external and internal demand that exceed individual resources or abilities (Richard S Lazarus 2000). Lazarus and Folkman introduced the theory of stress and the transactional model of coping in 1984. The transactional model is conceptualized as a reactive process for dealing with stress (Eager et al. 2019). This model focuses on the individual's cognitive and behavioral interactions with the environment and how to manage these problems (Cash & Gardner 2011). The transactional model has two assessment subprocesses, namely primary appraisal as an initial assessment of potential consequences when problems begin to be encountered and secondary appraisal which plays a role in analyzing efforts to deal with stress or choosing the type of coping used (Lazarus & Folkman 1987; Gaol 2016). Furthermore, coping methods are divided into two, namely problem focused coping and emotion focused coping. This theory can identify how investors deal with problems that cause stress. Stress occurs when investors experience losses and do not get the expected returns or other adverse conditions (Hobfoll 1989).

There is a debate on the point of view between EMH and BF related to how investors make investment decisions, so researchers are interested in investigating how investors behave in making investment decisions. This study uses Glaserian Grounded Theory (GT) analysis to reveal the inherent behavior of investors. GT emphasizes understanding behavior through information from data that can be used to refine and improve existing theories (Espriella & Restrepo 2020). So that using GT is expected to be able to reveal more exploratory information about investors in making investment decisions. The Glaserian version of GT provides room for falsification and refinement of existing theories (Lee 2012). The theory falsification is done by assuming that the existing theory does not have perfect truth. Falsification is done through the data in the study. The theory generated by GT is a theory related to data.

## 2 LITERATURE REVIEW

### 2.1 *Behavioral finance*

Psychological motivation is the main factor influencing each individual's investment decisions (Paule-Vianez et al. 2020). Psychological theory explains that in making decisions, each individual is influenced by basic needs that are formed due to the influence of the surrounding environment. Psychological factors that influence investment decision making have led to the emergence of a new perspective in finance, namely Behavioral finance (BF). The theory explains individual behavior in financial decision making and understands and predicts the financial market implications of the psychological decision process (Suryawanshi & Jumble 2016).

BF is concerned with the study of the psychology of financial market participants and their role in financial decision making (Kapoor & Prosad 2017). BF combines the concepts of finance and psychology in detecting behavior in investment decision making (Zahera & Bansal 2018). Financial accounting provides information that can be taken into account in making investment decisions, while BF analyzes behavior in using financial statements for investment decision making (Selcuk 2012).

An important study in BF is the cognitive and emotional biases of humans which show irrational behavior and are inversely related to EMH. The focus of BF is to explain human behavior when making decisions in the face of risk and uncertainty (Stracca 2004). BF explained that cognitive psychology plays an important role in finance (Kim & Nofsinger 2008). BF is the application of psychology in explaining market anomalies (Ramiah et al. 2015). Behavioral finance is also called

behavioral economics which combines psychology and economics and has an increasing interest (Thaler 2016). Thaler (2016) says research in BF concludes that efficient markets often lead to results that are not in accordance with the theory that explains rational behavior in investment decision making. So the results of the BF research contradict the initial hypothesis which states that there is rational behavior.

Irrational behavior or biases that exist trigger errors in analyzing information that cause overreaction or underreaction. BF explained that the irrationality in decision making has been inherent in every individual biologically, psychologically, and sociologically (Ahmad 2017). Some irrational behaviors or decision-making biases include overconfidence (Pikulina et al. 2017), disposition effect (Leponen & Tian 2020), herding effect (Youssef & Mokni 2018), mental accounting, endowment effect, house money effect (Zahera & Bansal 2018), hindsight biases (Muñoz & Vicente 2018), self-attribution biases and availability biases (Mittal 2019), and heuristics (Ritter 2003).

## 2.2 *Stress and coping theory*

Stress is a phenomenon that often occurs in every individual (Gaol 2016). The term stress was first introduced in the language of health psychology by Hans Selye in 1926. Stress is an imbalance between demand and the ability to fulfill that demand (Baqtayan 2015). According to Hans Selye in (Baqtayan 2015) stress is a non-specific response of the body to the demands made on it. Thus, understanding the occurrence of stress is very important to avoid the adverse effects of stress on psychology, physics, and economy (Dijkstra & Homan 2016).

Stress and the rate of return on investment have a relationship. Stress is related to investment loss opportunities, when investment losses are high, the stress level faced is also high (Hobfoll 1989). Stress occurs when investments provide losses and do not match expectations when starting an investment. So it can be concluded that stress occurs due to various factors.

One of the psychological studies that is how individuals respond to stress is coping theory. The theory was first introduced by Folkman & Lazarus and developed in 1989 by Carver, et al. According to Folkman & Lazarus (1984) Coping is a cognitive and behavioral effort to deal with demands that come from outside (family, work, and other environments) as well as demands from within or oneself (emotional conflict).

Lazarus and Folkman developed a transactional model that describes the individual process of solving problems. In the transactional model, there are two interrelated subprocesses, namely primary appraisal and secondary appraisal. Primary appraisal is the first step in the coping process that assesses the consequences of the problem and its relevance to oneself. There are three primary appraisal processes, namely irrelevant, benign-positive, and stressful (Gaol 2016, Lazarus & Folkman 1987).

Secondary appraisal plays a role after someone identifies a problem that is a threat or challenge. Secondary appraisal is the main supporting factor of primary appraisal (Lazarus & Folkman 1987). In this assessment stage, a person determines the type of coping used to solve the problem at hand (Gaol 2016). The type of coping chosen depends on the results of the assessment, what things are done to solve the existing problems (Lazarus 1993).

Furthermore, Folkman & Lazarus explain two types of coping, namely problem focus coping and emotion focus coping (Maryam 2017). Lazarus & Folkman explained the main difference between the two types of coping, namely problem focus coping to solve problems and manage sources of stress. While emotion focus coping is to reduce or manage emotions that arise due to existing circumstances (Baqtayan 2015).

Problem focused coping is a rational approach that changes the situation by changing the way people interact with the environment (Lazarus & Folkman 1987). This type of coping is used to reduce demands and increase resources to meet demands (Baqtayan 2015). Problem focused coping is used to change and remove sources of stress or avoid threatening situations. For example, making a decision to invest in government bonds that provide low risk when stock market conditions are bad. Someone applies this type when they think the problem can be managed and solved with the

resources they have (Maryam 2017). Lazarus and Folkman explain three forms of problem focused coping strategies, namely confrontative coping, seeking social support, and full problem-solving plans (Baqtayan 2015; Maryam 2017).

Baqtayan (2015) says that Emotion Focused Coping functions to manage emotional stress such as frustration, anger, anxiety and depression. Emotion focused coping changes the stressor or source of pressure indirectly and changes the function of emotions. Emotion focus coping is carried out when a person is unable to modify the situation that makes him depressed so that he is only able to accept the pressure because his resources are not able to cope with the demands (Maryam 2017). Emotion focused coping strategies according to Lazarus and Folkman include self-control, seeking social support, distancing, positive appraisal, accepting responsibility, and escape/avoidance (Baqtayan 2015).

Problem focused coping and emotion focused coping have different goals. The use of this type of coping depends on the problem being faced (Evans & Kim 2013). When a person is faced with emotions that are difficult to control due to an event, then using emotion focused coping is very appropriate. Conversely, when someone is faced with a problem that can be overcome by changing the source of pressure with systematic planning, problem focused coping is used. Baqtayan (2015) explains if someone who uses the emotion focused coping type feels a comfortable situation without modifying the existing problem. Meanwhile, someone who uses problem focused coping changes the situation or modifies the stressor so that the stress experienced can be eliminated or minimized. The use of this type of coping depends on the individual's assessment of the situation that occurs. Each individual will choose the type of coping that can solve problems and relieve stress. However, these two types of coping can be used simultaneously. Folkman and Lazarus (1984) mention that research shows individuals use both types of coping to solve problems.

### 3 METHODS

This study uses a qualitative approach to the Glaserian version of the grounded theory method. GT was first developed by Barney Glaser and Anselm Strauss in 1967. According to Glaser and Strauss (1967) GT is a theoretical discovery from data obtained and analyzed systematically. GT was developed to generate theory from data obtained from a qualitative approach (Biaggi & Wa-Mbaleka 2018). Glaser and Strauss call GT a "complex methodological mix" because it provides a systematic method of collecting data and is able to build a theory that is rich in concepts (Bryant & Charmaz 2012). Urquhart (2013) in (Biaggi & Wa-Mbaleka 2018) explains that the main purpose of GT is to generate theory from data.

This study uses GT because GT provides room for falsification and theory improvement (Lee 2012). Falsification is done because of the theoretical debate between BF and EMH (Bloomfield 2010). GT produces a theory that explains substantive topics and is suitable for behavioral research because the resulting theory focuses on an interaction or action. GT explains about what happened not what should have happened (Fernandez 2003).

In its journey, GT has developed with the emergence of three approaches, namely Glaserian Grounded Theory, Straussian Grounded Theory and Constructivist Grounded Theory (Bryant & Charmaz 2012b; Daniel 2014; Kenny & Fourie 2015). The difference between Glaserian Grounded Theory and Straussian Grounded Theory emerged after Strauss and Corbin wrote the book "Basics of Qualitative Research: Grounded Theory Procedures and Techniques" in 1990 (Alammar et al. 2018; Walker & Myrick 2006). The main difference between the three lies in the coding procedure used (Alammar et al. 2018; Biaggi & Wa-Mbaleka 2018). Coding in grounded theory is a data analysis process that involves researchers in the exploration and conceptualization process (Walker & Myrick 2006).

Glaser's version of coding is divided into two, namely substantive coding and theoretical coding (Kenny & Fourie 2015). Substantive coding consists of open coding and selective coding (Alammar et al. 2018; Kenny & Fourie 2015). In Glaserian GT, after the open coding stage, it is continued with selective coding. At this stage, systematic selection is carried out by compiling categories

that are more concept-intensive to produce core categories through continuous comparisons and memoing (Alammar et al. 2018).

Meanwhile, Straussian GT divides coding into three procedures, namely open coding, axial coding, and selective coding (Kenny & Fourie 2015). Gurd (2008) criticizes the Straussian coding procedure because it turns a flexible coding procedure into a rigid and complicated one. Strauss opens space for a lot of information that is not necessarily in accordance with the research objectives, so axial coding is done by focusing on categories based on labels that often appear from participants (Kenny & Fourie 2015). The coding procedure here does not work sequentially but tends to overlap and is too formal (Biaggi & Wa-Mbaleka 2018).

Then Constructivist GT was developed by Charmaz, a former student of Glaser and Strauss in 2006. The coding procedure in Constructivist GT consists of initial or open coding and refocused coding (Kenny & Fourie 2015). In constructivist GT theory must be shaped by participants and researchers, with a focus on experience and social meaning (Biaggi & Wa-Mbaleka 2018). Glaser opposes the constructivist emphasis and criticizes constructivist GT because the goal of GT is to conceptualize not describe participants' experiences. Glaser considers Charmaz to misclassify the method, because the more appropriate classification is qualitative data analysis, not GT (Kenny & Fourie 2015).

The Glaserian GT method is used in this study because it can explain actual behavior, then it is formulated in a behavioral theory that cannot be explained by previous theories (Espriella & Restrepo 2020). Glaserian GT provides space for the birth of new theories or improvements and refinements to existing theories (Lee 2012). The theory generated in GT is a theory related to data or substantive theory (Alammar et al. 2018). This study develops a substantive theory by collecting and analyzing data on the behavior of stockbrokers. Glaserian GT focuses more on conceptualizing substantive areas of research and information beyond substantive areas is ignored (Alammar et al. 2018; Fernandez 2003, 2005).

## 4 RESULTS AND DISCUSSION

### 4.1 *Irrational with limited rationale*

The process is one of the most vital in the Glaserian version of grounded theory because it involves the description and coding of everything that is dynamic, changing, moving, or actually happening from time to time in the research arena. Based on interview transcripts and direct notes from observations of investor behavior in the field, researchers identify, analyze and isolate responses, behavior, interactions, and investment decisions. The aspects isolated by the researcher are referred to as themes which are used as the basis for categories of information to understand a process.

The categories are then labeled in the form of an in vivo code, namely the labels of the categories stated in the form of words, terms, or language directly from the informants and not the words of researchers or financial terms. In this section, it will be explored more deeply through confirmation and justification of relevant theories. This is done to further strengthen the findings that have been built.

The research findings show that investors use affective potential with limited cognitive through overconfidence behavior. This behavior can be seen from the explanation of investors who stated that before the investment was made, they already had predictions about the achievement of targets. For this reason, investors seek additional information to convince and strengthen the predictions they have set and reject other information that they feel is not in line with their predictions. Unconsciously, investors perceive themselves as having above-average predictive abilities, so they are increasingly hunting for information that strengthens their predictions. While the prediction is based on perceptual mapping along the course of investment situations and conditions that are very different when the market experiences a market crash. Investors assume, with large resources, they can easily manage the allocation of funds to buy stocks that still have potential prospects. This overconfidence tends to lead to decisions that override the analysis, synthesis and evaluation of

portfolio design and market information. After a period of time, investors did an evaluation and found that their predictions turned out to be inaccurate. It is characterized by losses on some of their investment instruments. Investors explained that most likely, the point of view or overconfidence arises precisely because of panic seeing negative market sentiment. Further findings find representative bias behavior where investors use their perceptual framework to form predictions that are used as the basis for making investment decisions. This reasoning ultimately results in an incorrect assessment of the level of risk and return and includes other irrelevant factors that affect the success of the investment.

Often the error is caused by the point of view formed during the investment journey that is different from the market situation when the market crashes. When current unfavorable situations and conditions clash with personal assumptions and viewpoints, it creates doubts. Finally, there is a mutual confrontation between the viewpoints that have been formed with the new information and investors often feel more secure by believing in what has been formed so far.

Pompian (2006) explains that when the market is in a bad condition, it stimulates investor behavior to make a certain number that is the most dominant in their perceptual framework as a limit for the initiation of investment decision making. In this study, investors use pre-determined predictions as the basis for making investment decisions. Meanwhile, the market situation contrasts with the situation when the predicted figures were set.

Traversky and Kahneman (1974) explain that representative behavior is an antecedent of investors' overreacting behavior to determine investment potential by classifying the company's potential in their minds. When analyzed comprehensively, these irrational behaviors are related to one another and exist simultaneously. It starts with overreacting to past information, forming a kind of perceptual mapping for an investor.

When the individual is in a situation that gives consequences for threats and the situation is related to routine activities (work, relationships, etc.), the perceptual mapping is increasingly used as the basis for attitudes and actions. This leads to self-deception or self-deception, believing that what has become a perceptual mapping in him is appropriate to be used as the basis for action.

This perceptual mapping is the basis for investors to make predictions. Finally, the investor seeks to strengthen his belief that his prediction is accurate and relevant by responding to information that is felt to be in accordance with his wishes. In line with this, investors also reject information that is not in line with their beliefs even though investors are aware that the information is accurate and relevant to the current situation.

Furthermore, excessive confidence in the predictions set indicates that investors behave in overconfidence. The stronger the overconfidence behavior, the stronger the investor's overreaction to past information. This forms a perceptual mapping that is used as a basis for decisions (representatives). Representativeness itself is an intermediate variable in the interrelated process of the irrational behavior. When predictions based on perceptual mapping are used as initiation limits, what happens is anchoring and adjustment behavior. This happens when a panic attitude faces a loss situation, what emerges is the numbers that are most strongly attached to the minds of investors. All of them are emotional responses and individuals try to solve them for the purpose of reducing emotions. This is what is known as emotional focused coping.

Although investors are dominated by irrational behavior, the findings show that investor behavior is still colored by rational (cognitive) behavior although it is limited. This can be seen from the behavior of investors in observing information. Although rare, investors do analysis, synthesis and evaluative through investment strategies. The perspective that stocks at the lowest point are optimal to buy with a strong reversal basis is still owned by investors.

If analyzed more deeply, the market crash is marked by the fall of almost all stock lines sharply and in a very fast time, so that investors do not have time to cut losses to minimize losses. A concrete example of this situation is the 2008 monetary crisis which had a systemic impact on the capital market. At that time, the global financial crisis, coupled with a liquidity crisis in the banking sector, contributed to the collapse of stocks in the capital market, causing the JCI to be deeply corrected. The market crashes no matter whether the stock is blue chip or not, all fall out of control. This picture shows the magnitude of the market crash in destroying the psychology of

market participants. The biggest effect on investor psychology during a market crash is heuristic simplification which systemically encourages various forms of irrational behavior.

One of the effects of heuristic simplification is self-deception, which is a cognitive obstacle in a person by believing and believing that he has the broadest knowledge, is the smartest, superior and has the most accurate predictions than the actual reality. Therefore, investors in strengthening their beliefs, they choose information that they feel is in line with their beliefs and otherwise reject information that is not in line with their beliefs.

Self-deception aims to stabilize tension and emotions triggered by heuristic simplification. Fear, anxiety, and greed are the main causes of heuristic simplification, meaning that self-deception is triggered by fear, anxiety and panic. The forms of self-deception behavior such as loss aversion, overconfidence, representativeness bias, anchoring and adjustment, cognitive dissonance types 1 and 2 as well as several other irrational behaviors are further findings when the market is in a state of collapse.

Beaudry and Pinsonneault (2005) state that, individuals who are in difficult situations with minimal financial resources will try to change perceptions of capital market events by building expectations that negative consequences will not occur, comparing themselves with other individuals whose condition is worse, self-deception and keeping a distance from the capital market. This strategy, if successful, will be able to recover emotional distress but the benefits derived from the event are very small and may not even exist at all.

Loss aversion is found when investors experience the illusion of control in a negative situation. Investors create the perception that they are able to control the market with their investment decisions, so the market will immediately correct the situation through a reversal or reversal of the direction of stock price movements. Therefore, investors hold loser stocks too long in the hope that a price reversal will occur soon. Pompian (2006) argues that the illusion of control reinforces loss aversion behavior where investors hold on to investments that have experienced losses for too long, because they hope that the investment will turn a profit so that they can cover losses that have already occurred.

The description above is found in this study where all investors who become informants are those who are active investors with a minimum investment period of 5 years. They take the manager's input as a consideration and not a basis for making decisions. They do more analysis and make their own decisions. When investors have an emotional attachment to a particular stock or feel very familiar with the characteristics of a particular stock, investors tend to do nothing even if the stock's performance is in trouble. Moreover, investor confidence when a stock has performed well will strengthen investors not to do anything even if a market crash drops the stock price past the cut loss point. Emotions and psychological bias according to Hessner et al. (2013) stimulate investors not to care about negative things about stocks that are already known and have emotional ties.

Investors are afraid, instead of getting a bigger profit, they will get a loss if they are not sold immediately. The market crash brought inconsistency in investor analysis, where investors should have cut loss at a predetermined analysis point but instead were hit by holding loser stocks too long past the cut loss point limit. On the other hand, investors should have not cut their profits yet, but instead sold winner stocks too early.

Loss aversion is stronger when the findings show an attitude of pride or pride in the informant. Pride here is the emotional pleasure of getting an advantage. The desire of investors to get pleasure through profit, in this case seeking pride or seeking pride, has an impact on the behavior of investors to sell their investments too early. On the other hand, to avoid regret (regret), investors will hold too much of the losing stock. When a market crash occurs, investors with low resources and level of control will be faced with a variety of complex choices. Selling stocks too early triggers feelings of pride and avoids "feeling" remorse for losses.

The next irrational behavior found in this study is risk averse when looking at profits and risk seeking when looking at losses. When faced with two choices, namely, first, stocks that are sure to provide small profits and second, stocks that have a greater chance of profit but have a probability of not getting results, investors choose the first option (risk averse). On the other hand, when



investors are faced with two choices, namely, stocks that are sure to lose and stocks that have a greater probability of losing but have a small probability of getting nothing, investors choose the second option (risk seeking).

The market crash resulted in the decline of all stock price lines, providing an uncontrollable emotional stimulus to investor psychology. Loss aversion behavior encourages investors to not consistently see profits and losses. In stable conditions, investors do not like risk and will choose an investment with a definite rate of return compared to an investment with an uncertain rate of return. Therefore, there is a linear relationship between risk and return. However, the above does not apply when investors are at a loss consequent with little resources and control. Because investors are risk averse, investors are willing to take riskier investment opportunities if they get a higher profit (risk premium). The findings in this study show that investor behavior is risk averse, when looking at profits and risk seeking when looking at losses.

This behavior is very relevant to the research conducted by Traversky and Kahneman (1979), Tversky and Kahneman (1984), Tversky and Kahneman (1986) and Tversky and Kahneman (1996) which later in behavioral finance, the research resulted in the prospect theory. Tversky and Kahneman (1979) explain that there is a bias that is always inherent in individuals in making decisions under conditions of uncertainty, which is caused by psychological factors. Furthermore, in making individual decisions, they evaluate the advantages and disadvantages based on a reference point where this reference point can change.

The next finding is that investors are often faced with investment choices in difficult situations. When there is a conflict between cognitive and emotional (affective), it is often the case that negative alternatives are chosen while positive alternatives are set aside. This causes cognitive dissonance in two aspects, first, investors only receive information that is in accordance with their beliefs so that they do not have a complete and real picture of the market situation.

Second, investors tend to reinforce commitments that were previously made even though it seemed wrong to do so. Investors enforce the truth of these seemingly wrong commitments by rationalizing perceptions and actions that will encourage them to persist in holding wrong commitments. This behavior is found by holding the losing stocks too long, then perceiving that the action is appropriate so that investors continue to buy the loss-making similar stocks. Investors buy similar loss-making stocks without confirming with previous decisions objectively and rationally. Pompian (2006; 88) calls it "throwing good money after bad".

The next cognitive dissonance behavior is a continuation of the previous cognitive dissonance where investors are adamant in holding wrong commitments, stimulating an attitude of not wanting to learn from previous mistakes. As humans, investors are gifted with self-confidence and ego. So it is natural that investors always want to make the right decisions. However, this is often difficult to do when the market situation provides high emotional stress so that psychological biases lead investors to hold the wrong commitment.

Commitments that are not analyzed objectively and rationally based on previous and wrong decisions, have an impact on the emergence of subsequent investment errors. To reduce the inconvenience of the error, investors modify the belief that there is nothing wrong with the previous decision so that it seems to increase the truth value of the previous decision. This behavior is found where investors do not want to learn from previous mistakes and assume that the previous loss decision was not a mistake but bad luck.

Westerfield (2013) in his study found that cognitive dissonance causes a disposition effect. Investors try to rationalize past trading options in fact they have suffered losses. Therefore, investors are reluctant to immediately sell the losing stock because it will realize the next loss which will force them to admit that the decision taken was a mistake. The tendency of investors who experience cognitive dissonance is to blame others and are reluctant to blame themselves. This behavior is also found in this study where investors do not want to blame themselves and tend to blame the investment managers, government and issuers.

The next irrational behavior found is that investors are too excessive in responding to information where every bad information is responded to by simultaneously selling shares so that the price drops drastically. On the other hand, any good information is responded to by simultaneously buying

shares, so that the stock price rises drastically (overreaction). This resulted in the abnormal return of the leading stock (winner) which should have given a positive return turned out to be negative and became a loser stock (loser). On the other hand, loser stocks that usually provide negative returns and are not attractive to investors turn into superior stocks with positive returns. In addition, stocks that were predicated as winners fell drastically and on the other hand, stocks that were previously predicated as losers rose drastically.

The study of overreaction behavior refers to the results of research in the field of psychology where humans tend to overreact to information and dramatic events. De Bondt and Thaler (1985) are one of the pioneers in research related to investor overreaction. They state that when investors receive negative information, they tend to respond emotionally by overreacting. Investors set the price too high in reaction to information that gives a positive signal and conversely set the price too low in reaction to information that gives a negative signal.

The behavior continues with investors' awareness of their mistakes as indicated by the decline in stock prices that were previously predicated as winners and rising stock prices which were previously predicated as losers. The more extreme the investor's overreaction behavior, the more extreme the reversal or stock price reversal will be. This according to shows the adjustment of the stock price from the previous stock price.

The behavior of investors who overreact causes the formation and movement of stock prices to be abnormal or mispricing due to a price reversal. Winner stocks give negative returns while loser stocks give positive returns. Investors who have already invested in winner stocks get losses, while those who have already invested in loser stocks get profits. This indicates a drastic price reversal or reversal due to the correction, so that market performance is irrational.

King (2010) in his research found that companies that announced a loss of 10% of profits when the market crashed, would respond with a decrease in stock prices of more than 10% and vice versa. When investors realize their mistake, the declining stock price experiences a drastic reversal and vice versa. Investors often overreact to information, which is not the case when investors are rational.

## 5 CONCLUSION

The results of this study provide an overview of behavior from the perspective of Behavioral Finance and psychology. It is interesting to observe and understand that the behavior of market participants is very complex. According to the researcher, to justify that investor behavior is rational is a too narrow view. The diverse structure of human personality produces complex behavior.

This study pays attention to investor behavior and psychological biases when making investment decisions. The findings show that when faced with market events, investors carry out an information assessment process to determine whether these events have consequences for opportunities or threats. Investors identify whether the events they are facing have consequences for their profits or losses. In this process, investors determine the consequences (positive or negative) of capital market events and how these consequences affect their investments individually and for market participants as a whole.

When information has consequences for losses and the resources owned by investors are large, the behavior tends to be affective with limited cognitive. Investors develop efforts to stabilize emotions. Affective behavior appears more than cognitive even though the resources they have are sufficient to deal with problems. However, the consequences of loss have a greater emotional effect so that overreaction, overconfident, representative, and anchoring and adjustment behaviors appear compared to cognitive behavior.

When information has consequences for losses and the resources owned by investors are small, the behavior tends to be affective with limited cognitive. The efforts developed are aimed at reducing and restoring emotions. Most of the behaviors that appear are affective, such as loss aversion, cognitive dissonance, overreaction, overconfidence, representative and anchoring and adjustment.

## REFERENCES

- Ahmad, Z. 2017. Institutional investor behavioural biases: syntheses of theory and evidence. *Management Research Review* 40(5): 1–22.
- Alquraan, T., Alqisie, A. & Amjad, A. S. 2016. Do behavioral finance factors influence stock investment decisions of individual investors? (Evidence from Saudi Stock Market). *Journal of American Science* 12(9): 72–82.
- Alammar, F. M., Intezari, A., Cardow, A. & Pauleen, D. J. 2018. Grounded theory in practice: novice researchers' choice between straussian and glaserian. *Journal of Management Inquiry* 28(2): 1–18.
- Bakar, S. & Yi, A. N. C. 2016. The impact of psychological factors on investors' decision making in Malaysian stock market: A Case of Klang Valley and Pahang. *Procedia Economics and Finance* 35: 319–328.
- Baqutayan, S. M. saleh. 2015. Stress and coping mechanisms: A historical overview. *Mediterranean Journal of Social Sciences* 6(2S1): 479–488.
- Beaudry, A. & A. Pinsioneault. 2005. Understanding user responses to information technology: a coping model of user adaptation. *MISQ* 29(3): 493–524.
- Bloomfield, R. 2010. Traditional vs. behavioral finance robert. *Johnson School Research Paper Series*, 22(April).
- Boda, J. R. & Sunitha, G. 2018. Investor's psychology in investment decision making: a behavioral finance approach. *International Journal of Pure and Applied Mathematics* 119(7): 1253–1261.
- Bryant, A. & Charmaz, K. 2012. Grounded theory in historical perspective: An epistemological account. *The SAGE Handbook of Grounded Theory* 31–57.
- Bryant, A. & Charmaz, K. 2012b. Grounded theory research: methods and practices. *The SAGE Handbook of Grounded Theory* 1–28.
- Cash, M. L., & Gardner, D. 2011. Cognitive hardiness, appraisal and coping: Comparing two transactional models. *Journal of Managerial Psychology* 26(8): 646–664.
- Daniel, J. R. 2014. *Suatu tinjauan tentang classic grounded theory*. Research Gate.
- Dijkstra, M. T. M. & Homan, A. C. 2016. Engaging in rather than disengaging from stress: Effective coping and perceived control. *Frontiers in Psychology* 7(1415): 1–12.
- Eager, B., Grant, S. L. & Maritz, A. 2019. Classifying coping among entrepreneurs: is it about time? *Journal of Small Business and Enterprise Development* 26(4): 486–503.
- Espriella, R. De. & Restrepo, C. G. 2020. Research methodology and critical reading of studies Grounded theory. *Revista Colombiana de Psiquiatria* 49(2), 126–132.
- Evans, G. W. & Kim, P. 2013. Childhood poverty, chronic stress, self-regulation, and coping. *Child Development Perspectives* 7(1): 43–48.
- Fabozzi, F. J., Francis, G. & Markowitz, H. M. 2002. The legacy of modern portfolio theory. *The Journal of Investing* 11(3): 7–22.
- Fernandez, W. D. 2005. The grounded theory method and case study data in is research: issues and design. *Information Systems Foundations: Constructing and Criticising* 43–59.
- Fernandez, W. 2003. Using the glaserian approach in grounded studies of emerging business practices. *Electronic Journal of Business Research Methods* 2(2), 83–94.
- Folkman, S. 2010. Stress , coping , and hope. *Psycho-Oncology* 19: 901–908.
- Gaol, N. T. L. 2016. Teori stres: Stimulus, respons, dan transaksional. *Buletin Psikologi* 24(1): 1–11.
- Glaser, B. G. & Strauss, A. L. 1967. The discovery of grounded theory strategies for qualitative research (III). Aldine Pub Co Hobfoll, S. E. A New Attempt at Conceptualizing Stress. *American Psychologist* 44(3): 513–524.
- Gurd, B. 2008. Remaining consistent with method? An analysis of grounded theory research in accounting. *Qualitative Research in Accounting & Management* 5(2): 122–138.
- Hessner, S. et al. 2013. Emotion regulation reduces loss aversion and decreases amygdala responses to losses. *Social Cognitive and Affective Neuroscience* 8(3): 341–50.
- Hobfoll, S. E. 1989. A new attempt at conceptualizing stress. *American Psychologist* 44(3): 513–524.
- Kapoor, S. & Prosad, J. M. 2017. Behavioural finance: A review. *Procedia Computer Science* 122: 50–54.
- Kenny, M. & Fourie, R. 2015. Contrasting classic, straussian, and constructivist grounded theory: Methodological and philosophical conflicts. *Qualitative Report* 20(8): 1270–1289.
- Kim, K. A. & Nofsinger, J. R. 2008. Behavioral finance in Asia. *Pacific Basin Finance Journal*, 16(1–2): 1–7.
- King, C.S. 2010. Effects of emotions on investment strategies. *A Thesis Presented to The Faculty of The Department of Economics and Business the Colorado College*
- Lazarus, Richard S. & Folkman, S. 1984. *Stress, appraisal, and coping*. New York: Springer Publishing Company.

- Lazarus, Richard S. 2000. Toward better research on stress and coping. *American Psychological Association* 55(6): 665–673.
- Lazarus, R. S. 1993. Coping theory and research: Past, present, and future. *Psychosomatic Medicine* 55(3): 234–247.
- Lepone, G. & Tian, G. 2020. Usage of conditional orders and the disposition effect in the stock market. *Pacific Basin Finance Journal* 61(September 2019): 101302.
- Lee, H. S., Cheng, F. F. & Chuan, C. S. 2016. Markowitz portfolio theory and capital asset pricing model for Kuala Lumpur stock exchange: A case revisited. *International Journal of Economics and Financial Issues* 6(3): 59–65.
- Lee, F. 2012. Critical realism, grounded theory, and theory construction in heterodox economics. *Munich Personal RePEc Archive Papers* 36: 1–29.
- Maharani, S. N. 2014. Rekonsiliasi perseteruan antara efficient market hypothesis dan behavioral finance melalui perspektif neuroeconomics. *Jurnal Akuntansi Multiparadigma* 5(2): 244–261.
- Maryam, S. 2017. Strategi coping: Teori dan sumberdayanya. *JURKAM: Jurnal Konseling Andi Matappa* 1(2): 101–107.
- Mittal, S. K. 2019. Behavior biases and investment decision: theoretical and research framework. *Qualitative Research in Financial Markets*.
- Munoz, F. & Vicente, R. 2018. Hindsight effect: What are the actual cash flow timing skills of mutual fund investors? *Journal of Empirical Finance* 45: 181–193.
- Paule-Vianez, J., Gómez-Martínez, R. & Prado-Román, C. 2020. A bibliometric analysis of behavioural finance with mapping analysis tools. *European Research on Management and Business Economics* 26: 71–77.
- Pikulina, E., Renneboog, L. & Tobler, P. N. 2017. Overconfidence and investment: An experimental approach. *Journal of Corporate Finance* 43: 175–192.
- Pompian, M. 2006. *Behavioral Finance and Wealth Management – How to Build Optimal Portfolios That Account for Investor Biases*. New York: Jhon Willey and Son.
- Ramiah, V., Xu, X. & Moosa, I. A. 2015. Neoclassical finance, behavioral finance and noise traders: A review and assessment of the literature. *International Review of Financial Analysis* 41: 89–100.
- Ritter, J. R. 2003. Behavioral finance. *Pacific Basin Finance Journal* 11(4): 429–437.
- Rossi, M. 2016. The capital asset pricing model: a critical literature review. *Global Business and Economics Review* 18(5): 604–617.
- Rossi, M. & Gunardi, A. 2018. Efficient market hypothesis and stock market anomalies: Empirical evidence in four European countries. *Journal of Applied Business Research* 34(1), 183–192.
- Selcuk. 2012. Behaviour of individuals and institutions in relation to finance and accounting. *journal of international social research* 5(20): 304–304.
- Stracca, L. 2004. Behavioral finance and asset prices: Where do we stand? *Journal of Economic Psychology* 25(3): 373–405.
- Suryawanshi, P. B. & Jumble, A. G. 2016. Comparison of behavioral finance and traditional finance: for investment decisions. *International Journal of Commerce, Business and Management* 5(3): 81–85.
- Thaler, R. H. 2016. Behavioral economics: Past, present, and future. *American Economic Review* 106(7): 1577–1600.
- Tversky, A. & D. Kahneman. 1974. Judgment under uncertainty: Heuristics and biases. *science new series* 185(4157): 1124–1131.
- Tversky, A. & D. Kahneman. 1986. Rational choice and the framing of decisions. *The Journal of Business* 59(4): 251–278.
- Tversky, A. & D. Kahneman. 1992. Advances in prospect theory cumulative representation of uncertainty. *Journal of Risk and Uncertainty* 5:297–323.
- Tversky, A. & D. Kahneman. 1986. Rational choice and the framing of decisions. *The Journal of Business* 59(4): 251–278.
- Walker, D., & Myrick, F. 2006. Grounded theory: An exploration of process and procedure. *qualitative health research* 16(4): 547–559.
- Youssef, M., & Mokni, K. 2018. On the effect of herding behavior on dependence structure between stock markets: Evidence from GCC countries. *Journal of Behavioral and Experimental Finance* 20: 52–63.
- Zahera, S. A., & Bansal, R. 2018. Do investors exhibit behavioral biases in investment decision making? A systematic review. *Qualitative Research in Financial Markets* 10(2): 210–251.

## The role of financial literacy for housewives: How important is it during the COVID-19 pandemic?

R. Firmansyah\*, M.G.S. Wicaksono, A.P. Amalia, D.T. Kurniawan & A.A. Widiyanto  
*Universitas Negeri Malang, Malang, East Java, Indonesia*

M.R. Palil  
*Universiti Kebangsaan Malaysia, Malaysia*

**ABSTRACT:** The purpose of this study is to reveal the financial management system for housewives in Kemiren, Banyuwangi Regency. The COVID-19 pandemic has brought the economy to a standstill. Many people lost their jobs and sources of income, which resulted in high economic pressure and decreased welfare in the family. During such crucial times, cash flow is important to survive. The research was conducted with a case study approach. Data were collected through in-depth interviews. The results showed that the financial management of housewives in tourist villages in the Banyuwangi district was still relatively low. Many of them do not record cash flows, but some do simple bookkeeping. Improving financial literacy for housewives in Banyuwangi Regency is needed as an effort to improve household financial management.

### 1 INTRODUCTION

The COVID-19 pandemic has become a global issue because its impact is rapidly witnessed in all aspects of life, one of which is the economic aspect, which is still the concern of every country. Based on the data, it is stated that by the end of 2020, world economic growth will reach  $-4.4\%$ , while the contraction is very different from conditions at the beginning of the year, which is estimated that world economic growth should be positive at  $3.3\%$  (Yuniar 2021). A similar growth was experienced by the Indonesian economy, which experienced an economic contraction in 2020 of minus  $2.07\%$  (Kemenkeu.go.id 2021)). This condition prompted the government to shift its focus on dealing with the impact of public health as one of the factors that can restore the economy quickly and responsively.

Based on data from the Central Statistics Agency, the decline in the economy was due to a decrease in the number of tourists visiting Indonesia, both local and non-local (Bappenas 2020). As a result, Indonesia is estimated to have lost foreign exchange of USD 14.5–15.8 billion due to the decline in the number of foreign tourist arrivals (Komarudin 2020). This downturn is because the tourism sector relies heavily on human movement. The impact is directly felt by sectors that support tourism activities, such as travel, hotels, restaurants, and the MSME sector (Mansur 2021). According to data obtained by the Ministry of Cooperatives, around 37,000 MSMEs reported that they were very seriously affected by the COVID-19 pandemic. This shows that even on a small scale, it has a tremendous impact on the community, so it is very possible for them to lose their source of income due to layoffs or limited economic activities.

Kemiren Traditional Village is one of the villages in Banyuwangi Regency, where the village has become one of the tourist destinations affected by the COVID-19 pandemic. Various customs attract tourists to visit, including the traditional rituals of Barong Ider Bumi, Mepe Kasur, and Ngopi Ten

---

\*Corresponding Author: [rizky.firmansyah.fe@um.ac.id](mailto:rizky.firmansyah.fe@um.ac.id)

Ewu. However, these economic activities had to be stopped which affected their source of life. Economic pressures trigger the decline in family welfare (Raharjo et al. 2015). In such conditions, housewives have an important role in managing family finances. Being amid the difficult conditions forced them to survive for today and tomorrow. If you are unable, then many problems may occur, such as divorce cases, the poverty level will increase, and crime rates will increase.

The results of the study of Skogrand et al (2011) show that good financial management can reduce family economic pressure. In addition, adequate financial management can increase marital satisfaction and the quality of married life (Berry & Williams 1987; Parrotta & Johnson 1998). This means that financial management can improve family welfare while reducing the potential for divorce. Harmony in family relationships needs to be maintained, when in difficult times they can work together to overcome existing problems. The results of the research by Fred van Raaij et al. (2020) show that small families with relatively high levels of financial literacy usually use a shared financial management model. Bialowolski's research (2020) states that financial literacy has a positive correlation with financial management. In line with this, housewives who have good financial literacy and a positive mindset influence their financial management (Herdjiono & Damanik 2016).

Household finances, a husband fully entrusts to his wife (Lestari 2015). However, what often happens is that not all women have good financial literacy (Bucher-Koenen et al. 2017; Chen & Volpe 1998). This shows that a weak financial management is carried out by housewives (Soegoto et al. 2020). Likewise, in the traditional village of Kemiren, they faced uncertain conditions, in which they relied on the activities of tourist visits to their village. This condition shows the importance of financial literacy that a housewife must have. Therefore, good financial management in the household is closely related to efforts to achieve family welfare.

Referring to the description above, this study intends to reveal facts regarding financial management carried out by housewives in Banyuwangi Regency in facing great challenges during the COVID-19 pandemic. This is important to be studied further, considering the impact of the weakening economy so that a study on financial literacy is needed which can be a reference for housewives and further research.

## 2 METHODS

This research was conducted in the traditional village of Kemiren, Banyuwangi Regency. This village was chosen as the object of research because it is one of the villages affected by the limited activity of tourist visits. This potential is one of the attractions and sources of income for the local community. As the purpose of this study is to reveal the role of housewives in managing finances in current conditions, the case study approach was chosen to be able to provide a complete explanation of the level of financial literacy of housewives. Thus, this study will provide a complete picture of the activities of the village community to maintain the welfare of their families.

Sources of data in this study came from primary data and secondary data. Primary data was obtained through interviews with village officials, village traditional stakeholders, housewives, and the surrounding community. While secondary data was obtained from the documentation that had been made by housewives, such as simple bookkeeping and literature relevant to the topic of this research. In determining informants, the Snowball Technique can help to determine key informants in this study.

After the data is collected, the researcher separates and categorizes them into certain themes. Because the data collected in the field is quite a lot, it is necessary to reduce the data that is needed in this study. Data reduction is done by presenting the processed data, then providing coding based on a predetermined theme. After the data was verified, the researcher compiled a description in the form of drawing conclusions. Triangulation is carried out using a literature triangulation model, as verification of conclusions regarding the application of financial management carried out by housewives in their families.

### 3 RESULTS AND DISCUSSION

Financial literacy is the ability and skill of a person to utilize and apply knowledge of financial concepts, to be able to make effective financial decisions and financial planning, and create prosperity (Setyorini et al. 2021). Financial management in the family requires skilled, careful, and good management. The size of the value of family income is not a determinant of whether or not it is sufficient to meet the needs because if it can be managed carefully and well, it can meet the important needs of the family. Harmony in the family can be influenced by good and bad financial conditions and if you can manage finances well it will bring happiness and family welfare (Grace et al. 2020).

The main problem faced by business actors who are housewives as well as business actors in a tourist village, Kemiren Village, Banyuwangi, is the value of income which continued to decline due to the COVID-19 pandemic. Where since Indonesia entered the COVID-19 pandemic, several human movements in various sectors have been restricted, including the tourism sector in Kemiren Village, Banyuwangi. Kemiren Village is known as a tourist destination in East Java, which presents various performances and thick customs typical of the Osing tribe through art performances and regional food. Most business actors in Kemiren Village are housewives. The main problem arises due to the decline in the number of tourists in the village, which directly affects the lack of visitors to the tourist village so that housewives have difficulty managing family finances.

At the initial stage, the authors conducted observations and interviews to obtain detailed information regarding the conditions and problems experienced by housewives as business actors in Kemiren Village, Banyuwangi. The author conducts a mapping of needs analysis based on the data and facts that have been obtained. Some interesting facts were found by the author, namely (1) housewives do not make financial records using certain techniques, (2) there is a distribution of expenses and income received, (3) unexpected expenses are triggered by the value of local customs, (4) Debt is the best solution when experiencing financial constraints, (5) Some housewives consider financial literacy is not necessary because the level of family economic welfare depends on each individual as a form of gratitude to the Almighty.

High financial literacy has a positive effect on day-to-day decisions and encourages higher saving rates, which will improve the quality of life in the long term (Setyorini et al. 2021). When deepening the understanding of the problem through interviews, the authors know that the financial records carried out by housewives are not based on certain techniques derived from financial science. However, using a special technique, namely by making cans and labeling them according to the needs to be met by each family. Later the cans are filled with money from daily business income. If later the value of the need exceeds the portion of the initial distribution, then the shortfall will be covered with funds from cans with labels of other needs. If you already have more income, then the funds that have been taken will be returned to the can. This proves that the effectiveness of the financial management of housewives is still relatively low. Although they can determine the amount of need in certain posts, they are still unable to have a reserve fund management for emergency needs. Low financial knowledge will cause problems in household financial management, which will have an impact on poor financial resilience (Lindiawatie & Shahreza 2021).

In determining the number of family needs, housewives are based on the distribution of expenses and income received. W, a respondent who is a housewife and owner of a food stall in Kemiran Village, Banyuwangi, revealed that the calculation of the amount of expenditure and income is not done every month, but every day due to her status as an entrepreneur. If later there is a residual income, some housewives will save it in savings or divert it for investment. The form of recording expenses and income carried out by housewives in Kemiren Village, Bayuwangi, was carried out in general and not detailed because for them the recording was too burdensome and not as per the habits of the residents. This is expressed by S as follows:

"I don't have any income and expense calculations. If there is more sustenance, I share it with relatives and neighbors. We're not like city people."

Knowing from these disclosures, the authors know that the level of financial literacy of housewives in Kemiren Village is still relatively low, due to the emergence of the assumption that carrying

out financial records properly and carefully is a culture that is owned by urban communities and is not in harmony with the habits of residents in the village.

Kemiren village is known for the thick customs of the native Banyuwangi osing tribe (Wahyudiono & Imaniar 2021). The values of gotong royong and togetherness are upheld by residents and society. Kinship relations that are still being carried out today include wedding celebrations, funeral ceremonies, and tolerance between residents who are sick. This was revealed by IT as one of the food stall traders in Kemiren Village, he revealed that it has become a tradition for residents to bring food or basic necessities to residents who are sick or when visiting tahlilan events. This is where unexpected expenses arise, where the time and amount of expenses cannot be estimated. With this, housewives who are used to managing finances according to their daily needs, are forced to take necessary funds to meet these unexpected expenses. Having good financial literacy knowledge is needed to manage finances carefully and well, thereby minimizing the use of funds for daily needs for urgent or unexpected needs (Septiani & Wuryani 2020).

The close kinship between residents does not rule out the possibility of increasing sensitivity to help each other in meeting daily needs, such as the example of borrowing activities that are often carried out by housewives while experiencing a lack of funds. This was expressed by one of the business actors in Kemiren Village, SA, namely:

“If I have a lack of income, I usually borrow from relatives or neighbors. Here the neighbors are like brothers, so they help each other as long as the funds borrowed are not too big.”

SA revealed that taking debts is something that residents usually do with their neighbors because of the close kinship relationship in the village. Although not in large amounts, the SA considers that borrowing is the only way if you experience a sudden shortage of funds and need to meet urgent needs. On the other hand, SA said that if he gets excess funds from either salary or business income, he chooses to share it with his neighbors as a form of gratitude for the fortune he has received. For him, if you get more funds than you need, it is natural to share it with others. According to W, if he gets more funds than he needs, he will put it in a savings fund or use it for investment. From the description of the two housewives, the authors know that some housewives still have good skills in financial management, evident from their ability to create savings funds and future investments. However, for other housewives, the extra funds may be used as a place to strengthen kinship relations between residents by sharing fortune with neighbors and relatives.

Residents in Kemiren Village, Banyuwangi, uphold the values of customs, as well as the religious values of each individual. The relationship between the individual and the Almighty is based on a high sense of belief embedded in the heart and connected to Him. The depth of religious values allows gratitude for the abundance of fortune received by each individual (Firdaus 2019). The author tries to explore the value of financial adequacy and welfare for housewives in Kemiren Village. For them, whether or not the fortune received is based on each individual. SA believes that:

“Management is sufficient. All that is sustenance from the One Above. To be grateful.”

This proves that the financial management carried out by housewives in Kemiren Village cannot be separated from religious values that are upheld in their daily lives. Housewives and businesspeople in Kemiren Village consider that their current financial management is sufficient following the community habits and there is no need to learn other management techniques. In addition, they consider the high and low levels of family financial welfare based on gratitude and sufficiency for each individual, because in essence, it is sustenance that must be grateful for.

#### 4 CONCLUSION

Kemiren Traditional Village is one of the villages in Banyuwangi Regency, where the village has become one of the tourist destinations affected by the COVID-19 pandemic with economic activities that have been forced to stop and have an impact on their source of life. The main problem faced by business actors who are housewives as well as business actors in a tourist village, Kemiren Village, Banyuwangi, is the value of income, which continues to decline due to the COVID-19 pandemic



due to the decline in the number of tourists in the village, directly having an impact on the lack of village visitors. So that housewives have difficulty in managing family finances.

At the initial stage, the authors conducted observations and interviews to obtain detailed information regarding the conditions and problems experienced by housewives as business actors in Kemiren Village, Banyuwangi. The author conducts a mapping of needs analysis based on the data and facts that have been obtained. Some interesting facts were found by the author, namely (1) housewives do not make financial records using certain techniques, (2) there is a distribution of expenses and income received, (3) have unexpected expenses that are triggered by the value of local customs, (4) debt is the best solution when experiencing financial constraints, (5) some housewives consider that financial literacy is not necessary because the level of family economic welfare depends on each individual as a form of gratitude to the Almighty.

In carrying out financial records, housewives do not use certain techniques but use special techniques, such as making cans and labeling them according to the needs to be met by each family. When experiencing a lack of funds, debt-debt activities are commonly carried out due to the close kinship of the residents in Kemiren Village so that they are accustomed to mutual cooperation and help. Even though they have been able to determine the number of needs in certain posts, these housewives still do not have good reserve fund management.

The form of recording expenses and income carried out by housewives in Kemiren Village, Bayuwangi, was carried out in general and not detailed because for them the recording was too burdensome and did not follow habits of the residents. They consider that good and accurate financial records are a culture that is owned by urban communities and not in harmony with the habits of residents in the village. Housewives are used to taking funds to meet unexpected expenses from community activities. It would be better if housewives started to open emergency fund posts that could be used to meet unexpected expenses without having to use funds for daily needs. Housewives and businesspeople in Kemiren Village consider that their current financial management is sufficient as per community habits and there is no need to learn other management techniques. In addition, they consider the high and low levels of family financial welfare based on gratitude and sufficiency for each individual, because in essence, it is sustenance to be grateful for.

Some other interesting facts in this study are knowing the prevalence of debt-to-debt activities among residents because it is based on solidarity that is upheld by villagers, that it is appropriate for residents to help each other with residents in need such as sending food and necessities to unexpected activities such as death and in this case, the authors conclude that increasing financial literacy for housewives in Kemiren Village, Banyuwangi Regency needs to be done as an effort to improve management household finances to create good welfare for the family.

## REFERENCES

- Bappenas. 2020. *Laporan perkembangan ekonomi indonesia dan dunia triwulan III tahun 2020*. In [www.bappenas.go.id](http://www.bappenas.go.id).
- Berry, R. E. & Williams, F. L. 1987. Assessing the relationship between quality of life and marital and income satisfaction: A path analytic approach. *Journal of Marriage and Family* 49(1): 107–116.
- Bialowolski, P., Cwynar, A. & Weziak-Bialowolska, D. 2020. Financial management, division of financial management power and financial literacy in the family context – evidence from relationship partner dyads. *International Journal of Bank Marketing* 38(6): 1373–1398.
- Bucher-Koenen, T., Lusardi, A., Alessie, R. & Van Rooij, M. 2017. How financially literate are women? *Journal of Consumer Affairs* 51(2): 255–283.
- Chen, H. & Volpe, R. P. 1998. An analysis of personal financial literacy among college students. *Financial Services Review* 7(82): 107–128.
- Fred van Raaij, W., Antonides, G. & Manon de Groot, I. 2020. The benefits of joint and separate financial management of couples. *Journal of Economic Psychology* 80(January): 102313.
- Grace, Silooy, M. & Joseph, C. 2020. Pengelolaan keuangan keluarga dalam rangka peningkatan literasi keuangan. *MAREN: Jurnal Pengabdian Dan Pemberdayaan Masyarakat* 1(1): 90–96.

- Herdjiono, I. & Damanik, L. A. 2016. Pengaruh financial attitude, financial knowledge, parental income terhadap financial management behavior. *Jurnal Manajemen Teori Dan Terapan| Journal of Theory and Applied Management* 9(3): 226–241.
- kemenkeu.go.id. 2021. *Kemenkeu: Pertumbuhan ekonomi indonesia tahun 2020 di atas rata-rata negara di Asia Tenggara*. Kementerian Keuangan Republik Indonesia.
- Komarudin. 2020. *Kerugian sektor pariwisata indonesia atas penurunan wisatawan mancanegara*. Liputan6.Com.
- Lestari, S. 2015. Literasi keuangan serta penggunaan produk dan jasa lembaga keuangan. *Fokus Bisnis: Media Pengkajian Manajemen Dan Akuntansi* 14(2): 14–24.
- Lindiawati, L., & Shahreza, D. (2021). Penyuluhan literasi keuangan pada ibu rumah tangga di depok sebagai dasar membangun ketahanan keuangan keluarga. *Warta LPM* 24(3): 521–532.
- Mansur, A. 2021. *Ini Imbas penurunan sektor pariwisata akibat Covid-19*. Wwww.Republika.Co.Id.
- Parrotta, J. L. & Johnson, P. J. 1998. The impact of financial attitudes and knowledge on financial management and satisfaction of recently married individuals. *Journal of Financial Counseling and Planning* 9(2): 59–75.
- Raharjo, I. T., Puspitawati, H. & Krisnatuti, D. 2015. Tekanan ekonomi, manajemen keuangan, dan kesejahteraan pada keluarga muda. *Jurnal Ilmu Keluarga Dan Konsumen* 8(1): 38–48.
- Septiani, R. N. & Wuryani, E. 2020. Pengaruh literasi keuangan dan inklusi keuangan terhadap kinerja umkm di Sidoarjo. *E-Jurnal Manajemen Universitas Udayana* 9(8): 3214.
- Setyorini, N., Indiworo, R. H. E. & Sutrisno. 2021. Financial resilience: Household behaviour as. *Media Ekonomi Dan Manajemen* 36(2): 243–255.
- Skogrand, L., Johnson, A. C., Horrocks, A. M. & DeFrain, J. 2011. Financial management practices of couples with great marriages. *Journal of Family and Economic Issues* 32(1): 27–35.
- Soegoto, A. S., Lintong, D. N., Mintalangi, S. S. E. & Soeikromo, D. 2020. Meningkatkan peran ibu rumah tangga dalam pengelolaan keuangan improving the role of households in financial management. *Jurnal Pengabdian Dan Pemberdayaan Masyarakat* 4(1): 141–148.
- Wahyudiono, A. & Imaniar, D. 2021. Dampak pariwisata terhadap aspek sosial budaya masyarakat desa adat kemiren di Kabupaten Banyuwangi. *Representamen* 7(01): 30–40.
- Yuniar, A. 2021. *Kilas balik dampak pandemi Covid-19 ke ekonomi dunia dan indonesia*. Liputan6.Com.

## An investigation on the financial literacy of accounting students in Indonesia

N. Laily\*, A. Herdiani & Sulikah

*Universitas Negeri Malang, Malang, East Java, Indonesia*

G. Dellar

*Curtin University, Australia*

**ABSTRACT:** Financial literacy has recently received serious attention due to the increasing cases of fraudulent investment and has become an interesting topic to study. This research aims at investigating the relationship between financial knowledge, financial attitude, and financial behavior of accounting students. The data were collected using questionnaires directly distributed through google form and 307 accounting students from 11 universities in Indonesia participated in this research. A multi-regression random sampling technique was used to obtain and then analyze the data. The research results showed that financial knowledge and financial attitude influenced financial behavior. Thus, it is recommended to the educational institutions to develop programs designed to improve the students' financial knowledge and grow students' positive attitudes in response to financial problems, so that they can wisely make their financial decisions.

### 1 INTRODUCTION

Financial literacy has recently received serious attention since financial products become more complicated, increasing fraudulent investments, and individual's poor financial literacy levels in various countries (Aydin & Akben-Selcuk 2019; Halilovic et al. 2019; Jiang et al. 2020). Financial literacy is related to an individual's ability in financial management (Halilovic et al. 2019). Financial understanding is greatly essential for an individual to realize financial prosperity (Younas & Farooq 2019). Financial literacy has become one indicator of an individual in making financial decisions (Lusardi 2019). However, the result of survey conducted by OECD (Organization for Economic Co-operation and Development) found that the people's financial literacy was still poor in countries that joined as the APEC members (OECD 2019). The study conducted by OECD has also provided empirical evidence that poor financial literacy was also experienced by the people in ASEAN countries, such as Thailand, Indonesia, and Malaysia and positioned in the last third rank. Poor financial literacy also happened in Turkey (Aydin & Akben-Selcuk 2019), China (Jiang et al. 2020), Australia, Japan, Korea (Lusardi & Mitchell 2007), and Bosnia (Halilovic et al. 2019). This research is essential to conduct in response to the poor financial literacy experienced by various countries.

Previous studies have abundantly invested the correlation between financial literacy and financial management behavior (Fessler et al. 2019; Henager & Cude 2019; Kalwij et al. 2019), attitude (Aydin & Akben-Selcuk 2019; Fessler et al. 2019; Yong et al. 2018), financial prosperity (Aydin & Akben-Selcuk 2019), self-control (Younas & Farooq 2019), ability (Henager & Cude 2019), cognitive and emotional factor (Skagerlund et al. 2018), culture (Brown et al. 2018), and money illusion (Darriet et al. 2020). However, the research results are not relatively varied.

Aydin & Akben-Selcuk (2019) involved 1.443 students from 14 universities in Turkey for their research. The research results empirically proved that financial literacy influenced financial attitude

---

\*Corresponding Author: [nujmatul.laily.fe@um.ac.id](mailto:nujmatul.laily.fe@um.ac.id)

and financial behavior. This finding was supported by the result of research conducted by Fessler et al. (2019) who found that there was a correlation between financial literacy and financial attitude with financial behavior. However, Fessler et al. (2019) used instruments and measurements which were different from those used by Aydin & Akben-Selcuk (2019). Meanwhile, Younas & Farooq (2019) conducted their survey on 416 respondents in Pakistan from educational institutions, companies, and other institutions finding that financial prosperity was influenced by self-control and financial literacy. Slightly different research was conducted by Muñoz-Murillo, Álvarez-Franco, & Restrepo-Tobón (2019) which emphasized more on the relationship between cognitive ability and financial literacy. This research will re-examine the correlation between financial knowledge, financial behavior, and financial attitude.

Previous research has focused on financial literacy from investors for investment decision-making (Awais 2016; Janor et al. 2016; Rasool & Ullah 2020). This research focuses on accounting students as potential investors in the future, so this research is urged to provide an understanding of financial literacy. This research is greatly essential for students, especially accounting students who start learning to manage their own finance. Besides, this research can provide various contributions to the professions in accounting fields in assisting the accounting graduates to become more reliable accountants and auditors who have a deeper understanding of financial literacy to provide more satisfying services to their clients.

## 2 LITERATURE REVIEW

Financial literacy is related to an individual's ability to manage finance (Halilovic et al. 2019). The conceptual definition of financial literacy consists of five concepts: knowledge of financial concepts, ability to communicate the financial concepts, ability to manage the individual finance, ability to make the right financial decision, and having self-confidence in planning the financial needs in the future (Halilovic et al. 2019). OECD (2016) has defined financial literacy as the combination of awareness, knowledge, ability/skill, attitude, and behavior in making financial decisions to gain financial prosperity.

Financial literacy is an interesting issue to discuss since most countries have a similar problem, that is, people's poor financial literacy. The developing countries have poorer financial literacy than developed countries. Organization for Economic Co-operation and Development (OECD) has conducted a survey on financial literacy in countries joined by APEC. The survey result showed that Hongkong, China, and Korea had the highest financial literacy as compared to the other countries. Meanwhile, Thailand, Indonesia, and Malaysia were positioned in the last third rank of countries with the poorest financial literacy (OECD 2019).

Previous studies on financial literacy had been numerous conducted by Aydin & Akben-Selcuk (2019) involving over 1,400 students from universities in Turkey. The research result showed empirical evidence that financial literacy influenced financial attitude and financial behavior. This finding was also supported by the result of research conducted by Fessler et al. (2019) finding that there was a correlation between financial literacy and financial attitude with financial behavior. However, Fessler et al. (2019) employed different instruments and measurements from those used by Aydin & Akben-Selcuk (2019). Meanwhile, Younas & Farooq (2019) conducted a survey on 416 people in Pakistan coming from educational institutions, companies, and others. The research result found that financial prosperity was influenced by self-control and financial literacy. A slightly different study was conducted by Muñoz-Murillo, Álvarez-Franco, & Restrepo-Tobón (2019) emphasizing more on the relationship between cognitive ability with financial literacy.

Other studies were also conducted by Jiang et al. (2019) involving investors in China using a survey method. The result was quite surprising since women had poorer financial literacy than men. Besides, the investors with higher education levels also had higher financial literacy. Education on finance was proven to influence someone's financial literacy (Yong et al. 2018). Furthermore, Jiang et al. (2019) suggested including financial literacy in financial education. Lopus, Amidjono & Grimes (2019) conducted an experimental study on 30 teachers and 601 students in Indonesia by

giving training for 18 sessions within 18 months. The participants were given training with materials related to financial literacy and soft skill. Both teachers and students showed their significantly increasing knowledge of financial literacy and soft skill. This increase was correlated with the prior knowledge, working experience, school type, and intention to implement the training in their daily life. As a result, education on financial literacy can finally improve the workers' productivity. Education on finance has the greatest potential in reducing the gaps in financial literacy (Fessler et al. 2019). Skagerlund, Lind, Strömbäck, Tinghög, & Västfjäll (2018) conducted a survey on 2.063 respondents consisting of 51% women and 49% men in Sweden. The research result showed that education significantly influenced someone's financial literacy level. Based on the explanations, some hypotheses are formulated as follows:

- H1: Financial knowledge influences the financial behavior of accounting students
- H2: Financial attitude influences financial behavior of accounting students

### 3 METHODS

This research used a quantitative approach to answer the research problems. The data collection was conducted using the questionnaires directly distributed using Google form. Thus, 307 accounting students from 11 universities in Indonesia were connected using a random sampling technique. Financial literacy has three components consisting financial knowledge, financial behavior, and financial attitude. Financial knowledge is measured using seven questions with a total score of 7 points, showing that the higher the score, the higher the level of someone's financial knowledge. Financial knowledge is measured based on the basic knowledge on finance, saving, and investment. Financial attitude is measured using 3 questions based on understanding related to the financial products focusing on the students' tendency on their plans and saving activities (Aydin 2019). Financial behavior is seen in the students' tendency in behaving related to paying the bills on time, budget, and saving (Atkinson & Messy 2012). The data were tested and all items were valid and reliable.

The data were analyzed using a multiple regression analysis assisted with SPSS version 22 to figure out the influence of financial knowledge and financial attitude on financial behavior. Before conducting the hypothetical test, the normality, multicollinearity, heteroskedasticity of the data were tested. The analysis results showed that the data were normally distributed, no high correlation between variables, and no heteroscedasticity was found.

### 4 RESULTS AND DISCUSSION

The data collection was conducted using questionnaires directly distributed to respondents using Google form and 307 questionnaires were collected and considered valid to use as the research samples. Table 1 was statistically and descriptively presented.

Table 1. Descriptive statistic.

Variable	Frequency	Percentage
Gender:		
Male	61	18.27
Female	246	80.13
Age:		
19–23 years	286	93.15
24–28 years	21	6.85
Semester:		
II	46	15
IV	123	40
VI	86	28
VIII	52	17

(continued)

Table 1. Continued.

Variable	Frequency	Percentage
GPA:		
3.7–4.00	62	21.8
3.31–3.00	163	56.21
3.01–3.30	39	13.45
2.71–3.00	13	4.48
2.31–2.70	7	2.41
2.01–2.30	6	2.07
Financial Knowledge:		
1 Correct answer	20	6,5
2 Correct answers	40	13
3 Correct answers	67	21.8
4 Correct answers	75	24.4
5 Correct answers	71	23.1
6 Correct answers	15	4.9
7 Correct answers	15	4.9

Based on table 1 most respondents were dominated by females (80.13%) aged 19–23 years. The students who participated in this research were mostly in the fourth semester with a Satisfied General Point Average (56.21%). The research results also showed that the students with high General Point Average also had high financial knowledge scores. The students in the last semester also had high financial knowledge scores. Those scores were influenced by the increasing knowledge and experiences in financial management. Yet, simultaneously, the students' basic knowledge of finance, saving, and investment was still categorized at the medium level (24.4%). Only 4.9% or 15 students answered all the questions correctly. Thus, the students' knowledge of financial products still needs to be improved.

The discrimination test was conducted to figure out whether or not there was a knowledge difference in financial products, attitudes, and behavior in financial management made between male and female respondents. Table 2 shows that there is no knowledge difference on financial products, attitude, and behavior between the male and female students ( $P > 0.05$ ).

Table 2. Discrimination tests related to financial knowledge, financial attitude, and financial behavior.

	T	Df	Sig. (2-tailed)	Mean Difference	95% confidence interval of the difference	
					Lower	Upper
Financial Knowledge	−0.236	305	0.813	−0.05644	−0.52668	0.41380
Financial attitude	0.670	305	0.946	0.01893	−5.3373	0.57159
Financial behavior	−1.788	305	0.075	−0.60822	−1.2774	0.00991

The result of this research supported the research conducted by Aydin & Akben-Selcuk (2019) who also found that there was no different level of financial knowledge between male and female respondents. This was due to the difference in financial knowledge and expertise between male and female respondents (Aydin & Akben-Selcuk 2019; Halilovic et al. 2019; Laily 2016). Some previous studies also showed the different interests between male and female respondents related to financial topics (Jorgensen & Savla 2010). The female respondents were more knowledgeable on financial topics in general, while male respondents were more knowledgeable about insurance and personal loans (Danes & Hira 1987). As a result, the high scores in certain financial knowledge

fields were possibly balanced with the lower score in the other fields (Aydin & Akben-Selcuk 2019). The research also found that there were no differences in the level of financial attitude and financial behavior between male and female (Akben-Selcuk 2015).

Furthermore, the correlation analysis was also conducted to figure out the relationship between variables. The result of the correlation analysis showed that financial knowledge was correlated with financial behavior ( $r = 0.215$ ), yet not correlated with financial attitude ( $r = 0.064$ ). There was also a correlation between financial attitude and financial behavior ( $r = 0.204$ ). Conversely, the result of research conducted by Fessler et al. (2019) showed that there was a correlation between financial knowledge, financial attitude, and financial behavior. Individual knowledge of finance will determine how someone behaves and the financial attitude plays an essential role to form the individual attitude. In addition, the result of multiple regression analysis can be seen in Table 3.

Table 3. Discrimination tests related to financial knowledge, financial attitude, and financial behavior.

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std.	Error Beta		
Financial Knowledge	0.290	0.079	0.202	3.676	0.000**
Financial attitude	0.233	0.067	0.191	3.471	0.000**

Note: \*\* $p > 0.05$ ; Dependent variable: Financial behavior.

The regression result (Table 3) shows that financial knowledge ( $\beta = 0.290$ ,  $P < 0.05$ ) and financial attitude ( $\beta = 0.233$ ,  $P < 0.05$ ) influenced financial behavior. The higher the students' knowledge levels on financial products, the better their attitude toward financial management. Students with high financial knowledge scores showed a tendency to become wiser in financial management (Aydin & Akben-Selcuk 2019; Fessler et al. 2019). An skilled financial management personnel can understand and evaluate the related issues and predict the consequences in the future. This individual is known as a "well literate" individual (Herawati et al. 2018). The result of this research showed that only some accounting students (4.9%) had high financial knowledge levels, while the other 24.5% of students had a medium level of basic knowledge of finance, investment, and saving.

Knowledge of finance is greatly essential for accounting students to determine their financial attitude and behavior. This knowledge will be consciously or unconsciously implemented in their daily life (Herawati et al. 2018). The students will face various financial problems if not having adequate knowledge on good financial management. Students with poor financial literacy level tend to be less wise in making their financial decisions. Due to the importance of this financial knowledge, the higher education institutions should be well concerned on developing various programs to improve the students' financial knowledge. Samkin et al. (2012) have suggested that financial literacy should be introduced at schools although the other parties think that the integration of financial literacy to the school curriculum will result in more problems. The integration of financial literacy can be performed by the higher education institutions by adding the credits for courses related to finance, investment, and saving. The result of this research supported the research conducted by Aydin & Akben-Selcuk (2019), Halilovic et al. (2019), Henager & Cude (2019), Kim et al. (2019).

## 5 CONCLUSION

This research found that financial knowledge and financial attitude significantly influence financial behavior. The higher the students' knowledge levels on financial products, the better their attitude toward financial products and financial behavior. Students with poor financial literacy levels tend

to be less wise in making their financial decisions. The research also found that there were no differences in the level of financial knowledge, financial attitude, and financial behavior between male and female. The research provided evidence and the importance of financial knowledge and financial attitude for accounting students. This research is a contribution for the educational institutions to develop programs designed to improve the students' financial knowledge and grow the students' positive attitudes in response to financial problems so that they can make wise financial decisions. Future research can use experimental design to test the difference between financial knowledge, financial attitude, and financial behavior of accounting students.

## REFERENCES

- Akben-Selcuk, E. 2015. Factors influencing college students' financial behaviors in turkey: Evidence from a national survey. *International Journal of Economics and Finance* 7(6): 87–94.
- Awais, M. 2016. International journal of economics and financial issues impact of financial literacy and investment experience on risk tolerance and investment decisions: Empirical evidence from Pakistan. *International Journal of Economics and Financial Issues* 6(1): 73–79.
- Aydin, A. E. & Akben Selcuk, E. 2019. An investigation of financial literacy, money ethics and time preferences among college students: A structural equation model. *International Journal of Bank Marketing* 37(3): 880–900.
- Brown, M., Henchoz, C. & Spycher, T. 2018. Culture and financial literacy: Evidence from a within-country language border. *Journal of Economic Behavior and Organization* 150: 62–85.
- Darriet, E., Guille, M., Vergnaud, J. C. & Shimizu, M. 2020. Money illusion, financial literacy and numeracy: Experimental evidence. *Journal of Economic Psychology* 76(September 2019).
- Fessler, P., Silgoner, M. & Weber, R. 2019. Financial knowledge, attitude and behavior: evidence from the Austrian Survey of Financial Literacy. *Empirica* 47:929–94.
- Halilovic, S., Zaimovic, A., Berilo, A. A. & Zaimovic, T. 2019. Financial literacy assessment in Bosnia and Herzegovina. *Procedia Computer Science* 158: 836–843.
- Henager, R., & Cude, B. J. 2019. Financial literacy of high school graduates: long- and short-term financial behavior by age group. *Journal of Family and Economic Issues* 40(3): 564–575.
- Herawati, N. T., Candiasa, I. M., Yadyana, I. K. & Suharsono, N. 2018. Factors that influence financial behavior among accounting students in Bali. *International Journal of Business Administration* 9(3):30.
- Janor, H., Yakob, R., Hashim, N. A., Aniza, C. & Wel, C. 2016. Financial literacy and investment decisions in Malaysia and United Kingdom: A comparative analysis. *Geografia: Malaysian Journal of Society and Space* 12(2): 106–118.
- Jiang, J., Liao, L., Wang, Z. & Xiang, H. 2019. Financial literacy and retail investors' financial welfare: Evidence from mutual fund investment outcomes in China. *Pacific-Basin Finance Journal* 59(October 2019): 101242.
- Kalwij, A., Alessie, R., Dinkova, M., Schonewille, G., van der Schors, A. & van der Werf, M. 2019. The effects of financial education on financial literacy and savings behavior: evidence from a controlled field experiment in Dutch primary schools. *Journal of Consumer Affairs* 53(3): 699–730.
- Kim, K. T., Anderson, S. G. & Seay, M. C. 2019. Financial knowledge and short-term and long-term financial behaviors of millennials in the United States. *Journal of Family and Economic Issues* 40(2): 194–208.
- Laily, N. 2016. Pengaruh literasi keuangan terhadap perilaku mahasiswa dalam mengelola keuangan. *Journal of Accounting and Business Education* 1(4).
- Lopus, J. S., Amidjono, D. S. & Grimes, P. W. 2019. Improving financial literacy of the poor and vulnerable in Indonesia: An empirical analysis. *International Review of Economics Education* 32(May): 100168.
- Lusardi, A. 2019. Financial literacy and the need for financial education: evidence and implications. *Swiss Journal of Economics and Statistics* 155(1): 1–8.
- Lusardi, A. & Mitchell, O. 2007. Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business Economics* 42(1): 35–44.
- Muñoz-Murillo, M., Álvarez-Franco, P. B. & Restrepo-Tobón, D. A. 2019. The role of cognitive abilities on financial literacy: New Experimental Evidence. *Journal of Behavioral and Experimental Economics* 84(October 2019): 101482.
- Rasool, N. & Ullah, S. 2020. Financial literacy and behavioural biases of individual investors: empirical evidence of Pakistan stock exchange. *Journal of Economics, Finance and Administrative Science* 25(50): 261–278.



- Samkin, G., Low, M. & Taylor, J. 2012. Incorporating financial literacy into the secondary school accounting curriculum: a New Zealand perspective. *Australasian Accounting Business & Finance Journal* 6(4): 5–30.
- Skagerlund, K., Lind, T., Strömbäck, C., Tinghög, G. & Västfjäll, D. 2018. Financial literacy and the role of numeracy—How individuals' attitude and affinity with numbers influence financial literacy. *Journal of Behavioral and Experimental Economics* 74(March): 18–25.
- Végh, V., Nagy, Z. B., Zsigmond, C. & Elbert, G. 2017. The effects of using edmodo in biology education on students attitudes towards biology and ICT. *Journal Problems of Education in The 21 Century* 75(5): 483–495.
- Yong, C. C., Yew, S. Y. & Wee, C. K. 2018. Financial knowledge, attitude and behaviour of young working adults in Malaysia. *Institutions and Economies* 10(4): 21–48.
- Younas, W., & Farooq, M. 2019. Impact of self-control, financial literacy and financial behavior on financial well-being. *The Journal of Social Sciences Research* 5(51): 211–218.

## Analysis of thin capitalization on listed companies in Indonesia and Australia

R.D. Sismi & D. Martani\*

*Department of Accounting, Faculty of Economics and Business, Universitas Indonesia, Depok, Indonesia*

**ABSTRACT:** Thin capitalization is tax planning that is carried out by optimizing corporate debt. This tax planning will increase the interest expense and decrease tax expense, thereby increasing net income and firm value. Thin capitalization is measured by the ratio of total debt to capital. This study analyzed the factors that influence thin capitalization in companies in Indonesia and Australia. The regression test results showed that companies with overseas subsidiaries, companies with subsidiaries in haven countries, and companies that carry out export activities have a smaller thin capitalization value. The results of the study were generally not in line with previous studies, which state that these variables increase thin capitalization. This study also found that foreign ownership strengthens the relationship between foreign exposure and thin capitalization.

### 1 INTRODUCTION

Taxes are people's contributions to the state, which are based on state regulations and are used to finance state activities. The tax paid by a company is a burden, so the company tries to conduct a tax efficiency. According to Blaufus et al. (2015), tax avoidance is a tax management practice that is still within the legal scope. On the other hand, tax evasion is an illegal tax management practice. Both tax evasion and tax avoidance reduce tax expense or tax payable (Neck et al. 2012).

One of the tax avoidance practices is the use of a tax shield or the use of debt, which will increase interest expense and reduce taxes. Besides reducing taxes, interest expense also has an effect of increasing firm value. In the Modigliani-Miller I theory, the use of debt as a source of funding is neutral to firm value because it is assumed that there is no tax. However, when tax exists, such as in the Modigliani-Miller II theory, companies with higher debt will have a higher firm value because of the benefit of interest expense as a tax deduction.

The use of debt instruments to avoid taxes and increase the company's value can also be termed thin capitalization because a company that increases its debt will make its equity or capital smaller or thin. According to research by Egger et al. (2010) and Møen et al. (2011), the practice of thin capitalization is commonly carried out by various companies. Therefore, tax authorities try to regulate the interest expense arising from debt. One of the recommendations for regulating the debt interest was conveyed by the OECD (2015) to countries worldwide through Action Plan 4. This regulation is one of the fifteen recommendations to prevent base erosion and profit shifting.

Indonesia responded to this recommendation by issuing the thin capitalization rule (TCR). TCR is a rule that limits interest deductions above a certain level of debt. Buettner et al. (2012), using data from German affiliated companies, find that limiting deductible interest effectively reduces the use of the company's internal funds. Blouin et al. (2014) find that countries with stricter TCRs are more successful in lowering their debt-to-asset ratio. Weichenrieder and Windischbauer (2008), Overesch & Wamser (2010), and Wamser (2014) also find similar results that debt-to-equity ratio (DER) has a positive relationship with the company's value. Therefore, the use of TCR is still a crucial policy instrument for various countries.

---

\*Corresponding Author: dwi.martani@gmail.com

Haufler et al. (2018) divide TCR into two types, namely the safe harbor rule and the earnings stripping rule. According to Gresik et al. (2017), the safe harbor rule regulates the interest rate on the debt that a subsidiary company could charge when its DER value does not exceed a certain level. Meanwhile, the earnings stripping rule is a regulation to reduce the impact of tax erosion due to the parent company giving debt to a subsidiary company in a high tax rate area. In practice, various countries choose the earnings stripping rule (for example, Finland, Germany, Italy, Norway, Portugal, and Spain) or a mixture of the two types in formulating the TCR (for example, Denmark, Japan, and the United States) (Mardan 2017). Apart from the type of TCR, each country can also apply TCR with different strictness. The strictness refers to the maximum value of DER. According to Mardan (2017), developing countries generally impose a more lenient TCR than developed countries because the funding sources that can be obtained by companies in developing countries are limited.

Indonesia's TCR is more comprehensive when it is compared to other countries in Southeast Asia. Generally, countries in Southeast Asia overcome tax avoidance effects through debt instruments on an informal basis. This study uses Australia as the country of comparison because Australia has a TCR that is more similar to Indonesia. Under Australia's regulation, the debt-to-equity ratio is set at 1.5:1 (Deloitte 2018). In addition, research on thin capitalization has mostly been carried out using Australian data so that research on Australia's TCR can be found in many scientific papers.

Taylor & Richardson (2013) examine the determinants of capital structure in 812 public companies in Australia. In their research, multinationality, the use of tax havens, withholding taxes, and tax uncertainty are found to be the main determinants that affect the company's capital structure. In addition, supervision of corporate governance, the independence of the board of directors, organizational ownership, and the use of the Big-4 public accounting firms have a negative effect on thin capitalization. De Mooij and Hebous (2018) examine the impact of TCR on the company's debt ratio and the mitigation of default risk on companies in 60 countries. The results of this study find that regulations that limit interest are more effective in reducing the debt ratio. In addition, companies with higher tangible assets will be more responsive to TCR.

Christiana and Martani's (2016) research focus on discussing the determinants of thin capitalization practices on public companies in Indonesia for the 2010–2013 period. This study finds that the character of multinationality and the use of tax havens increase thin capitalization. Meanwhile, companies that disclose tax uncertainty and have high export sales have a low debt-to-equity ratio (DER). Companies tend to maintain their reputation to the public and government by reducing tax avoidance activities like thin capitalization. Nainggolan and Sari (2019) find that the ratio of interest-bearing debt to capital is still below 1. In addition, this study does not find a significant relationship between thin capitalization and tax aggressiveness.

The diversity of the results of these studies is one of the motivations for the researchers to find the appropriate variables that influence thin capitalization. Several studies on TCR have been carried out in Australia, so researchers analyze Indonesia and Australia's data together. This research analyzes the variables that affect the TCR by repeating previous studies. For consistency purposes, this study is extended to the latest Indonesia and Australia's data. Previous research were conducted when the TCR provisions had to be implemented, while this research is conducted when the provisions had been implemented for more than three years.

This study consists of five parts. The first part contains the research objectives and is followed by the development of hypotheses in the second part and the research methodology in the third part. The fourth section contains analysis and discussion of the results, and the fifth section contains conclusions and suggestions.

## 2 LITERATURE REVIEW

### 2.1 *Theoretical background*

Trade-off theory in capital structure explains how the choice of debt and capital composition can balance costs and benefits. In accordance with Miller Modigliani II's proposition, high debt will

increase the company's value, assuming that interest expense is a component of income deductions, thereby reducing taxes to be paid (tax shield). High debt will increase the company's value, but the company is faced with increasing potential financial distress. For this reason, the company will determine the level of debt that optimizes the benefits but at an acceptable level of financial distress risk. This theory explains incentives for companies to increase the debt value and benefit from the tax shield (Serrasqueiro & Caetano 2015). The practice of thin capitalization is carried out by increasing debt, which will increase interest expense as a deduction for income, thereby reducing the tax payable (Ezeoha & Ogamba 2010).

According to Haufler and Runkel (2012), the tax shield arises because the taxation system supports the deduction of interest expense in determining the tax base, whereas dividends (equity return) are not an expense that reduces the taxable income. This difference gives the company has an incentive to use debt to increase firm value, as long as the company still pays attention to potential financial distress. Egger et al. (2010) find that multinational companies with higher corporate tax rates in their home countries than in their affiliated countries will increase their debt-to-asset value by 3%-4%. Mintz and Weichenrieder (2010) also find a similar phenomenon in German multinational companies. Buettner et al. (2009) also find evidence that European multinational companies also increase their debt to minimize taxes.

The OECD (2015) categorizes the use of interest expenses from both the third party debt and the debt from related parties as the most common base erosion and profit shifting (BEPS) technique. In its report, the OECD (2013) explains that BEPS will harm three parties, namely the government, individual taxpayers, and businesses. The government will suffer losses because BEPS reduces tax revenues, and the government must increase costs to monitor taxpayer compliance.

## 2.2 *Thin capitalization in Indonesia and Australia*

Indonesia has regulated thin capitalization in Article 18, Section 3 of Law No. 7 of 1983 on Income Tax as amended several times and most recently formulated in Law No. 36 of 2008. The article states that "Director General of Taxes has the authority to re-determine the amount of income and deduction of income and determine debt in taxable income calculation for taxpayers who have special relationships with other taxpayers." Although Article 18, Section 3 has given authority to the DGT, in its implementation, there is no clarity regarding the limitation of debt and equity ratio (Darussalam and Kristiaji, 2015). The ambiguity occurs because the Minister of Finance Decree (KMK) No. 1002/KMK.04/1984 on Determination of the Debt and Capital Ratio for the Purpose of Imposing Income Tax, as an implementing regulation, is postponed according to KMK No. 254/KMK.01/1985.

To fill the legal vacuum and suppress the practice of thin capitalization, the Ministry of Finance issued a regulation on the debt and equity ratio through PMK No. 169 of 2015. Based on this regulation, the ratio between debt and capital is set at a maximum of 4:1. If the debt and equity ratio exceeds the predetermined ratio, the borrowing cost that can be recognized in calculating the taxable income is only the cost of the loan in accordance with the regulated ratio of debt and capital. Interest expense includes loan interest, discount or premium, additional costs, finance charges in finance leases, compensation costs, and foreign exchange differences. This regulation also describes certain types of companies that are not obliged to comply with TCR provisions, namely banking, financing institutions, insurance and reinsurance, oil and gas mining, companies with final income, and companies in the infrastructure sector. The implementing regulation of this PMK is contained in the Director General of Taxes Regulation (PER DJP) No. 25/PJ/2017 on Implementation of Determination of the Debt and Capital Ratio for the Purpose of Calculating Income Taxes and Procedures for Reporting Foreign Private Debt. In accordance with this PER DJP, companies are required to attach DER calculations and details of external debt from 2017 onwards. This regulation also stipulates that the interest that can be deductible is the interest on debt which meets the arm's length principle.

Australia has established TCR since 1936 in the Income Tax Assessment Act 1936 (ITAA). This regulation was replaced by the New Business Tax System (thin capitalization) Bill 2001, which

states that debt interest can only be tax deductible if the company's DER does not exceed 3:1 (Commonwealth Parliament & Parliament House 2013). Furthermore, Australia's TCR changed again in 2014, with the maximum DER for non-financial institutions being tightened to 1.5:1. According to Deloitte (2013), business players need to test their debt levels according to the new DER and evaluate debt capacity through asset revaluation or other balance sheet items. Companies that have exceeded the maximum limit are advised to recapitalize in order to prevent violations of new regulations.

Apart from the TCR, Australia also issued an additional procedure in the form of an arm's length debt test (ALDT). ALDT is one of the TCR regimes which is useful for providing tax concessions for non-financial companies that require DER above the maximum limit. Although it has been introduced since 2001, ALDT is not mandatory, so not many companies use this facility. It was recorded that in 2013, only 3% of companies in Australia applied for the use of ALDT in their tax system (Ernst and Young 2019).

### 2.3 *Previous studies*

De Mooij and Hebous (2018) analyze the impact of TCR on default risk. This study provides empirical evidence that TCR can effectively reduce the company's debt-asset ratio without increasing the risk of company default. The average ratio tends to be close to the ratio set by the government. This study also finds a faster response to TCR in industries with high tangible assets.

Taylor & Richardson (2013) examine the determinants of capital structure in publicly traded companies in Australia for the 2006-2009 period. This study finds a negative relationship between debt ratio and corporate governance, the independence of the board of directors, organizational ownership, and the use of the Big-4 public accounting firms. This research was conducted on 203 public companies listed on the Australian stock exchange.

Christiana & Martani (2016) replicate Taylor & Richardson's (2013) research on companies listed on the Indonesian stock exchange. This study discusses the determinants of thin capitalization practices in public companies in Indonesia for the 2010-2013 period. This study finds that the character of multinationality and the use of tax havens increase the company's thin capitalization. Companies that disclose tax uncertainty and have high export sales have a low DER. This is not in line with the research of Taylor & Richardson (2013). According to the researchers, the anomaly of result occurs because companies try to maintain their reputation in the long run and avoid aggressive tax avoidance.

### 2.4 *Research conceptual framework*

This study examines the determinants of thin capitalization and examines the moderating impacts of share ownership on thin capitalization, as illustrated in Figure 1.

This study tests the following variables as factors that determine thin capitalization: 1) multinationality, 2) tax haven, 3) exposure to tax uncertainty, and 4) foreign exposure. This study also tests the moderating effects of share ownership. The first moderating effect that will be tested is the moderating effect of foreign share ownership on the relationship between multinationality and thin capitalization. The second one is the moderating effect of foreign share ownership on the relationship between foreign exposure and thin capitalization.

### 2.5 *Hypothesis development*

#### 2.5.1 *Multinationality*

Companies that operate in several countries, or called multinational companies, are expected to try to conduct a tax efficiency on the parent entity and its subsidiaries. The main objective of multinational companies is to obtain the maximum profit and increase the company's value in one business group. The optimal profit is made by increasing the debt value because debt creates an interest expense that will reduce tax payable. In multinational companies, the cost of obtaining

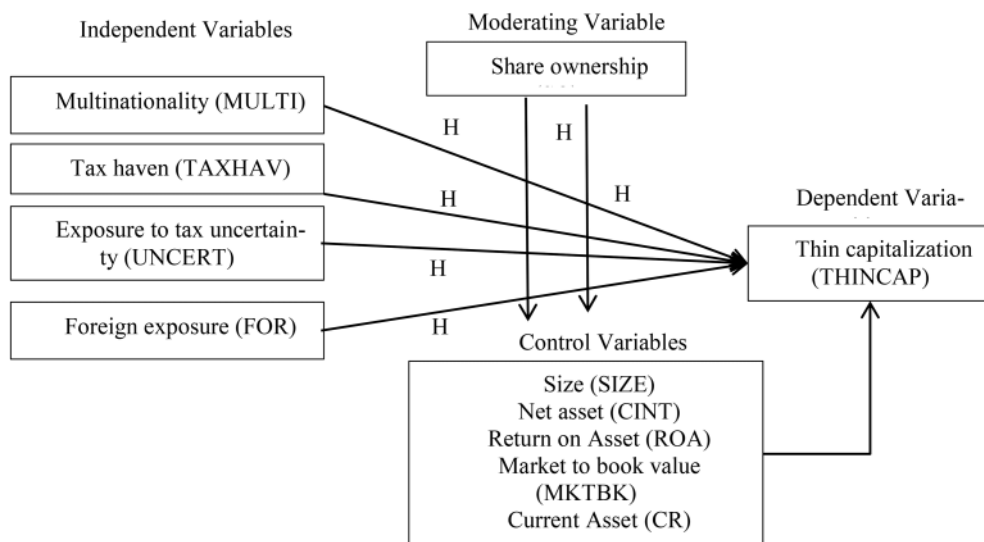


Figure 1. Conceptual framework.

debt is low because the cash flow of multinational companies is varied, and bankruptcy costs are low (Aggarwal & Kyaw, 2010). Thus, multinational companies are expected to have a higher thin capitalization value than similar entities without multinational characteristics.

This is supported by Buettner et al. (2009), who find that multinational companies in Europe have a wider opportunity to use debt for tax saving. In this study, multinational companies can have high debt levels because there are two accessible sources of debt, namely internal debt and external debt. Both types of debt are substitutes for each other, but the total impact is a higher debt on the capital structure (more thinly capitalization). Further research from Buettner et al. (2012) includes the behavior of multinational companies in OECD countries. In OECD countries, it is found that the practice of thin capitalization by using external debt is more frequent.

Dyrend et al. (2008), in their research in the United States, find that multinational companies proved to have a greater opportunity to implement tax avoidance strategies. These strategies include transfer pricing, intercompany debt, and transfer of intangible assets. Research by Merlo et al. (2019) shows that multinational companies are concerned about the existence of TCR in making their investment decisions. The existence of TCR regulations in a country decreases the country's opportunity to be selected as a place for investment by multinational companies. When a multinational company has decided to invest, it is estimated that there will be an increase in the debt value or an increase in thin capitalization.

However, the concept of tax avoidance through debt by multinational companies is not always applicable. Aggarwal and Kyaw's (2010) empirical research shows that multinational companies have a lower debt ratio than domestic companies. It is also found that companies with a higher the level of multinationality have lower debt. According to Aggarwal & Kyaw (2010), this is influenced by the additional company risk caused by overseas operating activities. Overseas operational activities create uncertainty due to the economic stability in which the investment is located, the regulatory uncertainty, and local cultural factors that can affect business sustainability. The effects of low cash flow variability, low bankruptcy costs, and more sources of debt acquired by multinational companies cannot compensate for the potential risk of these overseas operating activities. In addition, research related to multinational companies and the value of debt often ignores the effects of corporate dividend policies. A high dividend payout ratio will encourage greater use of debt because internal funding is relatively small. Based on this literature, it can be concluded that

there is a relationship between multinationality and the value of debt. However, there is still debate about the direction of the relationship. Therefore, the first hypothesis in this study is:

*H1. Multinational companies have an impact on thin capitalization.*

### 2.5.2 Tax haven

Tax haven countries have come to the attention of G-20 countries, the OECD, and tax authorities in various countries because it creates the opportunity to avoid taxes (Gravelle 2015). According to Levin (2012), this opportunity is very significant in influencing the value of tax savings and increasing profit after tax. Hanlon & Heitzman (2010) conclude that tax havens play an important role as a location for placing debt and investment, as well as other activities that affect the value of income both in accounting and tax. Tax haven countries can be used to securing assets and placing hedge funds which are one of the main components in the cost of capital. Banks see the use of tax havens as a positive thing because they help companies save more money and increase their debt capacity. So, banks can charge lower costs of debt to companies with affiliates in tax haven countries.

The bankers' view supporting the use of tax haven countries also drives the increase in the thin capitalization value. Richardson et al. (2020) find empirical evidence that confirms the positive relationship between tax haven countries and thin capitalization. Using data on 7,684 loan facilities, Richardson et al. (2020) conclude that companies operating in tax haven countries depend more on debt funding through banks than on increasing debt through bonds. In addition, by having better managerial abilities, the value of debt can increase. This phenomenon is caused by an element of management ability in determining credit risk (Cornaggia et al. 2017, Bonsall et al. 2017). Richardson & Taylor (2015) also find a positive relationship between thin capitalization and the use of tax haven countries.

From these studies, it can be obtained the fact that companies with tax haven characteristics get various loan facilities so that funding through debt becomes easy and cheap. Therefore, the second hypothesis of this study is:

*H2. Companies with subsidiaries in tax haven countries have an impact on thin capitalization*

### 2.5.3 Tax uncertainty

The component of uncertainty in taxes will increase the company's potential to have a tax penalty in the future. The uncertainty will increase when the tax authority, based on the tax examination, states the tax payable that is different from the company's calculation. This difference in tax calculation will cause tax dispute. Companies that have good internal information have a better chance of winning the dispute process. Gallemore & Labro (2015) find that companies with good internal information can reduce the effective tax value. Therefore, companies that disclose tax uncertainty have a higher chance of tax avoidance.

This phenomenon can be observed in research by Dyreng et al. (2014), who find that the higher tax uncertainty will result in higher tax avoidance. According to Dyreng et al. (2014), the effect of uncertainty on tax avoidance will be stronger when the company has more intangible assets. More specific research related to thin capitalization and tax uncertainty was carried out by Taylor et al. (2011). This study finds that the disclosure of uncertainty information has a significant impact on the company's thin capitalization structure. According to the researchers, companies will disclose information that helps manage tax risk and credit risk.

However, Christiana & Martani's (2016) research on companies in Indonesia provides different results. This study finds that companies that disclose tax uncertainty have a lower thin capitalization. It is argued that the risk of damage to reputation is the cause of the inconsistency of the results of this study compared to previous studies. From the above arguments, it can be concluded that the uncertainty of tax information is an important component of taxation. However, the direction of the effect of disclosing tax uncertainty on the value of thin capitalization is still under debate. On this basis, the third hypothesis is formulated as follows:

*H3. Disclosure of tax uncertainty in companies has an impact on thin capitalization*

#### 2.5.4 Foreign exposure

According to the WTO (2016), access to funding is a crucial component for companies with an export focus because this activity requires a large upfront sunk cost. This upfront sunk cost is used to produce goods to be sold (Manova 2013) and fulfill foreign regulations such as product certification and market research. Export activities also extend the cash conversion cycle because these activities have to go through a longer process of delivering goods than similar domestic companies. Most of these funding needs cannot be met through the equity component and operating cash flow (Foley & Manova 2015; Manova et al. 2015; Manova 2013). Therefore, companies engaged in the export sector have a relatively higher debt value than similar domestic companies.

Although the company's funding needs will increase, the scope of movement for companies with foreign transactions is also wider than companies that only conduct domestic transactions. Li et al. (2011) finds that global companies that are more diversified will get a higher valuation than domestic companies, so the cost of financing through debt will be lower. This facilitates the practice of thin capitalization because the obstacles to borrowing money are decreasing. Nguyen and Almodóvar (2018) find that companies with export purposes will be encouraged to use debt instruments to support their activities and reduce company risk.

For the Indonesian context, Christiana & Martani (2016) find that companies with export transactions have a lower thin capitalization value. This inconsistency, according to the researchers, is due to the use of tax avoidance methods other than thin capitalization. One explanation is that export transactions are dominated by third party transactions. Third party transactions are generally carried out in accordance with the prevailing market value so that they cannot be used as an instrument of profit shifting. From this evidence, there is one thing in common that the export value impacts thin capitalization. However, the direction of the relationship is still unpredictable. Therefore, the fourth hypothesis is formulated as follows:

*H4. International exposure to companies has an impact on thin capitalization.*

#### 2.5.5 Foreign share ownership (moderating variable)

The type of investor will influence the company's behavior in making policies, including the tax planning policy. Multinational companies are owned by many investors from different countries which have a different tax rate. Therefore, the more foreign investors in the company means that the company's multinationality level will also increase. On the other hand, investors will demand a higher return value because they have to bear the varied risks of the company's operations which are spread in various places. High demands for returns from investors encourage the company's management to practice tax avoidance. Ji et al. (2015) and Alzoubi (2016) find that aggressive tax planning is carried out by companies that are dominated by foreign owners. On this basis, the fifth hypothesis is:

*H5. Foreign shareholders will strengthen the relationship between multinationality and thin capitalization.*

Besides affecting the level of multinationality, foreign ownership encourages companies to enter international markets (exports). The urge to enter foreign markets arises from an increased productivity in companies with foreign shareholders. This is in accordance with Bircan's (2019) research which states that foreign ownership structures can increase company's production at low costs. Therefore, companies will be more competitive and able to enter foreign markets.

The increase in productivity is triggered by the transfer of technology and the ability provided by foreign investors to the company. Research by Hanley & Monreal- Pérez (2012) and Bustos (2011) show that there is a positive relationship between the transfer of technology and the export value of the company. In addition, Girma et al. (2015) find a positive heterogeneous relationship between export activities in all types of company structures and foreign ownership. It can be concluded that foreign ownership will increase the value of foreign exposure and strengthen the positive relationship between foreign exposure and thin capitalization. Therefore, the sixth hypothesis in this study is:



*H6. Ownership of foreign shares will strengthen the relationship between foreign exposure and thin capitalization.*

### 2.5.6 Control variables

This study uses control variables that are adopted from Taylor & Richardson's (2013) research. These variables include the value of capital intensity (CINT), company size (SIZE), ROA, the ratio of market value to book value (MKTBK), current ratio (CR), and corporate tax rates in each country (TR). The values of the CINT, SIZE, CR, and TR variables are expected to be positive. Meanwhile, the directions of other variables are not estimated because Taylor & Richardson (2013) find that there are differences in the directions of MKTBK and ROA.

## 3 METHODS

### 3.1 Sample

This study used the purposive sampling method, which applied several criteria to select sample companies (Sekaran & Bougie 2016). The criteria used to determine the research sample were:

1. The company is listed on the Indonesian or Australian capital market, and its shares were actively traded in the 2015-2018 period. The Indonesian capital market is the Indonesia Stock Exchange (IDX), and the Australian capital market is the Australian Stock Exchange (ASX).
2. The sample companies are members of the manufacturing industry. In this research, the manufacturing industry was limited to Automobiles and Parts, Beverages, Chemicals, Electronic and Electronic Equipment, Food Producers, Forestry and Paper, General Industrials, Household Goods and Home Construction, Personal Goods, Pharmaceuticals and Biotechnology, Technology Hardware and Equipment, and Tobacco. This study only used the manufacturing industry because thin capitalization is only relevant to this industry. Companies in the finance and mining industries have a debt component different from other industries or have operating activities that make their debt value high. In general, manufacturing companies do not have industry-specific regulations that differ between countries, so a comparison between Indonesia and Australia is easier to do.
3. The sample companies have complete financial and company information for the 2015–2018 period.

This study used the 2015–2018 data to include the value of thin capitalization before and after the issuance of PMK No. 169. In addition, this time frame is also close to the implementation of the new TCR in Australia. Data collection was conducted using the archival method, where researchers use administrative data and documents as data sources (Sekaran & Bougie 2016). Sources of data were accessed through the Thomson Reuters database and the company's annual report on the company's official website.

Model 1:

$$THINCAP_{i,t} = a_0 + \beta_1 MULTI_{i,t} + \beta_2 TAXHAV_{i,t} + \beta_3 UNCERT_{i,t} + \beta_4 FOR_{i,t} + \beta_5 SIZE + \beta_6 CINT_{i,t} + \beta_7 ROA_{i,t} + \beta_8 MKTBK_{i,t} + \beta_9 CR_{i,t} + \beta_{10} TR_{i,t} + e_{i,t}$$

Model 2:

$$THINCAP_{i,t} = a_0 + \beta_1 MULTI_{i,t} + \beta_2 FOR_{i,t} + \beta_3 SO + \beta_4 MULTI_{i,t} * SO_{i,t} + \beta_5 FOR * SO_{i,t} + \beta_6 SIZE + \beta_7 CINT_{i,t} + \beta_8 ROA_{i,t} + \beta_9 MKTBK_{i,t} + \beta_{10} CR_{i,t} + \beta_{11} TR_{i,t} + e_{i,t}$$

The details of the variables in the models are explained as follows:

- THINCA<sub>i,t</sub> : The value of debt to equity ratio.
- MULTI<sub>i,t</sub> : Dummy variable, with the value of “1” for companies that have at least one subsidiary domiciled outside the country of origin, and “0” for companies that do not have subsidiaries domiciled outside the country of origin.
- TAXHAV<sub>i,t</sub> : Dummy variable, with the value of “1” for companies with at least one subsidiary domiciled in a tax haven country, and “0” for companies that do not have subsidiaries in a tax haven country.
- UNCERT<sub>i,t</sub> : Dummy variable, with the value of “1” for companies stating that there is “Tax Uncertainty Exposure” in Notes to Financial Statements (CALK), and “0” for companies that do not disclose tax uncertainty statements.
- FOR<sub>i,t</sub> : Foreign exposure, expressed in export sales divided by the company’s total sales in a period *t*.
- SIZE<sub>i,t</sub> : Company size, calculated based on the natural log of total assets in a period *t*.
- CINT<sub>i,t</sub> : This variable is calculated based on the net value of PPE divided by total assets in the previous period (TAT-1). It describes the company’s capital intensity.
- ROA<sub>i,t</sub> : Return on assets.
- MKTBK<sub>i,t</sub> : Market value per company’s share divided by book value per company’s share. The value is calculated based on the figures obtained at the end of the applicable financial year.
- CRI<sub>i,t</sub> : Current ratio.
- SO<sub>i,t</sub> : The percentage of share ownership by foreigners in the company.
- TRI<sub>i,t</sub> : The corporate tax rate in each country.

The data was processed using the OLS (Ordinary Least Square) method by utilizing the STATA software. The OLS method was chosen because there were no autocorrelation and heteroscedasticity problems from the regression results.

## 4 RESULTS AND DISCUSSION

### 4.1 Sample

This study used data from publicly listed companies in Indonesia and Australia in the 2015–2018 period. Table 1. describes the research sampling process. By collecting data from Datastream, the authors obtained 608 companies from Indonesia and Australia, 220 of them are companies from Indonesia. These 608 companies met the criteria for active shares in IDX or ASX in the 2015–2018 period and their manufacturing industry operations. Further processing carried out by the researchers was only related to the completeness of the data and eliminating observations with extreme values (outliers) such as negative DER values.

Table 1. Sampling process.

Description	Data (n)		
	Indonesia	Australia	Total
Data available in Datastream	220	388	608
Minus: companies with incomplete data	(80)	(303)	(383)
Total companies with complete data	140	85	(225)
Minus: companies with data outliers	(9)	(0)	(9)
Total companies used	131	85	216
Companies’ data in 4 years	524	340	664

To better understand the data to be processed, company data observations for four years were summarized according to their characteristics and were analyzed statistically. Data on the companies' characteristics are arranged in Table 2.

Table 2. Characteristics of companies in Indonesia and Australia.

Description	Data (N)					
	Indonesia			Australia		
	n	%	THINCAP	n	%	THINCAP
Multinationality (MULTI)						
1	156	29.8%	0.239	156	45.9%	0.189
0	368	70.2%	1.546	184	54.1%	0.106
Total	524	100%		340	100%	
Tax Haven (TAXHAV)						
1	120	22.9%	0.263	76	22.4%	0.244
0	404	77.1%	1.422	264	77.6%	0.116
Total	524	100%		340	100%	
Tax Uncertainty (UNCERT)						
1	147	28.1%	0.699	48	14.1%	0.182
0	377	71.9%	1.335	292	85.9%	0.138
Total	524	100%		340	100%	
Foreign Exposure (FOR)						
1	287	54.8%	0.477	149	43.8%	0.220
0	237	45.2%	1.980	191	56.2%	0.107
Total	524	100%		340	100%	
Foreign Ownership (SO)						
More than 50%	129	24.6%	0.301	10	2.9%	0.042
20–50%	61	11.6%	1.444	25	7.4%	0.188
Less than 20%	334	63.8%	1.435	305	89.7%	0.144
Total	524	100%		340	100%	
Year						
2015	131	25%	1.316	85	25%	0.114
2016	131	25%	1.199	85	25%	0.150
2017	131	25%	1.138	85	25%	0.148
2018	131	25%	0.974	85	25%	0.164
Total	524	100%		340	100%	

Table 3. Regression result of model 1.

Variable	Predicted Sign	Coefficient	t	P> t
MULTI	–	0.7407	–3.21	0.001***
TAXHAV	–	0.2457	–2.02	0.044**
UNCERT	–	0.3813	–1.05	0.293
FOR	–	0.0018	–3.29	0.001***
CINT	+	–0.0015	–0.76	0.447
SIZE	+	0.8897	2.07	0.038**
CR	+	–0.3541	–3.22	0.001***
ROA	+/–	–0.0010	–0.34	0.733
MKTBK	+/–	–0.0132	–1.97	0.049**
TR	+	–7.9307	–2.91	0.004***
Intercept	+	–0.1172	–0.31	0.895

F statistic 0.0041

R-squared 0.0193

\*\* Significant at 5% level

\*\*\* Significant at 1% level

## 4.2 Regression analysis

The regression results of model 1 can be seen in Table 3. Overall, the regression model is significant, as indicated by the F-statistic value that is less than 0.05. This means that, in the regression model, the complete model is statistically accepted. The variables that are statistically significant at the 1% level are MULTI and FOR. So, hypothesis 1 and hypothesis 4 are accepted with a significance level of 1%. The TAXHAV variable proved to be significant at the 5% level, but the direction is not in line with the prediction. Thus, hypothesis 2 is rejected. On the other hand, the UNCERT variable cannot explain the thin capitalization phenomenon in Indonesia and Australia. So, hypothesis 3 cannot be proven in this study.

The relationship direction of the TAXHAV variable shows a negative sign, which is in contrast to the initial prediction. Companies with subsidiaries in tax haven countries have low thin capitalization values. There are several explanations for the results of this study. First, there is a downward trend in tax avoidance practices in companies in general, as in Thomsen & Watrin's (2018) research that finds a decrease in tax avoidance in companies in the United States and Europe. This argument is evidenced by the low gap between the statutory tax rate and the companies' effective tax rate. Further analysis of these findings shows that companies with the characters of multinationality, tax haven, and foreign exposure have an effective tax rate that is not much different or even higher than the statutory tax rate. Thomsen & Watrin (2018) explain that the existence of CFC (controlled foreign company) regulations as well as the existence of quality financial report audits and reliable reporting practices in a country increase tax compliance in this particular country.

Second, the countries in which companies are established have established appropriate regulations to increase companies' costs in doing tax evasion. Therefore, the benefits of shifting profits are low. This argument is conveyed in Mardan & Stimmelmayer's (2020) research, which shows that the government can influence the amount of costs to shift profits by setting the appropriate tax rate.

Third, there is a normalization pattern of expenditures in companies in the 2015–2018 period. Taylor & Richardson's (2013) research, which is the reference for this study, uses company data for 2006–2009, and Christiana & Martani (2016) use the 2010–2013 data. According to Andersen et al. (2016), companies generally carry out normalization of expenditures after having high debt levels in the previous years. There is a possibility that the 2015–2018 period is a normalization period so that the debt is low after the company had high debt in the previous period.

Lastly, companies pay more attention to reputation. According to Blaufus et al. (2019), companies that carry out tax evasion will get negative abnormal returns in the market. On the other hand, investors do not only consider the company's level of success in reducing the taxes paid but also the overall return on investment. Therefore, when the tax regulations are clear, the company will obey the regulations in order to protect its reputation.

The UNCERT variable is not proven to have a significant effect on the value of thin capitalization. The results of Thomsen & Watrin's (2018) research can answer this anomaly. Thomsen & Watrin (2018) find that a strong reporting system in a country can help this particular country to enforce taxation. In accounting, the UNCERT variable is regulated in paragraph five of IAS 12 Income Tax and PSAK 46 Accounting for Income Taxes in the Indonesian accounting standards. So, the disclosure of uncertainty can be seen as compliance with accounting regulations and not an indication of tax avoidance.

For the control variables, company size (SIZE), market to book ratio (MKTBK), CR, and company tax rate (TR) have a significant effect on the THINCAP variable. Meanwhile, capital intensity (CINT) and ROA have not been proven to be significant on the independent variable.

The regression results of model 2 can be seen in Table 4.4. The model to test the moderating effects of foreign ownership has an F-statistic value that is less than 0.05 and an R<sup>2</sup> value of 2.31%. The regression results show that the SO variable has a significant moderating effect on the relationship between FOR and thin capitalization, which is in line with the initial prediction. Hypothesis 6 can be proven and is in line with Girma et al. (2015), Hanley & Monreal- Pérez (2012), and Bustos (2011). It is proven that companies with higher foreign ownership have a higher relationship between foreign sales and thin capitalization.

Table 4. Regression result of model 2.

Variable	Predicted Sign	Coefficient	t	P> t
MULTI	–	–1.0406	–2.95	0.003***
FOR	–	–0.0024	–3.13	0.002***
SO		–0.1839	–2.15	0.032**
MULTISO	+	0.1049	1.57	0.118
FORSO	+	0.00003	2.33	0.020**
CINT	+	–0.0003	–0.15	0.880
SIZE	+	0.0989	2.27	0.024**
CR	+	–0.0004	–3.13	0.002***
ROA	+/-	–0.0136	–0.12	0.904
MKTBK	+/-	–0.0136	–1.96	0.050**
TR	+	–0.9146	–3.02	0.003***
Intercept		–0.0714	–0.08	0.936

F statistic 0.0135

R-squared 0.0231

\*\* Significant at 5% level

\*\*\* Significant at 1% level

On the other hand, the interaction between SO and MULTI characteristics is not significant. Companies with higher foreign ownership do not encourage companies to have subsidiaries abroad. This can be driven by the factor of maintaining reputation rather than considering investment returns and avoiding legal bondage due to thin capitalization violations that are easy to identify (Blaufus et al. 2019). Foreign exposure is calculated based on the value of exports that such activities can also be used for other types of tax avoidance, such as non-debt transfer pricing. According to Taylor & Richardson (2012), transfer pricing is the biggest determinant of tax avoidance.

The direction of the moderating variables of SO dan FOR has met the expectations. The negative coefficient of SO indicates that the company decreases thin capitalization when foreign shareholders own the company. However, when this foreign share ownership coincides with multinationality and foreign exposure characteristics, the direction changes to a positive (see: MULTISO and FORSO coefficients). This means that the negative relationship between MULTI and THINCAP will weaken when foreign shareholders are present. Likewise, the negative relationship between FOR and THINCAP will weaken when foreign investors own the company.

#### 4.3 Sensitivity analysis

Sensitivity analysis was performed to ensure that the regression results were analyzed in a robust and consistent manner. Sensitivity analysis was conducted by developing a new regression model for each individual independent variable. There were four new regression models that were tested. The entire results of the sensitivity test show consistency between the models that are processed jointly or separately. The MULTI, TAXHAV, FOR, and SO variables are significant at the 1% level. Meanwhile, the UNCERT variable remains insignificant. For the interaction, the MULTISO variable remains insignificant, and the FORSO variable remains significant at the 5% level. However, the MULTISO variable shows a significant increase in its influence. The variable was originally valued at  $P>|t| = 0.118$ , and changes to  $P>|t| = 0.104$ . This value is close to the significance level of 10%. It can be concluded that the MULTISO interaction has the potential to become significant under certain conditions. There is no change in the sign of coefficient in this sensitivity analysis.

## 5 CONCLUSION

This study aims to analyze the determinants of the thin capitalization practice and the moderating effects of foreign share ownership. This research was conducted on public companies in Indonesia and Australia in the 2015-2018 period. The results of regression analysis show that the

characteristics of multinationality, tax haven, and foreign exposure have a significant effect in reducing the value of thin capitalization. The findings on multinationality are in line with Aggarwal and Kyaw's (2010) research, while the findings on foreign exposure are in line with Christiana and Martani's (2016) study. Although tax haven has a significant impact on thin capitalization, the result is not in line with the previous studies. One of the reasons is that companies maintain their reputation by avoiding to have subsidiaries in tax haven countries. Besides, companies use subsidiaries in tax haven countries not for finance purposes but corporate action transactions like merger and acquisition. Inconsistencies in results are also found in the characteristic of tax uncertainty, which may occur because the disclosure of tax uncertainty is not for tax avoidance purposes but a compliance with the accounting standards.

Foreign ownership in the company does not affect the relationship between multinationality and thin capitalization, which is not in line with prior studies. Reputation, return on investment, and risk of legal entrapment due to violation of thin capitalization are believed to be the causes of this result. On the other hand, the value of foreign ownership is proven to affect the increase in the relationship between foreign exposure and thin capitalization. This is driven by the direct role of foreign owners in increasing the company's ability to enter the global market.

This study has several limitations, which hopefully can be improved in future studies. This research uses public data, whereas the TCR provisions are also applied to companies not listed on the stock exchange. Further research can increase the sample of private companies to expand the research scope. The operationalization of the multinationality variable is only able to show the difference between companies with foreign subsidiaries and companies without foreign subsidiaries. Further research can divide companies into three categories, namely companies with foreign subsidiaries, companies that are foreign-owned subsidiaries in Indonesia, and companies without foreign subsidiary relations. Operationalization of the tax uncertainty variable only captures data from the post-audit Notes to Financial Statements. The data is subject to change because it has not been audited by the tax authorities. For example, a company that does not disclose uncertainty may not necessarily have no tax cases in the future. Future research can reduce the uncertainty of this variable by adding an appropriate control variable.

This research is unable to explain the effect of other relevant tax regulations such as regulations related to Controlled Foreign Company (CFC), which obliges companies to calculate income from deemed dividends. This regulation can influence the characteristic of multinationality because this regulation is relevant for companies with foreign subsidiaries. Therefore, further research can develop a model for conducting a more comprehensive regulatory analysis. So, the effectiveness and contribution of regulations to the Indonesian tax system can be viewed more objectively and thoroughly. In addition, the results indicate that there is an effort to avoid taxes through non-debt transfer pricing, which can be the focus of further research.

## REFERENCES

- Aggarwal, R. & N. A. Kyaw. 2010. Capital structure, dividend policy, and multinationality: theory versus empirical evidence. *International Review of Financial Analysis* 19(2): 140–150.
- Alzoubi, E. S. S. 2016. Ownership structure and earnings management: Evidence from Jordan. *International Journal of Accounting & Information Management* 24(2): 135–161.
- Andersen, A. L., C. Duus & T. L. Jensen. 2016. Household debt and spending during the financial crisis: Evidence from danish micro data. *European Economic Review* 89: 96–115.
- Bircan, C. 2019. Ownership structure and productivity of multinationals. *Journal of International Economics* 116: 125–143.
- Blaufus, K., A. Möhlmann & A. N. Schwäbe. 2019. Stock price reactions to news about corporate tax avoidance and evasion. *Journal of Economic Psychology* 72: 278–292.
- Blaufus, K., M. Braune, J. Hundsdoerfer & M. Jacob. 2015. Does legality matter? the case of tax avoidance and evasion. *FAccT Center Working Paper* Nr. 19/2015.
- Blouin, J., H. Huizinga, L. Laeven & G. Nicodème. 2014. Thin capitalization rules and multinational firm capital structure. *CESifo Working Paper* No. 4695.
- Bonsall, S. B., E. R. Holzman & B. P. Miller. 2017. Managerial ability and credit risk assessment. *Management Science* 63(5): 1425–1449.

- Buettner, T., M. Overesch, U. Schreiber & G. Wamser. 2009. Taxation and capital structure choice – evidence from a panel of german multinationals. *Economics Letters* 105(3): 309–311.
- Buettner, T., M. Overesch, U. Schreiber and G. Wamser. 2012. The impact of thin-capitalization rules on the capital structure of multinational firms. *Journal of Public Economics* 96(11–12): 930–938.
- Bustos, P. 2011. Trade liberalization, exports, and technology upgrading: evidence on the impact of MERCOSUR on Argentinian Firms. *The American Economic Review* 101(1): 304–340.
- Christiana, D. & D. Martani. 2016. Determinan praktik thin capitalization listed companies di Indonesia 2010–2013. Paper presented at *Konferensi Regional Akuntansi (KRA) III*, Jember, Indonesia.
- Cornaggia, K. J., G. V. Krishnan, & C. Wang. 2017. Managerial ability and credit ratings. *Contemporary Accounting Research* 34(4): 2094–2122.
- Darussalam, D. & B. B. Kristiaji. 2015. *Telaah konstruktif debt to equity ratio di indonesia*. Jakarta: Ikatan Akuntan Indonesia.
- De Mooij, R. & S. Hebous. 2018. Curbing corporate debt bias: Do limitations to interest deductibility work? *Journal of Banking and Finance* 96: 368–378.
- Deloitte. 2018. *Taxation and investment in Australia 2018*. Deloitte.
- Deloitte. 2013. *Budget 2013-14 targets debt funding by multinationals*. Deloitte.
- Direktorat Jenderal Pajak. 2017., *Peraturan direktur jenderal pajak nomor PER-25/PJ/2017 tentang pelaksanaan penentuan besarnya perbandingan antara utang dan modal perusahaan untuk keperluan penghitungan pajak penghasilan dan tata cara pelaporan utang swasta luar negeri*. Jakarta: Direktorat Jenderal Pajak.
- Dyreng, S. D., M. Hanlon & E. L. Maydew (2008). Long-run corporate tax avoidance. *The Accounting Review* 83(1): 61–82.
- Dyreng, S., M. Hanlon & E. L. Maydew. 2014. *Rolling the dice: When does tax avoidance results in tax uncertainty?*
- Egger, P., W. Eggert, C. Keuschnigg & H. Winner. 2010. Corporate taxation, debt financing and foreign-plant ownership. *European Economic Review* 54(1): 96–107.
- Ernst and Young. 2019. *Australian tax office issues draft ruling on thin capitalization arm's length debt test*. EYGM Limited.
- Ezeoha, A. E. & E. Ogamba. 2010. Corporate tax shield or fraud? insight from nigeria. *International Journal of Law and Management* 52(1): 5–20.
- Foley, C. F. & K. Manova. 2015. International trade, multinational activity, and corporate finance. *Annual Review of Economics* 7(1): 119–146.
- Gallimore, J. & E. Labro. 2015. The importance of the internal information environment for tax avoidance. *Journal of Accounting and Economics* 60(1): 149–167.
- Girma, S., Y. Gong, H. Görg & S. Lancheros. 2015. Investment liberalisation, technology take-off and export markets entry: Does foreign ownership structure matter? *Journal of Economic Behavior & Organization* 116: 254–269.
- Gravelle, J. G. 2015. *Tax havens: International tax avoidance and evasion*. Washington: Congressional Research Service.
- Gresik, T. A., D. Schindler & G. Schjelderup. 2017. Immobilizing corporate income shifting: Should it be safe to strip in the harbor? *Journal of Public Economics* 152: 68–78.
- Hanley, A. & J. Monreal-Pérez. 2012. Are newly exporting firms more innovative? findings from matched spanish innovators. *Economics Letters* 116(2): 217–220.
- Hanlon, M. & S. Heitzman. 2010. A review of tax research. *Journal of Accounting and Economics* 50(2–3): 127–178.
- Haufler, A. & M. Runkel. 2012. Firms' financial choices and thin capitalization rules under corporate tax competition. *European Economic Review* 56(6): 1087–1103.
- Haufler, A., M. Mardan & D. Schindler. 2018. Double tax discrimination to attract FDI and fight Profit shifting: The role of CFC rules. *Journal of International Economics* 114: 25–43.
- Ji, X. D., K. Ahmed & W. Lu. 2015. The impact of corporate governance and ownership structure reforms on earnings quality in China. *International Journal of Accounting & Information Management* 23(2): 169–198.
- Kementerian Keuangan Republik Indonesia. 1984. *Keputusan menteri keuangan republik indonesia nomor 1002/KMK.04/1984 tentang penentuan perbandingan antara hutang dan modal sendiri untuk keperluan pengenaan pajak penghasilan*. Jakarta: Kementerian Keuangan Republik Indonesia.
- Kementerian Keuangan Republik Indonesia. 1985. *Keputusan menteri keuangan republik indonesia nomor 254/KMK.01/1985 tentang penundaan pelaksanaan keputusan menteri keuangan republik indonesia nomor 1002/KMK.04/1984 tanggal 8 Oktober 1984 tentang penentuan perbandingan antara hutang dan modal sendiri untuk keperluan pengenaan pajak penghasilan*. Jakarta: Kementerian Keuangan Republik Indonesia.

- Kementerian Keuangan Republik Indonesia. 2015. *Peraturan menteri keuangan republik indonesia nomor 169/PMK.010/2015 tentang penentuan besarnya perbandingan antara utang dan modal perusahaan untuk keperluan penghitungan pajak penghasilan*. Jakarta: Kementerian Keuangan Republik Indonesia.
- Levin, C. 2012. *Statement of senator cal levin (D-Mich) before U.S. Senate Permanent Subcommittee on Investigations on Offshore Profit Shifting and the U.S. Tax Code*.
- Li, S., J. Qiu & C. Wan. 2011. Corporate globalization and bank lending. *Journal of International Business Studies* 42: 1016–1042.
- Manova, K. 2013. Credit constraints, heterogeneous firms, and international trade. *The Review of Economic Studies* 80(2): 711–744.
- Manova, K., S. J. Wei & Z. Zhang. 2015. Firm Exports and multinational activity under credit constraints. *Review of Economics and Statistics* 97(3): 574–588.
- Mardan, M. 2017. Why countries differ in thin capitalization rules: The role of financial development. *European Economic Review* 91: 1–14.
- Mardan, M. & M. Stimmelmayer. 2020. Tax competition between developed, emerging, and developing countries – same same but different? *Journal of Development Economics* 146.
- Merlo, V., N. Riedel & G. Wamser. 2019. The impact of thin-capitalization rules on the location of multinational firms' foreign affiliates. *Review of International Economics* 28(1): 35–61.
- Mintz, J. M & A. J. Weichenrieder. 2010. *The indirect side of direct investment: Multinational company finance and taxation*. Cambridge: The MIT Press.
- Modigliani, F. & M. H. Miller. 1963. Corporate income taxes and the cost of capital: A Correction. *The American Economic Review* 53(3): 433–443.
- Møen, J., D. Schindler, G. Schjelderup & J. Tropina. 2011. International debt shifting: Do multinationals shift internal or external debt? *CESifo Working Paper* No. 3519.
- Nainggolan, C. & D. Sari. 2019. Kepentingan asing, aktivitas internasional, dan thin capitalization: pengaruh terhadap agresivitas pajak di Indonesia. *Jurnal Akuntansi dan Bisnis* 19(2): 147–159.
- Neck, R., J. U. Wächter & F. Schneider. 2012. Tax avoidance versus tax evasion: On some determinants of the shadow economy. *International Tax and Public Finance* 19(1): 104–117.
- Nguyen, Q. T. K. & P. Almodóvar. 2018. Export intensity of foreign subsidiaries of multinational enterprises: The role of trade finance availability. *International Business Review* 27(1): 231–245.
- OECD. 2013. *Action plan on base erosion and profit shifting*. Paris: OECD Publishing.
- OECD. 2015. *Limiting base erosion involving interest deductions and other financial payments, Action 4 – 2015 Final Report*. Paris: OECD Publishing.
- Overesch, M. & G. Wamser. 2010. Corporate tax planning and thin-capitalization rules: Evidence from a quasi-experiment. *Applied Economics* 42(5): 563–573.
- Republik Indonesia. 2008. *Undang-undang republik indonesia nomor 36 tahun 2008 tentang perubahan keempat atas undang-undang nomor 7 tahun 1983 tentang pajak penghasilan*. Jakarta: Republik Indonesia.
- Richardson, G. & G. Taylor. 2015. Income shifting incentives and tax haven utilization: evidence from multinational U.S. Firms. *The International Journal of Accounting* 50(4): 458–485.
- Richardson, G., G. Taylor & I. Obaydin. 2020. Does the use of tax haven subsidiaries by u.s. multinational corporations affect the cost of bank loans? *Journal of Corporate Finance* 64.
- Sekaran, U. & R. Bougie. 2016. *Research methods for business: A skill-building approach* (7th Ed.), West Sussex: John Wiley & Sons Ltd.
- Serrasqueiro, Z. & A. Caetano. 2015. Trade-off theory versus pecking order theory: capital structure decisions in a peripheral region of Portugal. *Journal of Business Economics and Management* 16(2): 445–466.
- Taylor, G. & G. Richardson. 2012. International corporate tax avoidance practices: evidence from australian firms. *The International Journal of Accounting* 47(4): 469–496.
- Taylor, G. & G. Richardson. 2013. The determinants of thinly capitalized tax avoidance structures: evidence from australian firms. *Journal of International Accounting, Auditing and Taxation* 22(1): 12–25.
- Taylor, G., G. Tower & M. Van Der Zahn. 2011. The influence of international taxation structures on corporate financial disclosure patterns. *Accounting Forum* 35(1): 32–46.
- Thomsen, M. & C. Watrin. 2018. Tax avoidance over time: a comparison of European and U.S. Firms. *Journal of International Accounting, Auditing and Taxation* 33: 40–63.
- Wamser, G. 2014. The impact of thin-capitalization rules on external debt usage – a propensity score matching approach. *Oxford Bulletin of Economics and Statistics* 76(5): 764–781.
- Weichenrieder, A. J. & H. Windischbauer, H. 2008. Thin-capitalization rules and company responses – experience from German legislation. *CESifo Working Paper* No. 2456.
- Wier, L. 2020. Tax-motivated transfer mispricing in south africa: direct evidence using transaction data. *Journal of Public Economics* 184.



## Tax rates reduction, tax understanding, and online tax services to MSME taxpayer compliance during Covid-19

K. Ardillah\* & M. Farhanah

*Accounting, Faculty of Business and Communication, Institut Teknologi dan Bisnis Kalbis, East Jakarta*

**ABSTRACT:** One of the government's policies is to reduce the tax rate, which is expected to make public entrepreneurs obedient to pay taxes, understand tax regulations and take advantage of technological development by conducting online tax services both in registration, reporting, and tax payment. This study aims to determine the effect of tax rates reduction, tax understanding, and online tax service on MSME taxpayer's compliance. The study population is MSME that is registered at Pratama-Sunter's Tax Office. The questionnaire was used as a data collection method in this study. The selection sample used the random sampling method by taking 99 respondents using the Slovin formula. This study uses data quality tests, classic assumption tests, and hypothesis testing. The results show that the tax rates reduction, tax understanding, and online tax service have a positive and significant effect on MSME taxpayers' compliance.

### 1 INTRODUCTION

Indonesia is a developing country and is continuously developing in various fields. The government carries out this development because it is for the welfare and prosperity of the community. The innovation aim for the country's growth is to increase taxes in all sectors. Taxes are one of the primary sources of national income and represent about 80% of national income. One of the government's actions in increasing tax revenue is to pay attention to the largest sector, which has enormous tax potential, namely the micro, small and medium enterprise (MSME) sector (Kumala & Junaidi 2020). The development of MSMEs in Indonesia today, increasing in the era of digitalization, has made the most significant contribution to economic growth. According to the Ministry of Small and Medium Enterprises of the Republic of Indonesia, the phenomenon of the development of the number of MSMEs in 2015–2017 ranged from more than 62.9 million, and in 2018 it reached 64,194,057 with an achievement of 99.9% of all businesses operating in Indonesia. This figure shows an increase from year to year, predicting that many MSMEs will grow. The same condition also occurs in labor absorption. The number of workers absorbed by MSMEs in 2018 was 116,978,631 people from the full use of national workers (Ministry of Finance 2019).

The facts on the ground show that the growth of micro, small and medium enterprises is inversely proportional to tax revenues, including many business actors who ignore tax compliance. Tax compliance is that every taxpayer must comply with all applicable regulations without the need for examinations, in-depth investigations, warnings or threats, applicable laws, and administrative sanctions (Gunadi 2013). According to the Indonesian Ministry of Finance, in 2018, the MSME sector contributed 65% or 60 million business owners in the Indonesian economy (Hifni 2019). The number of Micro, Small, and Medium Enterprises (MSME) taxpayers who complied with paying taxes in 2019 was 2.31 million taxpayers with 4.84 trillion tax revenues, the number of taxpayers grew 23% from 2018, which only reached 1,69 million, from the data it shows that MSME tax

---

\*Corresponding Author: kenny.ardillah@kalbis.ac.id

revenues are showing a slowdown because it is lower at 4,84 trillion compared to 2018 which is 5.37 trillion. MSME's final income tax contributions in 2019 amounted to Rp 7.5 trillion, or only about 1.1 percent of the total income tax revenue in the same year, amounting to Rp 711.2 trillion. The level of MSME tax compliance is still low even though the number of MSME taxpayers is increasing. MSME tax revenue and compliance have slowed yearly due to a lack of education from the government regarding tax rate information and socialization to MSME business owners (Yoga 2020).

In 2020, all countries experienced an economic crisis caused by Corona Virus Disease (Covid-19). All countries experienced a strong economic recession, which significantly weakened the Small, Medium, and Micro performance Enterprises (MSME) sector. In Indonesia, many small, medium, and micro-businesses had experienced a decline in income and even closed their businesses because the turnover obtained could not cover operational expenses when the Community Activity Restrictions were enforced. Based on the Katadata Insight Center (KIC) data, the number of MSMEs in Indonesia is 64,19 million. The composition of Micro and Small Enterprises is very dominant, namely 64,13 million or around 99,92% of the entire business sector. The COVID-19 pandemic has had a negative effect on MSMEs in which the majority of MSMEs (82,9%) felt the negative impact of this pandemic, and only a tiny proportion (5,9%) of MSMEs experienced positive growth (Coordinating Ministry for Economic Affairs of the Republic of Indonesia 2021).

The Ministry of Finance, in this case, has issued Minister of Finance Regulation Number 86/2020, which stipulates taxation policies to predict the impact of Covid-19 on economic stability and maintain MSME taxpayer compliance during the pandemic. The Minister of Finance Regulation also includes tax incentives for taxpayers affected by the Covid-19 pandemic, including the exemption of payment of MSME final tax obligations (Andrew & Sari 2021). This tax incentive is given to save the economy of the small, medium, and micro-businesses most significantly affected by the pandemic compared to other business sectors. Previously, the government set a special tax rate for the small, medium, and micro-business sectors, namely taxpayers who received or received total sales of less than Rp. 4.8 billion must deposit a tax obligation of 0.5% of sales turnover (Kumaratih & Inspriyarso 2020).

Tax incentives based on PMK 86/2020 for MSMEs in the form of tax rates for MSMEs that the government will bear have been implemented during the Covid-19 pandemic. MSME taxpayers do not need to pay tax obligations at a rate of 0.5% on the volume of their business, but the government bears the tax obligations with a change in the tax rate to 0%. An acceptable requirement for small, medium, and micro taxpayers to be able to receive tax incentives is that the taxpayer has submitted an Annual Notification Letter report related to business turnover within a minimum period of 2 years after the end of the tax period until the end of December 2020 to take advantage of the final income tax collected. Debts are borne by the government (Andrew & Saree 2021). The implementation of the policy to reduce and even exempt MSMEs from tax obligations is expected to encourage small, medium, and micro businesses to participate in promoting economic growth by providing convenience in tax administration and increasing taxpayer compliance during the COVID-19 pandemic so that MSME business actors can be given the comfort in paying their tax obligations (Cahyani & Noviari 2019).

One of the factors that reduce MSME taxpayer compliance is the understanding of taxpayers. The common knowledge of taxation is how taxpayers understand the current tax regulations (Primandani et al. 2017). The ability of taxpayers is still a problem because taxpayers themselves view taxes as a burden on their business, and taxpayers still have very little understanding of taxes (Putri & Fidiana 2020). In implementing the self-assessment system in Indonesia, taxpayers must understand the regulatory and administrative aspects and tax procedures. In implementing self-assessment, they must independently carry out taxation, such as calculations, payments, and reporting. The higher the understanding of taxation owned by the taxpayer, the more taxpayer compliance will increase and affect tax revenue in Indonesia (Simajuntak et al. 2012).

In addition to increasing understanding of MSME taxpayers, the services provided can also affect taxpayer compliance. The government seeks to improve taxpayer compliance by implementing several administrative system innovations to increase state revenues from the tax sector.

These changes were made to foster public trust in tax officials. The innovation that has been carried out by the Directorate General of Taxes and will continue to be optimized is the implementation of reforms in tax administration with electronic-based technology (Kusumawati & Pardi 2019). During the Covid-19 pandemic, the Directorate General of Taxes urged all taxpayers to carry out their online tax payment and reporting obligations because all Tax Service Offices in Indonesia have temporarily closed many of their operating policies to prevent the spread of the Coronavirus. In managing tax reporting and payment, taxpayers are expected to optimize the use of the E-Filling and E-Billing systems (Dewi et al. 2020). The Directorate General of Taxes designed this system to facilitate taxpayers and fulfill their tax obligations without directly visiting the Tax Service Office (Kusumawati & Pardi 2019).

E-Filling is an electronic taxation system used by taxpayers to report electronic annual tax returns from Annual Notification Letter in real and online via the internet (Ministry of Finance 2017). E-billing is an electronic taxation system taxpayers use to pay using a billing code, taxing at the designated bank. The existence of online tax services whose mechanism has been established by the government can make MSME actors increase awareness in terms of registering themselves to fulfill tax administration and obligations related to the business carried out and increase taxpayer awareness and compliance in calculating, depositing, and reporting their tax obligations (Nadhor et al. 2020).

In their research results, Putra & Supartini (2019) and Tambun & Riris (2019) investigate the impact of lowering tax rates on MSME taxpayer compliance, showing that lowering tax rates positively affects MSME taxpayer compliance. Another study by Kumala & Junaidi (2020) shows that tax rates have a negative effect on taxpayer compliance. The research results from Fitria & Supriyono (2019) and Azmary et al. (2020) show that understanding taxation positively affects taxpayer compliance. Other studies conducted by Arisandy (2017) and Pebrina and Hidayatulloh (2020) state that understanding of taxation negatively affects taxpayer compliance, which indicates that the higher or lower the knowledge of taxpayers will not affect taxpayer compliance. Research conducted by Handayani et al. (2020), Puspanita et al. (2020) and Listiyowati, et al. (2021) proves that online tax services have a positive and significant impact on the level of taxpayer compliance. The same research conducted by Handayani et al. (2020) confirms that the modernization of the tax administration system has a significant and dominant effect on MSME taxpayer compliance. However, different results are proven from research conducted by Nurchamid & Sutjahyani (2018) and Kusumawati & Pardi (2019), confirming the application of an online system of E-Filling and E-Billing has a negative effect on MSME taxpayer compliance.

The inconsistent results of previous studies make researchers want to re-examine whether the reduction in tax rates, understanding of taxation, and online tax services can affect MSME taxpayer compliance. The latest research with online tax service variables is still few, so researchers are motivated to raise the topic. The difference between previous studies and the current research lies in the independent variables used in this study, such as tax rates reduction, understanding taxation, and online tax services; the research location is centered on the Pratama Jakarta Sunter's Tax Office and the addition of questionnaire questions on reducing tax rates and understanding of taxpayers' taxation during the COVID-19 pandemic. The purpose of this research is to prove the positive effect of lowering tax rates, knowledge of taxation, and online tax services on MSME taxpayer compliance.

## 2 LITERATURE REVIEW

### 2.1 *Taxpayer compliance*

Taxes are public contributions to the state to finance general expenditures for administering the government (Sumarsan 2017). Taxes have an essential role in implementing development because they are one of the largest sources of financing all development expenditures. The tax function includes the state budget/source of finance (budget air) as a tool to optimize state revenues from

its people without direct reciprocity (Rahayu 2017). Taxpayer compliance is the obedience of the taxpayer in implementing the tax provisions following the provisions of the tax laws and regulations. Taxpayer compliance indicators can be based on the following indicators (Rahayu 2020).

1. Taxpayers need to be compliant in registering. Taxpayers who have fulfilled all subjective or objective requirements following the provisions of the legislation in the field of taxation are required to register with the KPP whose work area includes the residence, or place of domicile, and the establishment of business activity of the taxpayers.
2. Taxpayers need to be compliant in returning the tax from the Annual Notification Letter. Taxpayers must report to settlements or payments made, either individually or through withholding income from the company within one year.
3. Taxpayers need to be compliant in calculating and paying taxes owed. The taxpayer must calculate the tax imposition on his own business, and the taxpayers should pay the tax he owes.
4. Taxpayers need to be compliant in reporting and payment of arrears. Taxpayers should report taxes that have been paid and fulfill the amount of tax arrears. It is intended as a form of taxpayers' responsibility in fulfilling taxpayers' compliance.

## *2.2 Tax rate reduction*

The tax rate is the basis for imposing the amount of tax that must be paid by the taxation subject to the tax object that is his responsibility (Kusnanto 2019). MSME tax rates are regulated in PP No. 23 of 2018 article 2 paragraph 1, which on income from business received or obtained by a domestic Taxpayer with an inevitable gross turnover, is subject to final income tax within a certain period with a final income tax rate of 0.5%. Tax rate reduction indicators can be based on the Minister of Finance Regulation Number 86/PMK.03/2020 with the following hands from getting MSMEs tax incentives: (1) taxpayers whose gross turnover does not exceed Rp. 4,800,000,000 must submit a report on the realization of final income tax borne by the government, including income tax payable on income earned by the taxpayer and transactions with withholding agents or collectors and (2) subsequently by filling out forms and a tax payment letter or a printed billing code issued by the taxpayers.

## *2.3 Tax understanding*

Understanding tax regulations is how taxpayers understand and implement them following applicable laws (Mustofa et al. 2016). Taxpayers must know and understand the relevant tax regulations to carry out their obligations properly. If taxpayers do not know the tax regulations, they do not understand their responsibilities as taxpayers, thus making them disobedient (Mahfud et al. 2017). Taxpayers know several indicators and understand tax regulations (Bahri et al. 2018).

1. Taxpayers need to understand general provisions and taxation procedures. The contents of the general requirements and taxation procedures include, among others, the rights and obligations of the taxpayer, the Annual Notification Letter, tax ID number, payment procedures, and tax collection and reporting.
2. Taxpayers need to understand the tax system. The current tax system in Indonesia is a self-assessment system to give responsibility to taxpayers in calculating, depositing, and self-reporting the amount of tax that must be paid.
3. Taxpayers need to understand the tax function. The tax function is the primary use to determine the economy. Taxes have direct benefits in improving the general welfare. Taxes as one of the state revenue can support the implementation of development under state objectives.

## *2.4 Online tax service*

Tax service is a process of assistance to taxpayers in specific ways that require sensitivity and interpersonal relationships (Boediono 2013). Online information technology can be used to create

an electronic system that can support tax services and make it easier for taxpayers to carry out their tax administration and tax payment (Dewi et al. 2020). The following are online tax services that have been carried out by the government to date and continue to be optimized to provide convenience in the tax administration of taxpayers.

1. E-Filling is part of the system in tax administration that is used to submit real-time online by Annual Notification Letter through the Directorate General of Taxes portal. Letters of tax notification submission are more accessible, faster, and quick because they can be done anywhere and anytime. Reporting tax notification letters is cheaper because there is no charge for accessing the site and minimizes paper use (Lado & Budiantara 2018).
2. E-Billing is a system that functions as a process that includes registration of billing participants, generation of payment codes, and billing reconciliation in the state revenue system (Leliya & Afiya 2016). Implementing the E-Billing system has the following advantages and benefits in tax payments (Putri 2019).
  - a. Taxpayers are given the convenience of not waiting in line to make tax payments because tax payments can be made through electronic payments to banks.
  - b. Taxpayers can make payments faster because of the facility with electronic tax payments.
  - c. Taxpayers can be more accurate in filling out of electronic Annual Notification Letter correctly and correctly according to taxpayer's tax transactions

This study uses the dependent variable, namely MSME taxpayer compliance (Y), and the independent variables, namely the reduction in tax rates reduction (X1), taxpayer's understanding (X2), and online tax services (X3). To facilitate learning in this study, the researcher provides a model or conceptual framework shown in Figure 1.

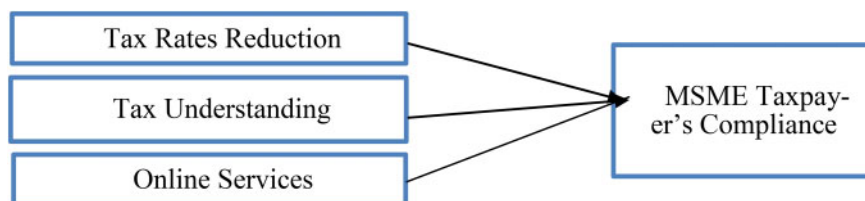


Figure 1. Conceptual framework.

## 2.5 Hypothesis development

### 2.5.1 The effect of decreasing tax tariffs on MSME taxpayer's compliance

The tax rate is the percentage used by the taxpayer to calculate the amount of tax that must be paid based on the object (Sudirman & Amirudin 2012). The tax rates set by the State Tax Administration for participating MSMEs vary according to the current situation. During the Covid pandemic, the PP 46/2013 tariff was changed from 1% to PP 23/2018 rates of 0,5 and become 0% now with MFR 86/2020 (Sari & Andrew, 2021). The purpose of reducing tax rates is not to burden small, medium, and micro-business taxpayers, thereby encouraging small, medium, and micro-business taxpayers to fulfill their tax obligations and other tax obligations. Fair and not burdensome tax rates for MSME taxpayers will increase compliance with income statements to the tax authorities. Tax reduction is an incentive policy taken by the government to encourage taxpayers with a total turnover of less than 4.8 billion to comply with regulations (Cahyani and Noviari, 2019). Based on research conducted by Putra & Supartini (2019), Setiawan (2019), Widodo (2019), Tambun & Iiris (2019), and Kumala & Junaidi (2020) concluded that MSME tax rates have a positive influence on MSME taxpayer's compliance.

*Ha1: The tax rates reduction has a positive effect on MSME taxpayer's compliance*

### 2.5.2 *The effect of tax understanding on MSME taxpayer's compliance*

The number of small, medium and micro enterprises is increasing yearly, but their tax compliance is deficient. In social learning theory, these direct observations and experiences form the basis for taxpayers to evaluate their understanding of tax regulations and choose to comply with these behaviors (Fitria & Supriyono 2019). Taxpayers must understand and know the tax payable and the due date of tax payments. Therefore, taxpayers who do not understand the applicable tax regulations can cause taxpayers to fail to fulfill their tax obligations, so it can be said that understanding taxation will affect MIPYMES taxpayer compliance (Putri & Fidiana 2020). The results of research from Azmary et al. (2019), Kumala & Junaidi (2020), Handayani et al. (2020), Fitria & Supriyono (2019), and Sari et al. (2019) stated that understanding taxation has a positive influence on MSME taxpayer's compliance.

*Ha2: Tax understanding has a positive effect on MSME taxpayer's compliance*

### 2.5.3 *The effect of online tax services on MSME taxpayer's compliance*

Ease of taxation is one way to improve taxpayer compliance. The government has modernized tax services in an online system to make it easier for taxpayers to deposit and report taxes related to their business. With the online system such as e-filing and e-billing, the government hopes that taxpayers comply more with tax regulations. The online system has a different use, such as e-filing to file an online tax return and e-billing to make a tax payment code for paying the tax expense. With an online system, paying taxes becomes easier. Individuals do not need to go to the tax reporting business's tax service office to settle and file taxes. Due to the increase in online tax services, online tax services positively impact MSME taxpayer compliance (Nadhor et al. 2020). This hypothesis is supported by research conducted by Handayani et al. (2020), Puspanita et al. (2020), Nurhamid and Sutjahyani (2018), Amwal et al. (2020), and Dwitrayani (2020), mentioning that online tax services have a positive and significant effect on taxpayer's compliance.

*Ha3: Online tax services have a positive effect on MSME taxpayer's compliance*

## 3 METHODS

The population in this study were all MSME taxpayers registered at Pratama Jakarta Sunter's Tax Office, amounting to 8,681 MSME taxpayers. Pratama Jakarta Sunter's Tax Office is one of the tax offices coordinated by the North Jakarta Regional Tax Office. The sample in this study is MSME taxpayers with income below 4.8 billion and registered at KPP Pratama Jakarta Sunter. The technique of taking samples in this study is the probability sampling technique, which is a sampling technique that provides equal opportunities for members selected as samples for each element or population. Simple random sampling is used because the sample members are chosen randomly, representing the entire population (Jaya 2020). In determining the subject of this study, researchers used the slovin formula with an error limit of 10% (Sugiyono 2018). The minimum number of respondents in this study based on the Slovin formula is 98.86, adjusted to 99 respondents. It is done to simplify data processing and improve testing.

The research method used is a quantitative research method with primary data. In this study, the questionnaire aims to answer questions to registered MSME Taxpayers regarding tax rate reduction, tax understanding, and online tax services regarding MSME taxpayer compliance at Pratama Jakarta Sunter's Tax Office (Jaya 2020). Respondents were asked to answer general questions such as name, gender, age, type of business, number of employees, length of business, and turnover, to describe the characteristics of the respondents. Respondents were asked to assess by answering closed questions posed by researchers based on each respondent's perception. The answer consists of five choices, such as Strongly Agree (SS), Agree (S), Hesitately (R), Disagree (TS), and Strongly Disagree (STS).

The researcher groups the operationalization of the variables to determine the indicator in the form to make questions for questionnaires according to the dependent and independent variables measurement in table 1 from Rahayu (2020), Ministry of Finance (2020), Bahri, et al. (2018), and Lado & Budiantara (2018) with the detail information as follows.

Table 1. Variable operations.

Variable	Indicator	Number of Item	Measurement Scale
Taxpayer's Compliance (Y)	1. Compliance with registering with the tax office	1,2	Likert
	2. Taxpayer compliance in returning Annual Notification Letter	3,4 4,5	
	3. Compliance in calculating and calculating taxes by taxpayers	6,7 8	
	4. The taxpayer himself carries out compliance with paying taxes		
	5. Compliance in paying arrears (Rahayu, 2020)		
Tax Rate Reduction (X1)	1. Tax Rate Reduction	1, 2	Likert
	2. MSMEs get 0% tax incentives	3	
	3. Taxpayers make reports on the realization of MSME taxes (Ministry of Finance, 2020)	4	
Tax Understanding (X2)	1. Knowledge of general provisions and tax procedures	1, 2, 3 4, 5	Likert
	2. Knowledge of the tax system in Indonesia	6, 7	
	3. Understanding of the tax function (Bahri et al. 2018)		
Online tax service (X3)	1. Ease of filling out and reporting of Annual Notification Letter	1 2	Likert
	2. Faster and more accurate calculations on e-filing and e-billing systems	3, 4, 5	
	3. It is not complicated to use the e-filing and e-billing system		
	4. Ease of online tax service (Lado & Budiantara 2018).		

Descriptive analysis was carried out in this study to classify data, tabulate and present data for each variable studied, and perform calculations to test the proposed hypothesis (Sugiyono 2017). The data quality test conducted in this study is the validity and reliability test. The classical assumption test carried out in this study includes the normality test, multicollinearity test, test, and heteroscedasticity test (Ghozali 2018). The data analysis technique used in this study is multiple linear regression analysis. The equations' coefficient of determination testing and partial testing can be formulated.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Y = MSME Taxpayer Compliance

$\alpha$  = coefficient constant

$\beta$  = Regression coefficient

X1 = Tax Rate Reduction

X2 = Tax Understanding

X3 = Online tax service

e = Standard error

## 4 RESULTS AND DISCUSSION

### 4.1 Data description

This study uses a questionnaire instrument consisting of four questions for reducing tax rates, seven questions for understanding taxation, five questions for online tax services, and eight questions for taxpayer compliance. The number of respondents in this study was 99 respondents, with the data's distribution of the questionnaire can be shown in Table 2.

Table 2. Questionnaire distribution results.

Description	Amount
A questionnaire that has been distributed	120
Questionnaire returned	120
Incomplete questionnaire	12
Questionnaires that do not meet the criteria	9
Processed Questionnaire	99

Based on Table 2 above, the questionnaires distributed by the author amounted to 120. The researcher overestimated the number of questionnaires distributed to reach the minimum number of samples determined based on the previous Slovin formula. In distributing the questionnaires, there were 12 incomplete questionnaires. The respondents did not provide answers, and the respondents' identities did not match the classification of the MSME sector were nine questionnaires. So in this study, the researcher obtained 99 questionnaires following the criteria for determining the sample that has been selected.

#### 4.2 Characteristics of respondents

In this study, the gender of the respondent is divided by 49 male respondents (49.5%) and 50 female respondents (50.5%). According to these data, most respondents in this study are women. Respondents aged 18–20 years were 11 respondents or (11.1%), respondents aged 21–30 years were 68 respondents (68.7%), respondents aged 31–40 years were 11 respondents (11.1%), respondents aged 41–50 years were eight respondents (8.1%), and respondents aged >50 years were one respondent (1%). These data show that most respondents are aged 21–30 years, as many as 68 respondents or 68.7%. Respondents based on the type of business, it can be seen that the respondents with the culinary as many as 35 respondents (35.4%), the type of shop business as many as 18 respondents (18.2%), the type of fashion business as many as 13 respondents (13%), the type of service business as many as 15 respondents (15.2%) and other types of business as many as 18 respondents (18.2%). It shows that respondents to the culinary industry are more dominant than respondents with the kind of shop, fashion, service, or other business.

Based on the length of business, respondents with business duration <1 year are 48 respondents (48.5%), 1–5 years business length is 29 respondents (29%), 6–10 years business length is five respondents (5.1 %), and length of business <10 years as many as 17 respondents (17.2%). It shows that most respondents with business duration <1 year are 48 respondents (48.5%) compared to other respondents. Respondents with 1–5 employees were 84 respondents (84.8%), respondents with 6–10 employees were eight respondents (8%), respondents with 11–15 employees were five respondents (5.1%), and respondents with more than 15 employees as many as two respondents (2%). These data show that most respondents with 1–5 employees are 84 respondents (84.8%). Respondents based on the number of business turnover showed that respondents with a turnover of <600 million were 87 (87.9%), a total turnover of 600 million-1 billion were 11 respondents (11.1%), and a total turnover of 1 billion – 4.8 billion was one respondent (1%). It shows that respondents with a business turnover of <600 million have as many as 87.

#### 4.3 Data quality test

Testing the validity of each item and all statement items on tax rate reduction, tax understanding, online tax services, and MSME taxpayer's compliance show the correlation value of each statement item based on r-count more than r-table (0.1975). Each statement item also offers a significance value less than 0.05 (5%). These results indicate that all statement items are valid. The results of reliability testing show that the reduction in tax rates, understanding of taxation, online tax services, and MSME taxpayer compliance has a Cronbach alpha value > 0.60. These results indicate that all statements in each of the variables used have a high-reliability value to be used for the next test.



#### 4.4 Classic assumption test

Based on the results of the normality test, asymp. sig. (2-tailed) on the One-Sample Kolmogorov-Smirnov Test showed a value of 0.200, which has amounted to greater than alpha 0.05. This result means that all research data has a normal data distribution. The results of the multicollinearity test show that the tolerance value obtained for a tax rate reduction, tax understanding, and online tax services is more than 0.10, and the Variance Inflation Factor value for a tax rate reduction, tax understanding, and online tax services is less than 10. These results can be interpreted as there is no multicollinearity problem between variables. The results of the heteroscedasticity test through the glejser test show the value of sig. On a tax rate reduction of 0.542, tax understanding of 0.177, and online tax services of 0.822 with an overall significance value of above 5% or 0.05. It shows that there is no heteroscedasticity in the regression model of this study.

#### 4.5 Coefficient of determination test

The coefficient of determination is defined as the square of the correlation coefficient squared and then multiplied by 100%. The results of the above analysis show that the coefficient of determination is  $(R^2_{xy} \times 100\%) = 0.498 \times 100\% = 49.8\%$ . These results indicate that MSME taxpayer compliance can be influenced by a decrease in tax rates, understanding of taxation, and online tax services by 49.8%. In comparison, the remaining 50.2% is influenced by other variables not examined in this research model.

#### 4.6 Partial test

The results of partial testing with multiple linear regression analysis using SPSS 24.0 can be seen in Table 3 below.

Table 3. Questionnaire distribution results.

Model	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	9,792	2,439	0,000
Tax Rate Reduction	0,300	0,120	0,015
Tax Understanding	0,479	0,093	0,000
Online tax service	0,281	0,120	0,021

Based on Table 3 above, the multiple regression equation in this study can be formulated as follows.

$$Y = 9,792 + 0,300TRR + 0,479TU + 0,281OS + e$$

Tax rate reduction has a significant value of 0.015, more diminutive than 0.05, concluding that Ha1 is accepted. The coefficient value on the tax rate reduction is positive, 0.300, which means an additional 1% decrease in tax rates so that MSMEs taxpayer compliance will increase by 30%. Based on these results, the tax rate reduction positively affects MSMEs' taxpayer compliance. Tax understanding has a significant value of 0.000, more diminutive than 0.05, concluding that Ha2 is accepted. The coefficient value on the tax understanding is positive, 0.479, which means that there is an additional 1% of the tax understanding, the MSMEs' taxpayer compliance will increase by 47.9%. Based on these results, the tax understanding positively affects MSMEs' taxpayer compliance. Online tax services have a significant value of 0.021, more diminutive than 0.05, concluding that Ha3 is accepted. The coefficient value on online tax services is positive, 0.281, which means an additional 1% of online tax services so that MSMEs taxpayer compliance will increase by 28.1%. Based on these results, online tax services positively affect MSMEs' taxpayer compliance.

#### 4.7 Discussion

The test results state that the tax rate reduction positively affects MSME's taxpayer compliance. It shows that the lower the MSME tax rate provided by the government, the more MSME taxpayer compliance will be, and lowering the MSME-related tax rate will reduce MSME business owners' spending to pay taxes. The tax rate reduction from tax incentives issued by the government based on PMK 86/2020 for MSMEs that have been implemented during the Covid-19 pandemic has increased the awareness of business owner taxpayers to increase their tax compliance. The high and low rates given to taxpayers affect taxpayer compliance. The results of this study are in line with the results of research from Andrew & Sari (2020), Putra & Supartini (2019), Tambun & Riris (2019), which showed that the tax rate reduction had a positive and significant impact on MSME's taxpayer compliance.

The tax understanding has a positive effect on MSME's taxpayer compliance. It shows that when taxpayers' knowledge of taxation increases, taxpayers' submission to fulfill their tax obligations will increase. The understanding of the taxpayer is related to the knowledge of tax regulations, such as the deadline for tax payments, tax reporting, the amount of tax that must be paid, and knowing the applicable tax policies and provisions. The results of this study are in line with the research of Fitria & Supriyono (2019), Azmary et al. (2020), which proves that the tax understanding has a positive and significant effect on MSMEs taxpayer compliance.

Online tax services have a positive effect on MSME's taxpayer compliance. It shows that online tax services in taxation are getting better and more accessible, increasing taxpayer compliance to pay taxes and fulfill all their obligations. With online tax services such as E-Filing, E-Billing, which are getting better, taxpayers can comply more with their tax obligations. It can be concluded that online tax services that are getting better will positively affect taxpayer compliance to fulfill their tax obligations. The results of this study are in line with research conducted by Handayani et al. (2020), Puspanita et al. (2020), and Listiyowati et al. (2021), which prove that it has a positive and significant effect on the level of compliance of MSME taxpayers.

## 5 CONCLUSION

The tax rate reduction has a positive effect on MSME taxpayer compliance. It indicates that the lower the tax rate provided by the government, the higher the MSME taxpayer compliance. Tax understanding has a positive and significant effect on MSME taxpayer compliance. It indicates that the better the taxpayer's knowledge of taxation, the better the level of MSME taxpayer compliance. The taxpayer knows what regulations and policies exist in taxation so that the taxpayer understands his obligations. Online tax services have a positive and significant impact on MSME taxpayer compliance. It indicates that the better the online tax services provided by taxation to taxpayers, the greater the compliance of MSME taxpayers.

Research on tax rate reduction, tax understanding, and online tax services can provide quality research results. Tax agencies as tax collection agencies from taxpayers must continue to improve the quality of tax services, both in human resources and other attributes, to encourage taxpayers to comply with their tax obligations. Taxpayers can pay attention and study every policy issued by the government related to taxes, especially MSME taxes. Taxpayers should have a sense of awareness to fulfill their tax obligations because the tax will return to the taxpayer, although not directly. Further researchers can add other primary data that is not sourced from questionnaires to strengthen the facts in the field, data collection methods such as interviews to be able to provide more accurate research results and add independent variables that have a more substantial predictive possibility of MSME taxpayer compliance, which are not used in this study such as tax awareness and tax sanctions. Further research can also increase the population and sample of respondents and expand the location of data distribution so that research results can be generalized properly.

## REFERENCES

- Andrew, R., & Sari, D. R. 2021. PMK 86/2020 Incentives amid the Covid 19 Pandemic: Does It affect MSME taxpayer compliance in Surabaya. *Journal of Accounting and Taxes* 21(2): 349–366.
- Arisandy, N. 2017. The influence of taxpayer understanding, taxpayer awareness and tax sanctions on individual taxpayer compliance conducting online business activities in pekanbaru. *Scientific Journal of Economics and Business* 14(1): 62–71.
- Azmary, Y. M. P., Hasanah, N. & Muliasari, I. 2020. The influence of spiritual intelligence, accounting application, tax understanding on MSME WPOP. *Journal of Accounting, Taxation, and Auditing* 1(1): 133–146.
- Bahri, S., Diantimala, Y. & Majid, M. S. A. 2018. The influence of tax service quality, understanding of tax regulations and tax sanctions on taxpayer compliance. *Darussalam Journal of Economic Perspectives* 4(2): 318–334.
- Boediono, B. 2013. *Tax service excellence*. Jakarta: Rhineka Cipta.
- Budi, C. 2013. *Millions of SMEs are tax heroes managing taxes is easy*. Jakarta: PT Elex Media Komputindo.
- Cahyani, L. P. G. & Noviyari, N. 2019. The effect of tax rates, tax understanding, and tax sanctions on MSME taxpayer compliance. *E-Journal of Accounting* 26(3): 1885–1911.
- Coordinating Ministry for Economic Affairs. 2021. Press Release HM.4/6/88/SET.M.EKON.3/04/2021. *Government support for MSMEs to recover in the pandemic period*.
- Dewi, S., Widyasari & Nataherwin. 2020. The effect of tax incentives, tax rates, tax sanctions and tax services on taxpayer compliance during the Covid-19 pandemic. *Journal of Economics and Management* 9(2): 108–124.
- Duli, N. 2019. *Quantitative research methodology: Some basic concepts for thesis writing and data analysis with SPSS*. Yogyakarta: CV Budi Utama.
- Fitria, P. A. & Supriyono, E. (2019). The effect of understanding tax regulations, perceptions of tax rates, and tax fairness on taxpayer compliance. *Journal of Economics and Banking* 1(1): 47–54.
- Ghozali, I. 2016. *Application of multivariate analysis with IBM SPSS 23 Program*. Semarang: Diponegoro University Publishing Agency.
- Ghozali, I. 2018. *Application of multivariate analysis with IBM SPSS 25 Program*. Semarang: Diponegoro University Publishing Agency.
- Government of the Republic of Indonesia. *Government regulation of the republic of indonesia number 23 of 2018*. Income Tax on Income from Business Received or Obtained by Taxpayers with Certain Gross Circulation.
- Gunadi. 2013. *Comprehensive income tax guide*. Jakarta: Bee Media Indonesia.
- Handayani, F., Bachtiar. & Khomariah, N. 2020. Factors affecting MSME taxpayer compliance in Balikpapan City District. *Scientific Journal of Accounting and Finance* 9(1): 53–60.
- Hifni, N. 2019. *Exploring the contribution of the MSME Sector*.
- Ispiyarso, B. & Kumaratih, C. 2020. The effect of policy on changes in final PPH Rates on MSME taxpayer compliance. *Indonesian Journal of Legal Developments* 2(2): 158–173.
- Jaya, I. M. L. M. (2020). *Quantitative and qualitative research methods*. Yogyakarta: Quadrant.
- Kumala, R. & Junaidi, A. 2020. The influence of understanding tax regulations, tax rates, environment, and awareness of taxpayers on taxpayer compliance in MSMEs. *Journal of Economics, Management, Business and Social* 1(2): 48–55.
- Kusumawati, S. & Pardi. 2019. The effect of taxation system reform, tax collection, tax rates and account representatives on taxpayer compliance (study of MSME taxpayers at KPP pratama Sukoharjo). *Journal of Economics, Digital Business, Creative Economy and Entrepreneurs* 1(1): 18–28.
- Lado & Budiantara. 2018. The influence of the implementation of the e-filing system on the compliance of individual taxpayers of civil servants with an understanding of the internet as a moderating variable. *Journal of Accounting Research* 4(1): 59–84.
- Leliya & Afiya, F. 2016. The effectiveness of the online regional tax financing system in increasing Cirebon city blood income. *Journal of Islamic Economic Law Research* 4(2).
- Listiyowati, Indarti, I., Wijayanti, F. & Setiawan, F. A. 2021. MSME taxpayer compliance during the covid-19 pandemic. *Jurnal Akuntansi Indonesia* 10(1): 41-59.
- Mahfud, Arfan. M. & Abdullah, S. 2017. The effect of understanding tax regulations, awareness of paying taxes and quality of taxes on corporate taxpayer compliance (empirical study on cooperatives in Banda Aceh City). *Master's Journal of Accounting* 6(3): 1–9.
- Ministry of Finance of the Republic of Indonesia. 2019. *Half percent MSME final PPH*.

- Ministry of Finance of the Republic of Indonesia. 2020. *Regulation of the minister of finance of the republic of indonesia number 86/PMK.03/2020*.
- Mustofa, F. A., Kertahadi & Maulinarhadi, M. 2016. The effect of understanding tax regulations, tax rates, and the principle of justice on taxpayer compliance (study on micro, small, and medium enterprise taxpayers located in the work area of the pratama batu tax service office after the enforcement of government regulation number 46 of 2013). *Journal of Taxation (JEJAK)* 8(1): 1–7.
- Nadhori, K., Fatoni, N., Nurudin. & Zakiy, F. S. 2020. The effect of reducing msme tax rates and online tax service systems on taxpayer perceptions (study on MSMES registered at the west semarang tax office). *Journal of Accounting* 11(1): 88–113.
- Nurchamid, M. & Sutjahyani, D. 2018. The effect of application of e-filling system, e-billing and understanding of taxation on taxpayer compliance at the tax office pratama Surabaya Tegalsari. *Journal of Accounting Economics* 3(2): 41–54.
- Pebrina, R. & Hidayatulloh, A. 2020. Effect of E-SPT implementation, understanding of tax regulations, tax sanctions, and quality of service on taxpayer compliance. *Scientific Journal of Economics and Business* 17(1): 1–8.
- Primandani, I., Syafi'i. & Hartono. 2017. Analysis of compliance behavior, understanding, ease of MSME taxpayers against PP No. 46 of 2013 at KPP Pratama Mulyorejo. *Journal of Accounting Economics* 3(3): 509–521.
- Puspita, I., Machfuzhoh, A. & Pratiwi, R. 2020. The effect of service quality on msme taxpayer compliance. *Journal of Economics and Business* 2: 71–78.
- Putra, R. J. & Supartini. 2019. The influence of the implementation of lowering MSME tax rates on msme taxpayer compliance with patriotism as a moderating variable. *Journal of Managerial Accounting* 4(2): 1–9.
- Putri, A. A. 2019. Taxpayer compliance: Study of e-billing, e-filling, and e-invoice aspects. *Dharma Andalas Journal of Economics and Business* 21(1): 1–13.
- Putri, F. P. & Fidiana. 2020. The effect of tax understanding, ease of paying taxes and fiscal services on MSME taxpayer compliance. *Journal of Accounting Science and Research (JIRA)* 9(1): 1–22.
- Rahayu, S. K. 2017. *Indonesian taxation: Concepts and formal aspects*. Bandung: Science Engineering.
- Rahayu, S. K. 2020. *Indonesian taxation: Concepts and formal aspects*. Bandung: Science Engineering.
- Simanjuntak., Hamonangan, T. & Mukhlis, I. 2012. *Economic dimensions of taxation in economic development*. Bogor: Achieve the Hope of Success.
- Sugiyono. 2017. *Quantitative, qualitative, and R&D research methods*. Bandung: Alfabeta.
- Sugiyono. 2018. *Quantitative research methods*. Bandung: Alfabeta.
- Sumarsan, T. 2017. *Indonesian taxation*. Fifth Edition. Jakarta: PT. Index.
- Suryani Suyanto and Associates. 2020. *The growth of MSME taxpayers who pay taxes is sloping*.
- Tambun, S. & Riris, S. B. 2019. The effect of decrease in MSME tax rates and taxpayer awareness on taxpayer compliance moderated by effectiveness of tax collection. *Journal of Tax Accounting* 4(2): 01–10.

## Risk management strategies in optimizing the potential of Selorejo village: Threats or opportunities?

M.G.S. Wicaksono\*, N.D. Syara, L. Mukaromah, R. Firmansyah & D. Narullia

*Universitas Negeri Malang, Malang, East Java, Indonesia*

M.R. Palil

*Universiti Kebangsaan Malaysia, Malaysia*

**ABSTRACT:** The purpose of this study was to identify and analyze the business risks faced by MSMEs in Selorejo Village during the COVID-19 pandemic. In times of crisis like today, the possibility of risk always overshadows the activities of business owners. Meanwhile, the MSME sector is the backbone of the country's economy, as the largest contributor to Gross Domestic Product (GDP), and is the mainstay of employment. Data collection was carried out through semi-structured interviews and documentation. Using a case study, the findings show that the risks shown by the Selorejo Coffee MSME owners are classified as a high consequence, meaning that the Selorejo Coffee MSME needs serious attention. The impact felt by MSME owners is that the losses borne are quite high which results in a decrease in the amount of income, so planning and risk control activities need to be carried out to maintain the existence of the business of MSME owners.

### 1 INTRODUCTION

Until now the COVID-19 pandemic is still a concern in various countries. The extraordinary impact resulted in the weakening of various sectors so that it could slow down the country's economic growth rate. The central statistics agency of the Republic of Indonesia reported that economic growth in the first quarter of 2021 experienced a contraction of minus 0.74% from the previous year (Kompas 2021). Based on this, the MSME sector needs special attention because it is the largest contributor to gross domestic product (GDP) and can be a mainstay in the absorption of labor and substitution for the production of economic goods (Ita 2021; Kompas 2020; Pratiwi 2020).

In times of crisis, risk will always overshadow businessmen due to unpredictable situations and conditions, thus creating risks that must be faced by MSME owners (Damayanti 2020). The results of a survey conducted in Thaha's research (Thaha 2020) stated that 50% of MSMEs indicated that they would go out of business due to the COVID-19 pandemic. This is due to government regulations and the possible risk of spreading the virus in the surrounding environment, which can affect the level of business productivity during the COVID-19 pandemic. Other causes may be due to a large number of new competitors with similar products, customers who feel bored with their products, and financial problems due to accidents or disasters. Considering this, MSMEs must try to change their strategy by avoiding or minimizing risks to survive and ensure business continuity (Bogodistov & Wohlgemuth 2017; Rehman & Anwar 2019). From here, risk management plays an important role in anticipating or minimizing all possible risks that will be accepted (Santoso & Mujayana 2021).

Risk management can be defined as a proactive effort in recognizing and managing internal events and external threats that can affect organizational success (Clifford et al. 2006; He & Lu 2018). The existence of risk management makes it easier for business actors to identify events that can cause risks and minimize the consequences of risks that will arise (Ita 2021). The risk

---

\*Corresponding Author: [mochammad.galih.1704216@students.um.ac.id](mailto:mochammad.galih.1704216@students.um.ac.id)

management process can be said to be effective when it can identify the risks that pose the greatest threat to the organization and provide guidelines for dealing with them. But in fact, based on the research from Santoso (Santoso & Mujayana 2021) there are still many MSME owners who don't have the knowledge and concern for risk management. One of the MSMEs that still has less risk management knowledge is Selorejo Coffee MSME.

Selorejo Coffee SMEs are managed by residents in one of the tourist villages of Malang Regency, namely Selorejo Village. The management of Selorejo Coffee is entrusted to the youth organizations. Processed products in the form of drinks or coffee grounds can be obtained at the “Café Pinggir Kali” located in the Bedengan Recreational Park area. Based on observation data in June 2021, it is known that this tourist spot known as the Bedengan Recreation Park is the center of the residents' economy. However, due to the current COVID-19 pandemic, the number of visitors to Bedengan Recreation Park has decreased and affects purchasing. The decline in tourist visitors was caused by the government's Large-Scale Social Restriction policy (Safi'i et al. 2020). Moreover, another risk was found that the implementation of the Selorejo coffee MSME business was still not collaborating with BUMDes which should be able to assist in business management. In addition to external risks that must be faced, other risks also occur from the internal environment related to human resources such as the expertise of the farmers that have not been maximized causing the low value of the coffee produced. These risks resulted in a decreasing income of MSMEs in the Selorejo Village (Brown & Rocha 2020).

Based on the explanation above, the purpose of this paper is to examine the sustainability of the Selorejo Coffee SMEs during the pandemic. Through the identification of the risk management process, a risk assessment that may arise and strategy analysis by MSME owners in Selorejo Tourism Village is carried out in minimizing business risk. This paper is carried out based on the general risk management framework, namely risk identification, risk assessment, risk control, and implementation (Santoso & Mujayana 2021).

2 METHODS

This research uses a case study approach conducted in a tourist village in Malang Regency. The Tourism Village was chosen as the object of study because it is one of the sectors affected by the COVID-19 pandemic, but the main focus is on MSMEs that are developing in rural communities. This research is very much needed in the current conditions, given that the potential of the village is one of the sources of community welfare. Analysis of Risk Management Strategies can help MSMEs in the village to find out the level of risk they face, so this study can provide recommendations for actions that can minimize risk. Therefore, this approach is used to be able to provide a complete explanation of the experiences and problems faced by MSME owners during the COVID-19 pandemic.

Sources of data in this study came from primary data and secondary data. Primary data was obtained through interviews with village officials, MSME owners, youth organizations and village communities. Meanwhile, secondary data was obtained from documentation that had been made by MSME owners in the form of financial records, customer lists and other supporting documentation as well as various literatures relevant to the topic of this study. The snowball technique helps researchers to determine key informants. The implication is that the researcher conducted interviews with the first informant, then the informant recommended the second informant, and so on until the data became saturated. The informants in this study, as follows:

Table 1. Informant.

No	Informant	Description
1	Village apparatus	Key informants
2	MSME owners	Key informants
3	Youth organization	Key informants
4	Villagers	Supporting informants

After the data was collected, the researcher separated the data. Too much data was collected from the field, so the data filtration was required. Data reduction is done by presenting raw data, then coding based on a predetermined theme. After the data was verified, the researcher compiled a description in the form of drawing conclusions as a whole. Triangulation is carried out using a literature triangulation model, as a verification of the conclusions regarding the impact of business risks faced by MSME owners in tourist villages in Malang Regency.

### 3 RESULTS AND DISCUSSION

This study adopts the model used by Santoso & Mujayana (2021) in analyzing possible risks to the Selorejo Coffee MSMEs during the COVID-19 pandemic. In detail, it can be explained as follows:

#### 3.1 Risk identification (risk level)

Risk management consists of eight components that are integrated with the management process (COSO 2004). These components are internal environment; objective setting (strategic, operations, reporting, and compliance); event identification; risk assessment; risk response; control activities; information and communication; and monitoring. In this case, risk events are caused by external factors, such as COVID-19 pandemic, government regulations, and customer demands. Meanwhile

The COVID-19 phenomenon has forced MSME owners in Selorejo Village to survive for business continuity. Due to their ignorance, they experience a dilemma to continue their business amid uncertain conditions. COVID-19 caused a sales drop due to a reduction in the number of visitors to Selorejo Village. The MSMEs' owners also did not have enough marketing skills, so their business activities cannot be effective. According to AM as an owner of the Selorejo Coffee SMEs, he said:

"I am confused, do I want to continue this business or should I look for other alternative jobs. If I trade, where should I sell it? So far, I have relied on visitors who come to Bedengan. Meanwhile, tours are temporarily closed for an undetermined time."

The step of risk identification was carried out by discussions with key speakers to determine the possible risks arising during the COVID-19 pandemic towards sustainability of MSMEs in the Tourism Selorejo Village, especially MSMEs Coffee Selorejo. Not all businesses will use the same risk analysis method (Ekwere 2016). The researcher and the MSMEs' owners decided the level of consequences based on the risk that they felt. The level of consequences of each risk is divided into 5 (five) categories, namely very light, light, moderate, heavy, and very heavy (Santoso & Mujayana 2021). The table below is the results of the identification of possible business risks.

Table 2. Risk identification level.

Level	Consequence	Level Description
1	Very light	1. Sales drop due to government regulations 2. Impact loss reaches 15%
2	Light	1. Sales drop due to government regulations 2. Impact loss reaches 20%
3	Moderate	1. Sales drop due to government regulations 2. Impact loss reaches 25% 3. Production and quality of coffee are weakening with a price around IDR 9000 per kg
4	Heavy	1. Sales drop due to government regulations 2. Impact loss reaches 35% 3. Production and quality of coffee are weakening with a price around IDR 7.000-8.500 per kg 4. MSMEs' management cannot be handled by BUMDes

(continued)

Table 2. Risk identification level.

Level	Consequence	Level Description
5	Very heavy	1. Sales drop due to government regulations 2. Impact loss reaches 50% 3. Production and quality of coffee are weakening with a price around IDR 5.000-7.000 per kg 4. MSMEs' management cannot be handled by BUMDes

The table above shows the possible risks with very light to very heavy consequences. Government regulations in tackling the spread of the virus, consequently affect the space for economic activities in the village Selorejo, especially product sales. The decrease in the number of visitors has an impact on MSME owners in Selorejo Village so that the losses can reach 15%, while at the level of very heavy consequences, the possible loss reaches 50%.

The level of productivity of coffee farmers is still low and can affect the value of coffee sales in the market. Cultivation of coffee is still underestimated because there is no special land for growing coffee. The data shows that farmers only plant coffee trees in between orange trees to maximize their orange fields. Meanwhile, the youth association leader said that the skills of farmers in managing coffee still need to improve, starting from picking to processing it into ready-to-serve coffee. These things cause low productivity levels and the selling price of coffee ranges from IDR 5,000 per kg to IDR 9,000 per kg.

The existence of BUMDes managed by the Village Office can help increase the productivity of business owners and minimize risks that may occur. However, most farmers are tempted to get profits when they manage and distribute them independently. In addition to affecting the selling price, this also affects the supply of coffee and Selorejo Coffee MSMEs have been witnessing a shortage of raw materials. This problem needs special attention for the sake of the resilience of the Selorejo Coffee MSMEs in the future.

Meanwhile, in terms of duration and the possibility of the risk occurring, the researcher identified the frequency level of possible risks experienced by MSME owners during the COVID-19 pandemic. The frequency level is measured up to 5 (five) levels. The following is the probability level experienced by MSMEs in Selorejo Tourism Village.

Table 3. Risk probability.

Level	Frequency	Description
1	Almost never	It can happen once in 5 years
2	Rarely	It can happen 1-3 times a year
3	Seldom	It can happen 6 times a year
4	Often	It can happen once a month
5	Must be happening	It can happen more than once a month

Based on the table above, the highest level occurs when the frequency of risk is more than once a month. When the risk occurs more than 10 times, MSME owners are at a heavy risk. Meanwhile, the risk of a very light occurs once in 5 years, which means that MSME owners rarely run the risk in a year.

### 3.2 Risk assessment

This step is carried out to provide an assessment or determine the level of consequences of the risk. The purpose of this step is to make decisions on risk actions. Here is a table of severity (consequences):



Table 4. Risk probability.

		Frequency				
Risk Matrix		Very Light	Light	Moderate	Heavy	Very Heavy
Frequency	Oftentimes	Moderate	High	High	Extreme	Extreme
	Often	Moderate	Moderate	High	High	Extreme
	Seldom	Low	Moderate	Moderate	High	Extreme
	Rarely	Low	Moderate	Moderate	High	High
	Almost never	Low	Low	Moderate	Moderate	High

Table 4 shows the level of extreme consequences occurring when the frequency of occurrence of very heavy risks exceeds once a month. Meanwhile, the level of very light consequences occurs when the risk rarely occurs in 1 year. Based on the exposure of village official staff and members of the youth organization, the risk during the COVID-19 pandemic is included in the high level of consequences. This choice was made because the risk was rare for 1 year, but the impact was directly felt by the Selorejo coffee MSME owners. Therefore, it is necessary to have recommendations that are used to make a decision. The following table presents the risk category representation of the risk assessment results:

Table 5. Recommendation action.

Category	Recommendation
Low	Requires new procedures in production and distribution systems
Moderate	Need action to execute the risk
High	Requires risk planning and risk control
Extreme	Requires more attention from related parties

Based on MSMEs' risk matrix Kopi Selorejo belongs to high-level consequences and is based on the categorization of risk assessment recommendations, the planning, and control of risk needs to be done. This is because the MSMEs have been high losses and their income was decreased. Coffee sales also decreased more than 6 times in 1 year due to the decline in consumer purchasing during the pandemic.

### 3.3 Risk control

This step is carried out to provide an assessment or determine the level of consequences of the risk. The purpose of this step is to make decisions on risk actions. Here is a table of severity (consequences):

This activity is a follow-up action to anticipate the occurrence of risks. Conditions of the business in future pandemic becomes something that is difficult to predict due to the change in the situation and raises the risk that must be faced by the business owners (Damayanti 2020, Nalini 2021). There is a shift in consumption patterns amid the pandemic, the quality of service and consumer trust also determines the level of business resilience. It makes MSMEs Coffee Selorejo able to adjust and be responsive to the development of the times in an attempt to survive amid pandemic COVID-19. The paper gives a recommendation for control of risk, such as following:

- The addition of the souvenir center for the development and accommodation of the products by the MSME community. In addition to encouraging people to produce a new product, it will become one of the alternative sources of income during the pandemic. This development provides a sense of minimizing financial losses.

- The role of BUMDes in optimizing the development of coffee cultivation, determining prices and target markets, as well as marketing in the form of coffee products (Paloma & Putri 2019). In this case, the cooperative will assist the management of MSME owners during coffee cultivation until the product marketing process.
- Optimization system of digital marketing, on this form of activity promotion and create a market through social media platforms that are online (Nalini 2021; Purwana et al. 2017). This is necessary to improve sales performance and maximize market engagement.
- Using a marketplace/e-commerce, this recommendation provides a solution to avoid the risk of declining sales productivity which has an impact on the revenue of MSME owners. This decrease was caused by government regulations that urge consumers to make online transactions (Hardilawati 2020). The solution that can be made by MSME owners is to add an online sales system.

### 3.4 *Implementation*

Based on the recommendation, the role of BUMDes cannot be maximized in this realization because BUMDes is still considered a new organization in Selorejo, so the community decided to develop their own business. They also can't build the souvenir center yet because they could not spend more cost for production, so the implementation that had been done by MSME owners is the optimization of digital marketing. The utilization of digital marketing is starting to create awareness of MSMEs Coffee in the Village Selorejo. The rapid development of technology to make digital marketing and utilization marketplace as something that must be understood by the business owners (Hardilawati 2020). MSMEs owners also need to consider the right social media that represent the market, so the branding will be more effective.

Digital marketing can be done through various social media, like Facebook, Instagram, or WhatsApp. Through social media, MSMEs owners can start promotions in the routine that can create a more extensive market and achieve customer trust. Digital marketing could be photo/video products, Facebook ads, Instagram ads, or promotion products via live. Some of the efforts that will attract the attention of customers and can optimize the introduction of products will be an impact on the branding of products of MSMEs themselves.

In addition, MSME owners can also use the marketplace as a marketing medium, such as Tokopedia, Shopee, Lazada, or Bukalapak. Using the marketplace can increase profits and make it easier to reach more markets (Hardilawati 2020). The purpose of using the marketplace is not only to make profits but also to build relationships with customers (Purwana et al. 2017). In case it is also easier for MSMEs owners to observe the chances of sales in the future.

## 4 CONCLUSION

During the COVID-19 pandemic, MSMEs are the most vulnerable sector to be affected because they have a relatively low level of business resilience. It led to a decrease in revenue during the pandemic as a result of the regulation of government that reduces the intensity of the sale. Based on the analysis of risk assessment, the MSMEs of Kopi Selorejo have business activity disruptions and suffered losses. Conditions have demanded MSMEs owners to have a strategy to survive so that they have to perform the analysis of risk management and prepare actions to control risk.

One of the efforts to survive is recommended is to build awareness of customers through digital marketing and optimization of e-commerce. It will help MSMEs to expand their market and can create customer engagement through communication on social media. In addition, MSMEs owners were able to grow the consumers' trust and create loyal customers.

The selection of MSME Kopi Selorejo as the object of research is a recommendation from village officials. This is because according to them, the development of Kopi Selorejo is in the process of branding, so they are very vulnerable to possible risks. Therefore, this research is limited to MSMEs in Selorejo Coffee, and not entirely done to MSMEs that are developing in Selorejo Village.

## REFERENCES

- Bogodistov, Y. & Wohlgemuth, V. 2017. Enterprise risk management: a capability-based perspective. *Journal of Risk Finance* 18(3) 234–251.
- Brown, R. & Rocha, A. 2020. Entrepreneurial uncertainty during the Covid-19 crisis: Mapping the temporal dynamics of entrepreneurial finance. *Journal of Business Venturing Insights* 14(May): e00174.
- Clifford, F., Gray & Larson, E. W. 2006. *Project management: The managerial process*. New York: McGraw Hill.
- COSO. 2004. Enterprise risk management-integrated framework. *Committee of sponsoring organizations of the treadway commission, American*.
- Damayanti, R. 2020. Manajemen risiko melalui identifikasi dan pengelompokan risiko saat pandemi Covid 19 studi kasus UMKM batik tulis lasem di kabupaten rembang. *Prosiding Seminar Nasional Unimus* 3.
- Ekwere, N. 2016. Framework of effective risk management in small and medium enterprises (SMEs): a literature review. *Bina Ekonomi* 20(1): 23–46.
- Hardilawati, W. laura. 2020. Strategi bertahan UMKM di tengah pandemi Covid-19. *Jurnal Akuntansi Dan Ekonomika* 10(1): 89–98.
- He, C. & Lu, K. 2018. Risk management in SMEs with financial and non-financial indicators using business intelligence methods. *Technology, Innovation and Industrial Management* May: 405–418.
- Ita. 2021. Manajemen resiko usaha pada UMKM pempek di kota Palembang di masa pandemi Covid 19. *Media Ekonomi Dan Kewirausahaan* 1(1): 1–12.
- Kompas. 2020. *Ini 3 subsektor ekonomi kreatif yang jadi penyumbang terbesar PDB Indonesia*. Kompas.Com.
- Nalini, S. N. L. (2021). Dampak dampak covid-19 terhadap usaha mikro, kecil dan menengah. *Jesya (Jurnal Ekonomi & Ekonomi Syariah)* 4(1): 662–669.
- Paloma, C. & Putri, A. 2019. Analisis risiko produksi kopi arabika (*Coffea arabica* L.) di Kabupaten Solok (Studi Kasus di Kecamatan Lembah Gumanti). *Journal of Socio Economic on Tropical Agriculture* 1: 84–93.
- Pratiwi, M. I. 2020. Dampak Covid-19 terhadap perlambatan ekonomi sektor umkm. *Jurnal Ners Universitas Pahlawan* 4(2): 30–39.
- Purwana, D., Rahmi & Aditya, S. 2017. Pemanfaatan digital marketing bagi usaha mikro, kecil, dan menengah (UMKM). *Jurnal Pemberdayaan Masyarakat Madani (JPMM)* 1(1): 1–17.
- Rehman, A. U., & Anwar, M. 2019. Mediating role of enterprise risk management practices between business strategy and SME performance. *Small Enterprise Research* 26(2): 207–227.
- Safi'i, I., Widodo, S. R. & Pangastuti, R. L. 2020. Analisis risiko pada UKM tahu takwa kediri terhadap dampak pandemi COVID-19. *Jurnal Rekayasa Sistem Industri* 9(2): 107–114.
- Santoso, R. & Mujayana, M. 2021. Penerapan manajemen risiko UMKM madu di Kecamatan Badas Kabupaten Kediri di tengah pandemi COVID19. *Jurnal Nusantara Aplikasi Manajemen Bisnis* 6(1): 74–85.
- Thaha, A. F. 2020. Dampak Covid-19 terhadap UMKM di Indonesia. *Jurnal Brand* 2(1): 147–153.

## Design and build repayment capacity-based loan mitigation model for women's cooperatives in East Java

A. Murdiono\*, F. Zen, L.N. Istanti & Subagyo

*Faculty of Economics, Universitas Negeri Malang, Malang, East Java, Indonesia*

N. Utaberta

*Universiti Putra Malaysia, Malaysia*

**ABSTRACT:** This study aims to design and build a repayment capacity-based non-performing loan mitigation model to minimize the occurrence of bad loans for women's cooperatives. This study involved 30 women's cooperatives in East Java from the districts of Blitar, Tulungagung, and Pacitan. The research phase begins with a preliminary study that needs analysis in the preparation of the model. The second stage begins by planning a model framework and then developing a bad credit mitigation model based on payment capacity. Activities carried out in the third stage include expert validity testing and model feasibility testing by users. It is hoped that this repayment capacity-based non-performing loan mitigation model can be a reference for women's cooperatives in providing credit to members and prospective members. In addition, it is expected to minimize the occurrence of bad loans and improve financial performance for women's cooperatives in East Java.

### 1 INTRODUCTION

One of the business units of the cooperative is the savings and loan business (Credit Cooperative). According to Judisseno (2005:163) the definition of credit is trust. Iskandar (2008: 93) defines receivables are obligations from the customer to the bank and have uncollectible consequences. Based on the terminology mentioned, credit in cooperatives is the trust of creditors in the debtor (Firdaus & Riyanti 2009: 1). Credit risk is the risk of loss arising from the debtor's failure to meet its obligations at maturity (Hardanto 2006 ; Tampubolon 2004). Therefore, for the savings and loan business, it is very important to carry out risk management on the credit provided (Mamai 2020). Fahmi (2011: 2) defines risk management as a process run by a manager in identifying and evaluating efforts to minimize the consequences of a risk.

Miswanto (2012) explained that the risk management process in savings and loan cooperatives starts from the stage of identifying potential factors that have a less impact on savings and loans. Therefore, it is important to provide an overview of how credit mitigation models for cooperatives as an effort to minimize the occurrence of bad credit. Mitigation is an effort made to minimize the risk of the activities carried out (Manusiwa 2011), (Manusiwa 2011), Widyarningsih (2018), Septiarini (2020) and Gweyi (2013) stated that the application of credit mitigation is beneficial for cooperatives to minimize the occurrence of bad credit. The implementation of better risk mitigation will help cooperatives to improve their financial performance (Rahayu & Herdiyanto 2018).

---

\*Corresponding Author: achmad.murdiono.fe@um.ac.id

Ade & Edie (2006) explained the definition of bad credit is the inability of debtors in paying off loans following the agreed time. The statement is reinforced by the theory of bad credit as the debtor's inability to pay principal and interest payments more than one year after maturity (Dendawijaya 2009). Tampubolon (2004:24) explains that exposure arising as a result of failure to meet its obligations constitutes a potential credit risk.

Fuller (2015) states that the factors that influence non-performing loans include institutional, political, and lending standards. Cooperatives that have problems in credit are mostly due to the lack of standards in lending. This condition will certainly provide the potential for non-performing loans in the future. Gweyi (2013) states that the majority of bad loans in savings and loan financial institutions occur because they do not have special strategies or policies that regulate loans. Djohanputro (2006) states that the value of credit risk consists of the quality of credit exposure and quantity of credit exposure. In the end, the occurrence of bad loans will be directly proportional to a decrease in financial performance or even the potential for bankruptcy (Siswoyo 2012).

Kasmir (2000: 104) One way to analyze the potential for credit is through the 5C analysis. Through this analysis, financial institutions are given an overview of the potential for uncollectible loans. One of the indicators used in the 5C analysis model is the capacity or ability of the debtor. This indicator is the most relevant analytical tool for women's cooperatives. This is due to problems with the ability of cooperative management resources in conducting credit risk analysis and the inadequate profile of debtors (cooperative members) with a more in-depth and complex analysis. Therefore, we need a mitigation model based on the ability to repay debtors (members).

A cooperative is a collection of people and capital who carry out business activities to achieve their goals together based on family principles (Law No. 25 of 1992). Cooperatives and SMEs are the locomotives in the people's economic development so the empowerment of cooperatives and SMEs must be a top priority for long-term national economic development (Herdiawan 2012). East Java as one of the meccas of economic empowerment based on SMEs and Cooperatives makes a model of family-based economic empowerment through women's cooperatives. In 2010 the East Java provincial government established women's cooperatives in all villages and the output with a capital capitalization of Rp. 45 billion (Siswoyo 2012). The contribution of women's cooperatives to economic empowerment is undeniable, but along the way, women's cooperatives also experience various business problems ([www.diskopukm.jatimprov.go.id](http://www.diskopukm.jatimprov.go.id)). The majority of cooperatives in Indonesia have had credit problems (Rinastiti 2012) noted that there are about 40% of bad loans occur in a several cooperatives.

The existence of women's cooperatives is proven to be able to encourage the family economy which leads to increasing economic growth in East Java (Siswoyo 2012). The easy credit application process makes women's cooperatives the prima donna of the community to get funding. Apart from the easy process, the community's interest in women's cooperatives is due to the low -interest rate on the loan value. However, the results of the assessment conducted on the performance of women's cooperatives show that the increase in loan value is directly proportional to the occurrence of bad loans. (Siswoyo 2012). Based on the problems above, a bad credit mitigation model is needed with a repayment capacity approach. Through this research, it is hoped that it will provide guidance in providing loans to members and minimizing the risk of the credit provided.

## 2 METHODS

Based on the purpose of the research, the approach used in this research is the research and development approach. Borg and Gall contain systematic guidelines for the steps taken by researchers so that the products they design have standards of feasibility (Cavendish et al. 2019). The following will be spelled out at the stages designed in this study.

### 2.1 *Preliminary study stage*

The first stage conducted in this research was to conduct a theoretical review and empirical study at the Cooperative and MSME Office of East Java Province to conduct Focus Group Discussion (FGD) and data collection in 30 women's cooperatives in Blitar, Tulungagung, and Pacitan regencies.

### 2.2 *Planning and model preparation stage*

The results of theoretical studies and field studies became the basis in designing and compiling a bad loan mitigation model based on repayment capacity. The preparation stage starts from the stage of reconstructing the model or standard of credit management that has been done by women's cooperatives and then making adjustments for the preparation of a new model.

### 2.3 *Model trial stage*

The third stage in this research is to test the bad credit mitigation model that has been built. At the initial stage, the validity of the material and model experts was tested. After the expert validity test, the mitigation model feasibility test was carried out by the cooperative management and the Cooperatives and UMKM Service as users.

### 2.4 *Type of data and data analysis*

This type of data in development uses qualitative descriptive data. Qualitative data is generated from expert responses of materials and user responses, the Cooperative Service members and women cooperative administrators. The data analysis used in this study is descriptive data analysis. Descriptive data analysis is used to analyze data obtained from the results of validation of material experts, media experts, and questionnaires from users. As for some of the data analysis techniques used in this study.

### 2.5 *Validity test*

Validity test is carried out to ensure how well an instrument is used to measure the concept that should be measured. The formula used is the product moment formula. If  $r$ -count (Corrected Item-Total Correlation) is positive and greater than  $r$ -table ( $r\text{-count} > r\text{-table}$ ), then the item or variable is valid. On the other hand, if the  $r$ -count (Corrected Item-Total Correlation) is negative and or and the  $r\text{-count} < r\text{-table}$ , then the item or variable is invalid. The results of the validity test indicate that all items in the questionnaire are valid at a significance level of 5%.

### 2.6 *Reliability test*

Sukmadinata (2010) states that the reliability test is useful for knowing the level of constancy or determination of the measurement results. In this study, the reliability test was carried out using the Cronbach alpha formula. To test the reliability, it is done by looking for the reliability number of the questions in the questionnaire using the alpha formula. After obtaining the value ( $\alpha$ ), compare this value with the critical number of reliability in table, which shows the relationship between the number of questions and the reliability of the instrument. The results of the reliability test in this study are declared reliable if the resulting alpha greater from the critical number is reliable. The reliable critical number in this study used was 0.50 because the number of questions were  $> 20$ , i.e., 22 questions thus it was considered to be reliable if ( $r_{11}$ ) 0.50.

## 2.7 Descriptive data analysis

Data analysis regarding model development was carried out using a percentage descriptive system. The percentages that have been obtained are then transformed into tables to make reading of the research results easier. The percentage range and qualitative criteria can be determined based on the following table:

Table 1. Development revision decision making.

Achievement of learning goals	Qualification	Qualification
81%–100%	Excellent	No need to revise
61%–80%	Good	No need to revise
41%–60%	Enough	Revision
21%–40%	Less good	Revision
0%–20%	Very bad	Revision

Source: Riduwan 2010.

## 3 RESULTS AND DISCUSSION

### 3.1 Preliminary study

Preliminary study activities carried out by analyzing primary data obtained through field studies at the Department of Cooperatives and SMEs in East Java Province and 30 women's cooperatives. Based on the data analysis, information is obtained regarding the application of risk management in the savings and loan business, the application of the 5C model in analyzing prospective debtors, and the standard procedures applied by women's cooperatives in providing loans to the members. In addition to field studies through primary data, the preliminary study phase is also carried out by conducting a literature study on cooperative management, risk management of savings and loans, and non-performing loan mitigation models based on repayment capacity. The results of the preliminary study activities will be useful in designing a non-performing loan mitigation model based on repayment capacity.

### 3.2 Bad credit mitigation model for women's cooperatives

#### 3.2.1 5C model reconstruction

One of the analytical components used in the bad credit mitigation model is the 5C analysis model. Through 5C analysis, cooperatives will obtain information about the profile of prospective debtors. This profile will later provide recommendations regarding whether or not it is feasible to get a loan recommendation. Debtors who are not eligible to receive loans, of course, do not receive a recommendation from the management and vice versa. However, the application of the 5C model in banking will be different if it is applied to women's cooperatives. In addition to the low capacity of human resources in applying 5C analysis, the low complexity of the data is also a problem in implementing 5C analysis in women's cooperatives. Therefore, the reconstruction of the 5C analysis model is the initial stage in the preparation of this bad credit mitigation model. The following is a reconstruction of the 5C model in women's cooperatives.

Based on the picture above, there is a change in the terms and meaning of the 5C variable in its application to women's cooperatives. This change was made to make it easier for administrators to apply each variable in the 5C model. In addition, through the field study, the composition of each indicator of the 5C analysis model was obtained. Based on the picture above, the variable of members' ability to repay installments (repayment capacity) is the most dominant indicator in determining the eligibility of prospective customers.

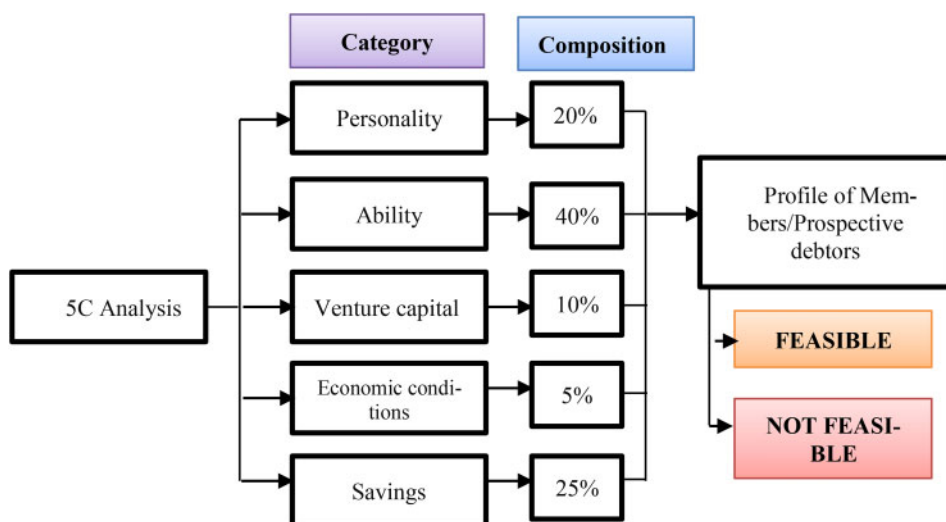


Figure 1. Reconstruction of the 5C model in the women's cooperative.

### 3.2.2 Reconstruction of savings and loan business management

The second stage in this research is to model the management (management) of the savings and loan business. Based on the situation in the field, the majority of the management of savings and loan businesses in women's cooperatives is managed by the cooperative management (Chairman, Bndahara, Secretary). This condition is of course not ideal in the management of savings and loan businesses. This is because there are personal limitations in business management and not all administrators have the ability to manage savings and loan businesses. This condition certainly will not be effective in the application of the 5C analysis model. Therefore, it is necessary to have a department/departments that has/have competence in analyzing the eligibility of members/prospective debtors. Based on the results of field studies, some cooperatives already have a credit management model even though it has not been standardized. The following is a reconstruction of the management of save and borrow businesses by women's cooperatives.

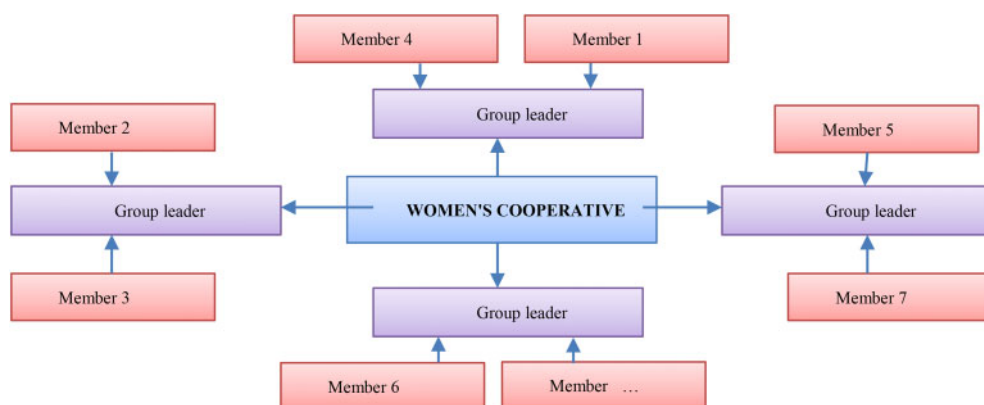


Figure 2. Reconstruction of savings and loan business management.

Based on field observations, it is seen that the process of minimizing risk in women's cooperatives is carried out by forming groups. The board will form a group by appointing a chairperson as a



representative in the group. The functions of the group include facilitating communication between the management and members and facilitating the process of paying member dues to the cooperative. The appointed group leader will take an important role in providing recommendations on loan applications to cooperatives. Although able to provide solutions to the possibility of bad credit, it is necessary to set standards for group leaders so as to provide the principle of justice for all members of the cooperative.

### 3.2.3 Analysis of Repayment Capacity on the bad credit mitigation model

Bad credit in women's cooperatives will potentially reduce the income of cooperatives, especially in cooperatives whose businesses are savings and loan cooperatives. If there are more bad loans that occur, the cooperative will lose the opportunity to earn profits from each loan disbursed. The management of women's cooperatives will mitigate bad loans, one of which is based on the ability of members. Cooperatives will consider the ability to repay (repayment capacity) prospective members. When a prospective debtor applies for credit, all data that has been provided to the creditor will be analyzed by the cooperative management. The following is a model for analyzing the ability of members to repay loans based on the repayment capacity in women's cooperatives.

Assessment of the potential debtor's ability is very important to determine his ability to control the business. Usually, this assessment is associated with education, the ability to understand government regulations, the ability to lead, the ability to master the field of business, and future prospects. Thus, the receivables or credits granted are appropriate for the needs of the debtor for the credits received. If the assessment carried out does not get detailed information related to the debtor's business condition, where when a business owned by the debtor goes bankrupt, it will affect the smoothness of credit payments, causing the cooperative to experience bad / problem loans.

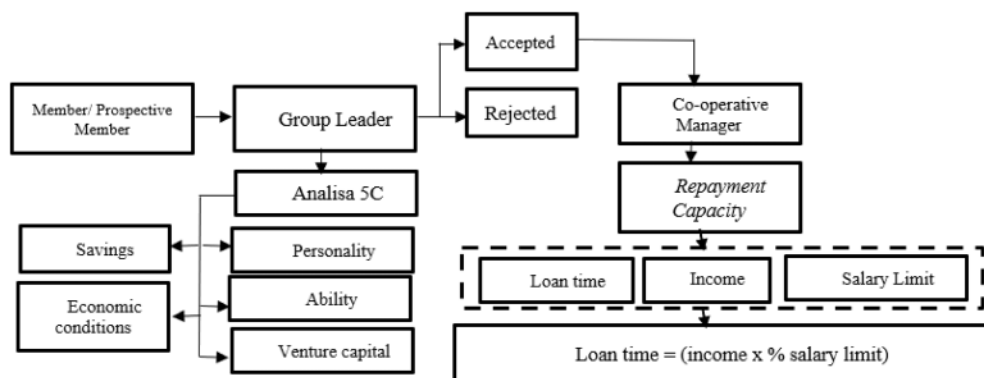


Figure 3. Repayment capacity-based loan analysis model.

### 3.3 Model trial results

The trial of the credit mitigation model in this study includes a questionnaire test (validity and reliability), expert validity test and acceptance test of the bad credit mitigation model. The following are the conclusions from the test results.

#### a. Questionnaire Validity and Reliability Test

The reliability test used is Alpha Cronbach. The results of the reliability test show that the variables in the questionnaire have a Cronbach Alpha coefficient value greater than 0.6 so it can be said that the question instrument used in the user and expert questionnaire is reliable.

#### b. Validation of the expert team (expert judgment)

The expert trial phase was carried out to determine the feasibility of the model that had been built through an assessment instrument for the construction of 5C analysis materials, savings

and loan business management, and repayment capacity as the basis for providing credit. The following is the result of the expert validity test.

Table 2. Results of model assessment by experts.

Variable	Admission Score	Description
Material	70.5%	Good
Picture	71.4%	Good
Systematic	74.5%	Good

Expert trials include material indicators, pictures and systematics of bad credit mitigation models. Based on table 2, it is known that the value of the 3 indicators mentioned above is 60% so that it is stated that based on the three elements, the assessment made is considered good. Thus, the experts in this study agreed to accept that this bad credit mitigation model could be used by the management of women's cooperatives in managing savings and loans.

c. Model acceptance rate test

The results of the assessment of the model are described in the following table:

Table 3. The number of officially reported plague cases in the world.

Variable	Admission	Score Description
Material	84.8%	Good
Picture	82.9%	Good
Systematic	88.6%	Good

Table 3 above shows that the acceptance score of the bad credit mitigation model is more than 80% which means that based on the aspect of appearance, material, and also the benefits of the model made are considered very good by the cooperative management and the Cooperatives and MSMEs Office.

### 3.4 Implementation of bad credit mitigation model on women's cooperatives

The bad credit mitigation model in women's cooperatives consists of the 5C model reconstruction, savings and loan business management, and repayment capacity analysis on the bad credit mitigation model.

#### 3.4.1 Character

One of the elements in the 5 C's is to assess the personality of members/prospective customers. In women's cooperatives, one of the criteria in this personality is how the relationship between potential customers in society is. The variable character of cooperative members/prospective members is calculated by 25% by the management in providing information on the profile of prospective debtors.

#### 3.4.2 Capacity

The second factor in this 5C analysis is the ability of members/prospective customers. The ability of this customer is not only measured by the income owned by the customer every month. However, more detail is the remaining income allocated by the customer to pay the principal and disposal each month. The ability of this customer will also affect the number of loans that can be given. This element of capacity will greatly affect the members' ability to pay. The variable of the ability of cooperative members / prospective members is calculated by 30% by the management in providing information on the profile of prospective debtors.

### 3.4.3 *Capital*

The third element of the 5C model is the assets of the business owned by the customer/prospective member of the cooperative. In this element, it is very minimal to find women's cooperative administrators to carry out an analysis of the business assets of members. This is because of the limited capacity of the cooperative management. However, it will still be very strategic for the cooperative management to carry out this analysis to members who borrow funds for business development. The variable of working capital for cooperative members/prospective members is calculated at 10% by the management in providing information on the profile of prospective debtors.

### 3.4.4 *Condition of economic*

The majority of women's cooperatives do not have the ability to carry out economic analysis in the analysis of lending to members. However, economic analysis is still important as a forecast of future economic conditions. Variable ability of cooperative members/prospective members is calculated by 5% by the management.

### 3.4.5 *Collateral (savings)*

The understanding and application of guarantees in providing credit in women's cooperatives is different from financial institutions such as banks. In banking institutions, guarantees are assets that will be assessed by banks but in women's cooperatives, the guarantee is more on the cooperative's trust in members. Women's cooperatives emphasize the element of trust (social capital) as collateral in savings and loan contracts. The cooperative member savings variable is calculated at 30% by the management in providing information on the profile of prospective debtors.

Women's cooperatives need to develop a non-performing loan mitigation model based on the ability of members. This is because the repayment capacity based non-performing loan mitigation model can be the first step to prevent bad loans in savings and loan cooperatives. In general, this repayment capacity analysis is carried out by a specific and in-depth analysis team of prospective debtors. Based on the data obtained, women's cooperatives do not have a special team to assess the feasibility of prospective debtors to obtain loans. Therefore, in order to maximize the application of the bad credit mitigation model, women's cooperatives need to form a loan commission as in the model above.

Obtaining detailed information is very necessary to assess the feasibility of prospective debtors, because any little information will affect the results of the analysis. The formation of special analysts to analyze the feasibility of prospective debtors is expected to minimize the occurrence of bad loans. This special analysis team will focus on all information about prospective debtors or members who want to make loans, including the ability of members to pay loan installments.

## 4 CONCLUSION

Based on the results and discussion above, the formulation of the conclusions in this study are as follows.

1. The first stage in building a bad credit risk mitigation model is to reconstruct the 5C analysis model.
2. The next stage is to reconstruct the management aspect of savings and loan business management in women's cooperatives based on the clustering of member areas.
3. The model for mitigating non-performing loans in women's cooperatives considers the capacity repayment of members.
4. Based on the model test results, it is known that the bad credit mitigation model has fulfilled the requirements to be used as a model in conducting a mitigation analysis of the occurrence of bad loan for women's cooperatives.

The results of the study recommends that women cooperative administrators in implementing bad credit mitigation is to consider the ability of members to pay back debt through voluntary

income and deposits in cooperatives and form loan committees. This committee will later provide recommendations in the application of loans by members to the central board.

## REFERENCES

- Ade, A. & Edia, H. 2006. *Bank dan lembaga keuangan bukan bank*. Jakarta: Gramedia.
- Alhimnie, F. A. & Septiarini, D. F. 2020. The analysis of risk mitigation technique of home financing takeover in Bank Panin Dubai Syariah Surabaya Branch. *Jurnal Ekonomi Syariah: Teori dan Terapan* 7(6): 1074–1090.
- Djohanputro, B. 2008. *Manajemen risiko korporat*. Jakarta: PPM.
- Cavendish, W., Morris, C.T., Chapman, L.A., Ocasio-Stoutenburg, L. & Kibler, K. 2019. Teacher perceptions of implementation practices to support secondary students in special education. *Prev. Sch. Fail. Altern. Educ. Child. Youth* 1–9.
- Edilius & Sudarsono. 2010. *Manajemen koperasi indonesia*. Jakarta: Rineka Cipta.
- Fahmi, I. 2011. *Manajemen risiko*. Bandung: Alfabeta.
- Firdaus, H. R. & Ariyanti, M. 2009. *Manajemen perkreditan bank umum*. Bandung: Alfabeta.
- Fuller. W. 2015. who's borrowing? credit encouragement vs. credit mitigation in national financial systems. *Politics & Society* 43(2): 241–268.
- Gweyi Moses. 2013. Credit risk mitigation strategies adopted by commercial banks in kenya. *International Journal of Business and Social Science* 4(6).
- Hardanto, S.S. 2006. *Manajemen risiko bagi bank umum*. Jakarta: Elex Media Komputindo.
- Harun. 2013. Peranan pengendalian internal pada koperasi Purlina Kota Semarang. 1(3).
- Herdijawan, K. 2012. *Manajemen resiko pada koperasi*.
- ICA. 1995. *Dimensions of the international cooperative movement*. UWCC
- Iskandar, S. 2008. *Bank dan lembaga keuangan lain*. Jakarta: PT. Semesta Asa Bersama.
- Judisseno, R. K. 2005. *Sistem moneter dan perbankan indonesia*. cetakan kedua. Jakarta: Gramedia Pustaka Utama.
- Mamai, M. 2020. Credit risk aspects and mitigation strategies in SMEs lending. *European Journal of Business and Management* 12(23): 2020.
- Kasmir. 2002. *Dasar-dasar perbankan*. Jakarta: PT Raja Grafindo Persada.
- Miswanto, B. 2012. *Manajemen resiko KSP dan USP*.
- Darmayanti, N. P. A. & Suryantini, N. P. S. 2017. Determinan keputusan pendanaan pada perusahaan publik di Indonesia. *Jurnal Akuntansi Indonesia* 6(2): 99–112.
- Rahayu & Hendriyanto. 2018. Mitigasi risiko pembiayaan pada bank perkreditan rakyat syariah (BPRS) SAFIR cabang curup Kabupaten Rejang Lebong. *Al Falah: Journal of Islamic Economics* 3(2): 191–212.
- Riduwan. 2010. *Skala pengukuran variabel-variabel penelitian*. Bandung: Alfabetha
- Rinastiti, A. 2012. *Sistem pengendalian kredit pada KSP tabita Salatiga*. Laporan Skripsi PE FKIP UKSW.
- Siswoyo, B. B. 2012. *Pengembangan koperasi wanita: Materi pendampingan koperasi wanita di Jawa Timur*.
- Sukmadinata. 2010. *Metode penelitian pendidikan*. Bandung: PT. Remaja Rosdakarya.
- Tampubolon, R. 2004. *Manajemen risiko: Pendekatan kualitatif untuk bank komersial*. Jakarta: PT. Elex Media Komputindo.
- Theresa, M. G. H. 2012. *Analisis repayment capacity kredit usaha rakyat sektor agribisnis pada Bank Rakyat Indonesia unit Cibungbulang Bogor*.
- Undang-undang No 25 tahun 1992 tentang koperasi.

## The development of “SIDEDI” application: Early detection instrument to capture radicalism thought symptom for senior high school students

J.H.G Purwasih\*, A.A. Widiyanto & S.A. Idrus

*Universitas Negeri Malang, East Java, Indonesia*

**ABSTRACT:** Religious radicalism is a threat of which many parties, including schools, should be alert because students are vulnerable to thought infiltration. Many studies found radical thought among students. However, it indicates only the phenomenon existing without yielding expedient and efficient preventive attempt. Therefore, the author developed “SIDEDI” application early detection instrument of radical thought phenomenon for Senior High School students that can be accessed online through Playstore. This research and development adapts Walter Dick and Lou Carey’s ten development stages. The result shows that there are two applications designed separately for teachers and students. Student (SIDEDI) application was designed to indicate and to answer questions. Meanwhile, the code to access class and question was designed for teacher application.

### 1 INTRODUCTION

Religious radicalism threat among Indonesian youths is a serious threat. The result of research conducted by some institutions showed that educated people instead become those groups’ target (Ali & Purwandi 2018; Saputra 2018). One of them is students that are vulnerable to be the target of their attempt of regenerating religious radicalism thoughts. It is indicated with the result of survey conducted by Mata Air Foundation and Alvara Research Center (2017) finding Senior High School students agreeing and supporting jihad. In addition, *Badan Intelijen Negara* (BIN or State Intelligence Agency) stated that a survey conducted by UIN Jakarta (2018) found some Indonesian students indicated to have radical religious perspective in some areas (PPIM UIN & UNDP Indonesia, 2018).

In 2018, the author also found religious radical thought phenomenon in Malang and Batu Cities (East Java). About 2% of students being the combined sample agreed that state ideology (Pancasila) can be replaced with the new one (Purwasih & Widiyanto 2020). There is also another phenomenon leading to the idea of agreeing with the replacement of Indonesian government system with *khalifah* system. Such condition can be seen from students stating strongly agree (8%) and agree (23%) in Malang and Batu Cities, respectively (Purwasih & Widiyanto 2020).

Some studies found that many channels by which radical thought penetrates into school environment should be on alert. First, the channel is religious extracurricular activity (Rokhmad 2017) (Muhammad & Probadi 2013) (Wahid Foundation 2016), Intra-School Students Organization (OSIS) (Darraz 2013), teacher and alumni (Bano dkk 2016), and teaching book (Rokhmad 2017). The findings of previous studies confirm that religious radicalism still enters into school environment easily.

The result of current research in 2019 shows that the school’s poor sensitivity and resistance are due to some factors: 1) school still consider religious radicalism has not been a serious threat, 2) the difference of religious perspectives between teachers, 3) many infiltration fissures in bureaucratic

---

\*Corresponding Author: joan.hesti.fis@um.ac.id

system in school, 4) a perspective assuming that school is responsible for students even when they have been outside school (Purwasih & Widiarto 2020).

Considering the result of previous studies, the authors assume that early detection instrument to filter and to prevent radical thought infiltration among students should be developed. In the future, early detection can help many parties, particularly schools, in identifying potential radicalism. This development is very important recalling that the special policy related to radical thought and movement has not gotten school's special attention so far. Meanwhile, the school's poor knowledge and awareness of radicalism can attenuate the school's resistance (AF 2013).

To fill in vacuum and urgency, the author develops early detection instrument of radical thought phenomenon for Senior High School (SMA) students. The author presents this instrument in the application that can be downloaded via Playstore named "SIDEDI". Thus, the instrument can be accessed massively. It is intended to design early detection instrument that can be used independently by schools. This research is very important as it can minimize the risk at messo, macro-structural, and institutional levels at school.

2 LITERATURE REVIEW

Radicalism is a personal and political changing and transforming process from one condition to another. Radicalization occurs inside individual through non-instantaneous gradual rather than quick and easy process. An individual's experience becomes radical not just within a night, but it results from experiences he/she has (Horgan 2005). Radical thought phenomenon is still controversial, and even other studies indicate the importance of distinguishing radicalism and extremism concept at practical level. This sensitivity can be considered as an issue harmful to the social stability of society (Weert & Eijkman 2019). On the other hand, anticipating the phenomenon existing is very important.

3 METHODS

This research applied *research and development* method adapted from Walter Dick and Lou Carey's thought (Gall & Borg 2003). The result of our previous research underlies this current research. Meanwhile the procedure of research developed consisted of ten points: 1) identifying objective, 2) formulating indicator, 3) identifying platform specification, 4) formulating development design, 5) research instrument, 6) developing indicator into statement and platform framework, 7) combining instrument into platform, 8) formative evaluation, 9) revision, and 10) summative evaluative and final display.

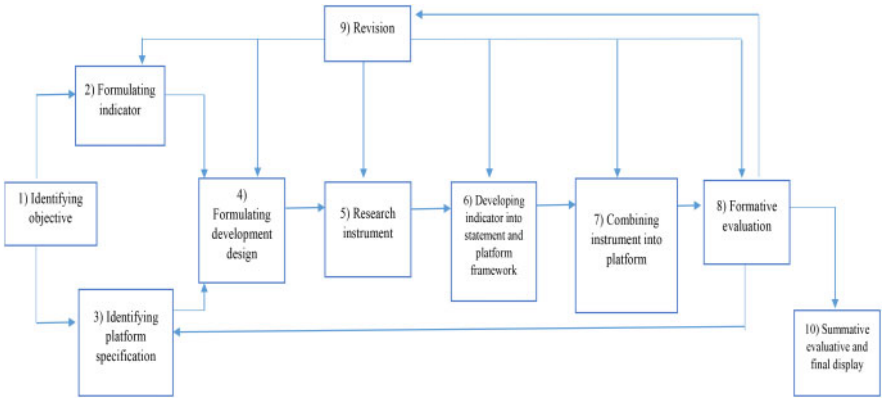


Figure 1. Ten development stages of result and discussion.

### 3.1 Step 1: Objective of development

This research formulated the objective of development through need analysis. The author reflected the result of basic research conducted in 2018 and literature study. The result reflected survey-based research conducted in 2018 as follows. 1) Survey technique applied is still conventional and, thereby, data processing cannot be done quickly. 2) Data collected by some authors is utilized more for their own research purpose. 3) Indicator is still dependent on the existing literature. Meanwhile, the experience with specific cases in the field is still very limited. Considering the reflection of previous studies, the instrument used has not been published widely. Nevertheless, there are some authors publishing their instrument, but the instrument still needs some processing to be reused.

The development of instrument for detecting radical thoughts or the similar has actually been conducted in some states. For example, *The Violent Extremist Risk Assessment 2 Revised (VERA-2R)* (Pressman & Flockton 2012). The instrument has been revised from its early version (Pressman 2009) and *Risk Assessment for Violent Extremists (RAVE)* developed by Geoff Dean Elaine Pressman along with *Netherlands Institute for Forensic Psychiatry and Psychology (NIPF)*. NIPF is a Dutch institution providing forensic expert. NIPF provides mental health information to intermediate forensic expert and Dutch General Attorney Office. Meanwhile, RAVE developed by Geoff Dean explains that perception provides entrance toward the development of radicalism idea. He suggested that neuroplasticity, i.e., the brain's ability of changing the experience generates interaction between cognitive process and cerebral nervous mechanism. He also indicated that the repeated reinforcement of extremist perception encourages the acceptance to radicalism and extremism, leading to the establishment of radicalized mindset. In this stage, individual is prepared for violent action because his/her thought develops rationalization and justification to behave extremely (Dean 2014). Second, the instrument development is utilized widely to deal with terrorism and extremism actors. In such condition, it can be seen that the management of radicalism threat gets serious attention in some states, as indicated with some instruments developed by scientists, organizations, and governmental institutions. Meanwhile, the instruments of detecting radical thought phenomenon used more widely in Indonesia so far are the instruments of collecting data in the research but have not been developed as preventive measure. It is indicated with many studies on the mapping of radical thought symptom or risk (Wahid Foundation 2016), (Khozin 2013).

Having made reflection, the author formulated the development of early detection instrument with the following objectives:

1. To detect the radical thought phenomenon among senior high school students
2. To be used by each school as the part of preventive attempts
3. To be affordable anytime and anywhere
4. To get quick result (the output can be known directly)
5. Not to generate ethnic, religion, and race sensitivities. The instrument used question items not using term/concept and other religious symbols.

### 3.2 Step 2: Indicator of material

In this stage, the author formulated an indicator to be developed in the item questions of instrument. The author used two methods: literature study and collecting data from field experience. Literature review was conducted by reading some journals and book discussing the radical thought phenomenon in school, particularly senior high school. Meanwhile, the author got field experience from the result of FGD along with teacher and the findings of studies in previous year. Having applied the two techniques, the author successfully formulated four basic indicators: exclusive, intolerant, extreme, and violence. Each indicator is developed in the form of sample statement questions concerning self experience phenomenon, family, school, and social media.

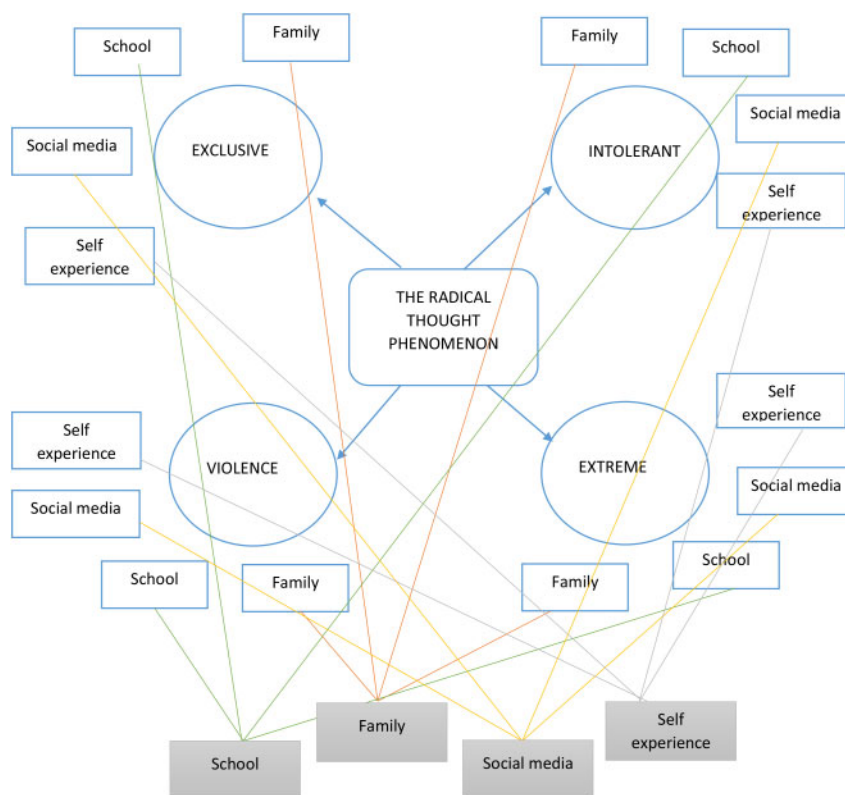


Figure 2. Indicator design.

### 3.3 Step 3: Indicator of platform

The indicator of platform was obtained through FGD between author, teacher, and policymaker of partner school. The indicators of platform development are as follows:

1. Usable
2. Attractive
3. Accessible anytime and anywhere
4. Result obtained can be known directly
5. Secured secret

### 3.4 Step 4: Formulating development design

In principle, this research started with indicator-developing stage, instrument development, fit and proper test, integration of application framework, fit-and-proper test, and revision. This design of research and development is presented in Figure 3.

### 3.5 Step 5: Formulating feasibility instrument

Product feasibility instrument is formulated to assess instrument and product feasibility. The instrument feasibility is tested by linguist, material feasibility, and statistic test. Meanwhile, product feasibility test was conducted using independent trial/simulation. Linguist assesses language effectiveness and diction use corresponding to the potential respondents' (Senior High School students)



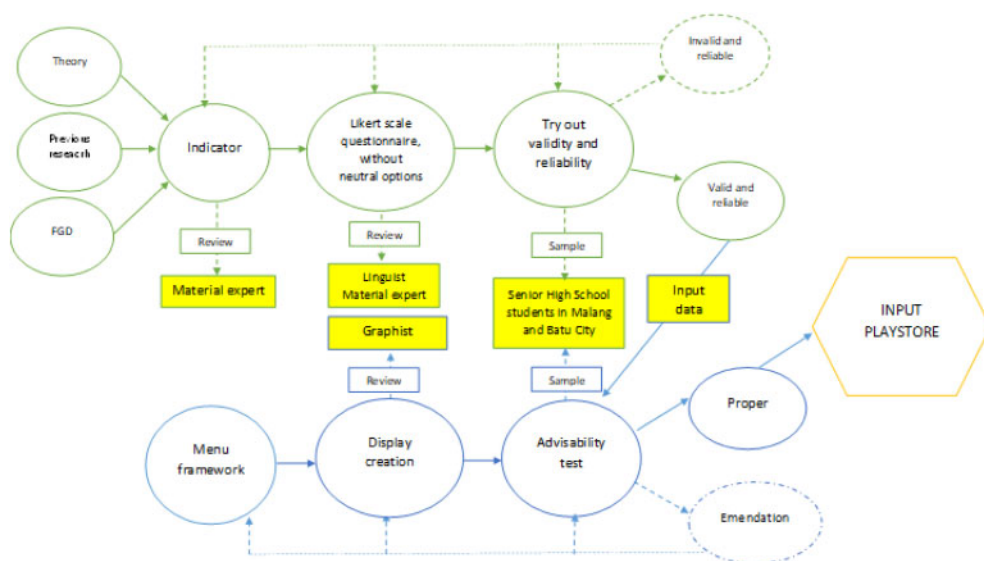


Figure 3. Design of development.

ability and checks whether or not there is interpretation on ethnic, religion, and race interpretation. The material feasibility tests the compatibility of construct and indicator application to the implementation of examples in the question item. Then, statistic test was conducted to find out instrument validity and reliability.

### 3.6 Step 6. Developing questionnaire and platform design

The author developed 44 question items. It is an expansion of the four basic indicators formulated by the author. The author cannot mention all question items here; nevertheless, the development of sub indicator and dimension used by the author can be shown below.

Table 1. The indicators of questionnaire.

1.	Exclusive	Introvert: willing to participate in one religious group only Restricting the intercourse with other religion Prioritizing his religious group
2.	Intolerant	Negative prejudice with religious motive Not accepting different creed Treating other religions' adherents unequally
3.	Extreme	Viewing the state ideology in contradiction with religion Replacing state ideology with religion-based perspective Wanting religion-based state system
4.	Kekerasan	Legalizing anarchism to achieve the religion-labeled objective Intimidating other religions' adherents

In addition to developing questionnaire, the author also develops platform design. To access this application, teachers and students are given different address menus. Teachers can develop class to be given certain code later. This code will be used by the students to be able to enter into the class. It is provided to enable the teachers to utilize group and individual data in the class. Furthermore,

the statement items can be accessed and answered by the students. Having answered the questions, the students can acquire information on the result of their understanding tendency.



Figure 4. Design of SIEDDI application development for teacher.



Figure 5. Design of SIEDDI development for students.

3.7 Stage 7: Combining integrated prototype instrument with the platform



Figure 6. Integrated prototype instrument.

3.8 Stage 8: Formative evaluation

3.8.1 Quality of instrument viewed from linguistic aspect

Linguists' verification was conducted to enable the instrument to qualify the EYD's (Indonesian language Norm Standard) requirement. The author asked one of the Indonesian language education lecturers to assess the language feasibility. Then, linguists also assess whether or not there is a potential ethnic, religion, and race sensitivity, and the language appropriateness to the targeted users (senior high school students) understanding level. The result of linguist study shows that generally this application has used good language.

3.8.2 Quality of instrument viewed from material aspect.

Material feasibility was conducted through internal evaluation between authors. The authority reevaluates the feasibility of material, the appropriateness of indicator, and the relevance of question items. This checking is conducted through construct accuracy technique qualitatively using inter-rater triangulation. The result shows that there is a difference of perception between raters (authors), and some question items tend to be less accurate. Therefore, the author then corrected it together.

### 3.8.3 *Quality of instrument viewed for validity and reliability test*

Validity test was measured using product moment, while reliability test was conducted using *alpha Cronbach*. This test was conducted on 33 senior high school students from different school background. The result of pretest shows that 7 (seven) statement items are invalid because it is less than standard *r* stable (0.5). These seven items were then corrected by the authors and trialed again, until all question items are valid.

### 3.8.4 *Quality of application display*

The author evaluated the quality of application both internally and externally. The author reevaluated the product prototype before making it available in the Playstore. Thereafter, the author asked the teacher to try seeing and using this application. The result indicated some weaknesses: less accurate input and output of measurement result that can be anticipated and corrected.

## 3.9 *Step 9: Product revision*

Considering the weaknesses found in the terms of language, material content, and display, the author conducted revision to get maximum output. The revision made was then evaluated and supervised by involving the potential product users. The result showed that the users said that the product prototype has been feasible. The author then uploaded it onto Playstore as the final stage.

## 3.10 *Step 10: Summative evaluation and final display*

Summative evaluation was conducted by revising the instrument and content display when it has been uploaded onto Playstore. It is intended to minimize the finding of error. The final display of application resulting from this research on the Playstore is shown in the figure below.

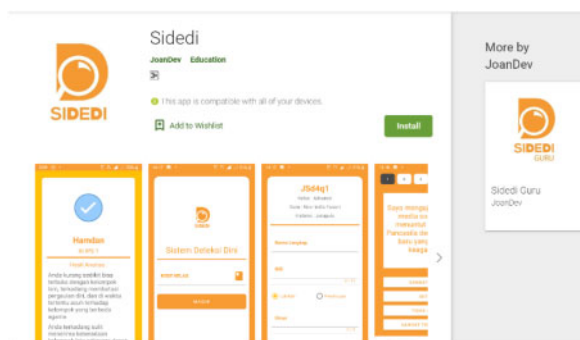


Figure 7. SIEDI application for student.

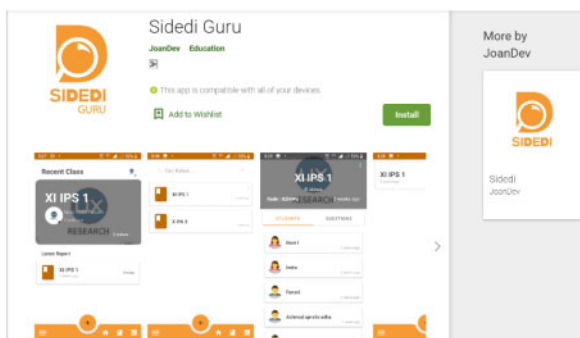


Figure 8. SIEDI application for teacher/school.

## 4 CONCLUSION

This instrument is developed to prevent religious radicalism thought among students. Nevertheless, the users should remember that this instrument is not an absolute tool to be developed to label an individual. The result obtained from this measurement is only a representation of “tough phenomenon” to which the users should be alert and then to take anticipative action and to facilitate the students. In addition, the alertness to religion radicalism issue of which many parties should be aware as a phenomenon that can harm the school’s reputation. The spirit to improve school’s alertness and resistance is very desirable in warding off radicalism.

## REFERENCES

- A. Rokhmad. 2017. Radikalisme islam dan upaya deradikalisasi paham radikal. *Walisongo J. Penelit. Sos. Keagamaan*. doi: 10.21580/ws.20.1.185.
- A. G. AF. 2013. Pemetaan problem radikalisme di SMU negeri di 4 daerah. *J. MAARIF Menghalau Radikalisasi Kaum Muda Gagasan dan Aksi*, vol. 8, no. No. 1, Juli.
- A. van de Weert and Q. A. M. Eijkman. 2019. Subjectivity in detection of radicalisation and violent extremism: a youth worker’s perspective. *Behav. Sci. Terror. Polit. Aggress*. doi: 10.1080/19434472.2018.1457069.
- D. Elaine Pressman and J. Flockton. 2009. Calibrating risk for violent political extremists and terrorists: The VERA 2 structured assessment. *Br. J. Forensic Pract.*, 2012, doi: 10.1108/14636641211283057.
- D. E. Pressman, *Risk Assessment Decisions for Violent Political Extremism*.
- G. Dean. 2014. *Neurocognitive Risk Assessment for the Early Detection of Violent Extremists*. Springer International Publishing.
- H. Ali and L. Purwandi. 2018. Radicalism rising among educated people? research finding on professionals, college and high school student, Jakarta, 2018. doi: 10.1177/1538574418797223.
- J. H. G. Purwasih and A. A. Widiyanto. 2020. Indication of radicalism: Students’ perceptions on pancasila in the digital era. doi: 10.2991/assehr.k.200214.023.
- J. H. G. Purwasih and A. A. Widiyanto. 2020. School resilience and religious radicalism in senior high schools. in *Emerging Trends in Psychology, Law, Communication Studies, Culture, Religion, and Literature in the Global Digital Revolution*, 2020, pp. 98–101, doi: 10.1201/9780429322259-22.
- J. Horgan. 2005. The social and psychological characteristics of terrorism and terrorists. in *Root Causes of Terrorism: Myths, Reality and Ways Forward*.
- M. A. Darraz. 2013. Radikalisme dan lemahnya peran pendidikan kewargaan. *J. MAARIF Arus Pemikir: Islam dan Sos.*, vol. 8, no. 1, pp. 154–173.
- M. Bano, D. Syafruddin, A. Azra, A. Nata, R. Zakaria, and S. Sunoko. 2016. *Study on Islamic Religious Education in Secondary Schools in Indonesia*. Jaarta: Directorate General of Islamic Education Ministry of Religious Affairs, Republic of Indonesia.
- M. D. Gall, J. P. Gall, and W. R. Borg. 2003. Educational research (Seventh edition). *Educational Research: An introduction*. Pearson Education, USA, [Online]. Available: <http://psycnet.apa.org/psycinfo/1996-97171-000>.
- PPIM UIN and UNDP Indonesia. 2018. *Survei nasional: Sikap dan perilaku keberagamaan di sekolah dan universitas*.
- R. E. Saputra. 2018. *Api dalam Sekam: Keberagamaan generasi Z*. Jakarta.
- W. A. Muhammad and K. K. Pribadi. 2013. Anak muda, radikalisme, dan budaya populer. *J. Maarif*.
- Wahid Foundation. 2016. Riset potensi radikalisme di kalangan aktivis rohani islam sekolah-sekolah negeri.
- W. Khozin. 2013. Sikap Keagamaan Dan Potensi Radikalisme Agama Mahasiswa Perguruan Tinggi Agama. *EDUKASI J. Penelit. Pendidik. Agama dan Keagamaan*, doi: 10.32729/edukasi.v11i3.415.

## A perspective of characteristic government budget work plan based on Habermas theory

M. Puspaningtyas\* & F.M. Edwy

*Universitas Negeri Malang, Malang, East Java, Indonesia*

N. Mohamed

*Universiti Teknologi Mara, Malaysia*

**ABSTRACT:** This study aims to identify differences in characteristics of the budget work plans preparation for several cities in East Java. Preliminary observation data were obtained during the initial formulation of this research, namely the preparation of a workable budget plan with different policies and times as the impact of regional autonomy. The research uses a qualitative approach by conducting interviews with informants in several government agencies using the Habermas' Discourse Theory of Morality, Politics, and Law, which stated that the differences in the characteristics of the preparation of budget work plans in each city/district were influenced by political factors and human resource factors as well as several other factors. It can be concluded that the differences in the characteristics of the preparation of the budget work plan make their color for the submission of the budget process, which represents the budget process in East Java.

### 1 INTRODUCTION

One part of planning activities that determines whether or not a work program is running is the budget. The budget represents all operational and financial activities in an organization or industry. In its application, the format and details regarding the preparation of the budget are adjusted to the form of the agency or industry. APBD is a regional government financial plan for one year, which is determined through regional regulations. The APBD is prepared following the needs of regional government administration and regional revenues (Barbakem et al. 2018; Pramono 2014). According to Law No. 17 of 2003, APBD consists of the revenue budget, expenditure budget, and financing. In general, in various meanings, it is also stated that APBD includes regional expenditures, regional revenues, and regional financing (Halim & Abdullah 2006; Oktora & Pontoh 2013).

The budget is a tool for the government as a driver of socioeconomic development to enhance the quality of the community. Designing each work program begins with planning, one of which is budgeting. A budget is a tool that helps in the process of planning and coordinating future activities to achieve goals. According to research conducted (Pakasi 2015), budget is one of the important components in planning. A budget is defined as a periodic quantitative plan (unit of amount) that is prepared based on the approved program, as a management tool in achieving goals. Budgeting is part of a management control system, which plays a role as a planning and control tool, so managers handle activities more effectively and efficiently.

Regulation Number 94/PMK 02/2017 is about the Guidelines for the Preparation and Review of Work Plans and Budgets of State Ministries/Institutions and Ratification of the Budget Implementation List. Government Regulation Number 90 of 2010 concerning the Preparation of Work Plans

---

\*Corresponding Author: miranti.puspaningtyas.fe@um.ac.id

and Budgets of State Ministries/Institutions, the Minister of Finance has stipulated Regulation of the Minister of Finance Number 163/PMK. 02/2016 about Guidelines for the Preparation and Review of Work Plans and Budgets of State Ministries /Institutions and Ratification of the Budget Implementation List. To adjust the implementation of the preparation and review of the work plans and budgets of state ministries and agencies with the provisions in Article 23 of Government Regulation Number 17 of 2017 concerning Synchronization of the National Development Planning and Budgeting Process, it is necessary to re- regulate the provisions regarding the guidelines for the preparation and review of work plans and budgets of State ministries, agencies, and endorsement.

The review of the RKA-SKPD and PPKD is carried out during the preparation of the RKA by the SKPD that has a budget allocation and as a program after the SKPD budget ceiling is set. In the results of the review, APIP will provide conclusions on the preparation of the RKA-SKPD and PPKD if there are weaknesses and/or errors in the preparation of the RKA, then the problem will be submitted along with recommendations for improvement to the RKA drafting unit so that improvements/adjustments are immediately made and coordinated with TAPD or the results APIP review can be used by TAPD while evaluating RKA SKPD and PPKD. Basically, the purpose of the Government Internal Supervisory Apparatus (APIP) to review the RKA-SKPD and PPKD is to provide limited assurance that the RKA has been prepared based on the Budget Ceiling and/or Budget Allocation determined based on the Strategic Plan, SKPD Work Plan, standards costs, and other government policies as well as complying with planning and budgeting principles, to assist the Head of SKPD to produce an RKA that meets the principles of being effective, efficient, and economical in achieving performance targets.

Kren (1992) identified two main types of information in organizations, namely: (1) information about managers' behavior when making decisions for evaluating performance, and (2) information on implementation to achieve better results. Meanwhile, Baiman (1982) added that job-relevant information helps subordinates to increase their choice of actions through successful business information. This condition provides subordinates with a better understanding of alternative decisions and actions that need to be taken to achieve goals. If subordinates or budget implementers are asked to provide information data to their superiors or budget power holders so that superiors or budget power holders will gain a better understanding of knowledge relevant to the task (Ompusunggu & Bawono 2014). From the description above, it is concluded that job-relevant information related to tasks that assists managers in preparing budgets to be effective and efficient can assist in decision-making.

Observations conducted in 15 Cities/Regencies in East Java regarding the preparation of the Budget Work Plan (RKA) found differences in terms of regional autonomy related to the management of budget preparation. Based on these differences, it is indicated that there is a different communication pattern between each region. This indication is the basis for the research question, namely whether the difference in governance and policy will affect the person in charge of preparing the Budget Work Plan?

Based on the explanation above, the research team conducted an investigation in cities/districts in East Java regarding the management of budget preparation from the perspective of communication by Habermas. The purpose of writing this article is to find out the characteristics of the preparation of financial plans for cities/districts in East Java. It is expected to be able to support and contribute to knowledge about budgeting in the government sector.

## 2 LITERATURE REVIEW

### 2.1 *Budget*

Understanding Budget: Budget is a financial plan for the future, the plan identifies the goals and actions needed to achieve (Hansen & Mowen 2013). Anthony & Govindarajan (2007) state that a budget is a financial plan and tools for short-term planning and control within the organization. Meanwhile, Mulyadi (2001) explains that the budget is a short-term work plan that is prepared

based on the long-term plan set out in the programming process. According to Rudianto (2009), an organizational budget work plan has been realized in quantitative data, formally, and systematically. Meanwhile, as stated by Mardiasmo (2009), the budget allows performance estimate that is achieved during a period expressed in financial measures. From the several definitions of the budget above, it can be concluded that the budget is a work plan that covers all company activities for a certain period of time in the future and is used for organizational control as outlined in numerical or financial terms.

Budget Participation on the authority of Milani (1975) budget participation is a reflection of the perspective of subordinate managers regarding the level of involvement experienced by subordinates in budget preparation, the type of logical decision making provided by a superior when the budget is corrected, the frequency with which the budget is discussed and agreed with his superiors, subordinates have a lot of influence on the final budget and their thought contributions to the budget. Meanwhile, as stated by Hansen & Mowen (2013) budget participation is a budgeting approach that allows managers who will be responsible for budget performance, to participate in budget development, budget participation communicates a sense of responsibility to lower-level managers and encourages creativity. And according to Nurrasyid (2015) budget participation is an understanding of how far the involvement and influence of individuals in the budget preparation process with budget participation can lead to the alignment of organizational goals.

According to Hansen & Mowen (2013), budget participation has several problems, namely setting standards too high or too low. Budget standards that are too high can cause frustration for managers, while budget standards that are too easy to achieve can cause managers' performance to decline and create a budget gap. Budgetary slack occurs when a manager intentionally understates revenues and overestimates costs in filing a budget. It aims to make it easier for managers to achieve budget targets. Finally, pseudoparticipation is a dysfunctional behavior of managers (bosses) who do not use budgetary participation in practice. Pseudoparticipation is also defined as false or false participation.

## 2.2 *Budgetary slack (budget gap)*

Budgetary slack is the most common obstacle in budgeting, which is dysfunctional behavior. According to Suartana (2010), the budget gap is a budgeting process where distortions are found intentionally by reducing budgeted revenues and increasing budget costs so that targets are easily achieved. Meanwhile, Darlis (2002) argues that budgetary slack is an act of subordinates who reduces their productive capabilities when they are allowed to determine their performance standards. Lubis (2011) defines budgetary slack as the difference between the resources that are needed efficiently and a larger number of resources to complete a task. From the above definition, it can be concluded that budgetary slack is a budgeting process where income is reduced and costs are increased so that it is much different from the realization to facilitate the achievement of targets.

Budgetary slack can occur for several reasons, according to Samad (2009), there are three reasons managers do budgetary slack, namely: 1.) Budgetary slack will make performance look better in the eyes of the leadership if they can achieve budget targets. 2.) Budgetary slack is often used to overcome uncertainty in predicting the future. 3.) The allocation of resources will be based on the projected budget, so that the gap makes it flexible. Abdullah (2012) explains that budgetary slack can result in inefficient allocation of resources, the budget set becomes ineffective, and the budget functions as a tool for assessing the performance of lower dysfunctional managers. This is good because the budget set does not reflect the true capabilities of lower managers. Budgetary slack can occur on an ongoing basis and affect the preparation of the next period's budget. Budgetary slack will increase along with the years of the budget period (Stevens 2002).

Habermas (1996) understands these rights to freedom and political participation as an abstract system of basic rights generated by reflection on the nature of discursive legitimacy in the contexts shaped by functional demands on modern law. Because of these abstract rights, each government is expected to be able to interpret and refine them for its particular historical circumstances, such as equipping them with further welfare and environmental rights. After all, the rights system is the

minimal set of normative institutional conditions for any legitimate modern political order. The rights system can articulate a normative framework for constitutional democracy, within which further institutional mechanisms such as the legislature and other branches of government must operate.

*The notion of public autonomy means that the legitimacy of ordinary legislation must ultimately be traceable to strong public discourse processes that influence formal decision-making in the legislature. This requirement is in the principle of democratic legitimacy, which reads: "only a law that can claim legitimacy can fulfill the consent of all citizens in the discursive process of laws which in turn have been legally formed". As he goes on to explain, this principle articulates the core requirements for "externally" institutionalizing various kinds of practical discourse relevant to the justification of a particular law. Decisions about the law involve a combination of validity claims not only truth claims about the possible consequences of different legal options, but also claims about moral correctness (or justice), claims about the authenticity of different options concerning the shared values of government and history, and pragmatic claims about which option is feasible or more efficient. A valid law must pass the different types of discursive tests that come with each of these claims of validity. The emergence of many problems involving conflicts between certain interests cannot be reconciled by discursive agreement on validity but only through a fair bargaining process.*

This strong orientation towards cognitive validity qualifies Habermas' version of deliberative democracy as an "epistemic" theory. On one hand, it represents the specification of discourse principles for a particular type of discourse (legal-political discourse). For Habermas, reasonable political discourse must at least begin with the assumption that legal questions are recognized in the principle of a single right answer, or at least a set of discursively valid answers in which a fair compromise is acceptable to all parties. This highly cognitive and consensualist assumption has drawn fire even from sympathetic commentators. One difficulty that lies in Habermas' assumption is that in public discourse on controversial political issues, citizens can separate moral constraints on acceptable solutions, perhaps open to consensus, from ethical-political and pragmatic considerations, in which reasonable citizens may not agree.

### 3 METHODS

This research uses a case study approach conducted in five cities in East Java. The rationale for the object of the research is that the regional government work unit prepares a budget work plan that is different from the satker in other cities. Data collection was done through interviews, observation, and documentation. Interviews were conducted with several employees of the Regional Development Planning Agency and the Regional Finance Agency. Furthermore, observations are made by observing the preparation of the government's work budget that will be carried out in the current year. The last step is through a study of documentation related to the implementation of budgeting in the target area to be studied.

Data analysis was carried out in conjunction with other parts of development research, namely data collection and writing of findings. Research data analysis was carried out by organizing the data (Creswell 2016). Data analysis activities in this study were carried out by reducing data, presenting data, drawing conclusions, and verifying data. Source triangulation techniques and method triangulation are only carried out to test the validity of the research results. In addition, researchers will also conduct member checks to reduce bias that may occur.

Data collection methods used interviews and observations of five subjects who participated in research on the determination of the preparation of a budget that is useful as input for the government of East Java. A total of 10 participants were asked the same questions in the context of the benefits of the outreach activity. The selection of 10 participants was tentative, meaning that it is adjusted to the conditions of city or district political policy. The sampling technique used was snowball sampling, so that not all participants were interviewed when the answers submitted were relatively the same. Speakers are the officials who are authorized in preparing the budget or are well aware about the ins and outs of the budget. The types of questions that we give to the informants are structured questions where the questions want straightforward answer from the source.



## 4 RESULTS AND DISCUSSION

### 4.1 Budgeting

Budgeting for the City/Regency governments in East Java has been implemented and has been prepared by Regulation Number 163/PMK. 02/2016. Based on the research conducted, the budget preparation starts from each unit, which is adjusted to the work program. The design of the unit's works program refers to the Regional Short-Term Development Plan and Medium-Term Development Plan of each city. After the SKPD, the draft budget is submitted to the comprehensive budget compiler from the city/district. After all the data has been collected, the regional government will first consult the DPRD and be attended by the authorized official and the Mayor/Regent of the area.

The process of preparing the RKA regulates 2 (two) main materials, namely: the approach to budgeting and the budgeting process. The approach used in the preparation of the budget suitable with the Law Number 17 of 2003 pertaining to the State Finance consists of the following approaches: i) Integrated Budgeting, ii) Performance-Based Budgeting (PBB), and iii) Expenditure Framework Medium Term (KPJM). The preparation of integrated budgeting is carried out by integrating all planning and budgeting processes within the Ministries/Agencies and BUN to produce RKA-K/L and RDP documents with budget classification according to organization, function, and type of expenditure (economy). Meanwhile, PBK pays attention to the relationship between funding and expected performance and pays attention to efficiency in achieving that performance. The basis for the preparation of PBK includes performance-oriented budget allocation (output and outcome); budget allocation for national development programs/activities is carried out with a program-based budgeting approach (money follow program) through PBK among others. Flexibility in budget management is very useful in maintaining the principle of accountability. This matter is in line with what was conveyed by Mrs. Cecilia who stated the following:

*"For the preparation, usually from SKPD first miss, after it was compiled as per the format by Bappeda, and then will be consulted to Parliament for approval. After getting approval from the DPRD, the next process will be submitted to the Province of East Java so that the APBD funds can be channeled to the city/regency."*

If the budget preparation is not approved by the DPRD, then the city/district government will make revisions and adjustments based on a more realistic budget. This will cause the budget preparation time to be longer and require rescheduling to be consulted again with the DPRD for approval. Delay in submitting to the provincial government causes a delay in the timeline of budget preparation and distribution of the budget to cities/districts in East Java. The East Java Provincial Government estimates the estimated amount of APBD funds flowing to cities and regencies in East Java.

Not only APBD funds are estimated from the budget for cities/districts, but several program components funded by the APBN also need to be included in the budget. Hope that does not fit the reality is the right expression when the East Java Provincial Government wanted the joint formulation related to the budget of 38 cities/regencies in East Java ([jatimprov.go.id](http://jatimprov.go.id)). With the same date in the preparation and submission, it is hoped that the coordination between the provincial government and local governments will be more synergistic. In addition, the budget drafting team is an important factor in the government system. The budget drafting team is expected to have qualified capabilities; one way to increase the budget team's capability is to involve the budget team in budget preparation training. The lack of training and education related to regional financial budgeting, which was attended by the SKPD budget drafting team was greeted with approval by almost all the financial teams of each city. The same thing was conveyed by Pak Harry regarding the capabilities of the budget drafting team.

*"Indeed, what is needed by a budget team is the suitability of education and background in budgeting. You could say the budget drafting team must be capable of preparing the budget. However, this is not in line with training and education activities related to budgeting. Actually, the budget teams of each region need training on how to estimate the government budget"*

#### 4.2 Political characteristics of city/regency

One of the results of research related to budget preparation, which is one of the reasons for the delay in the preparation process is political factors. Regional autonomy policies and systems have an important role in providing views on the assignment of tasks. As per Habermas's (2017) theory of politics, "correct" political values and goals have meaning that is mutually agreed by everyone under the same condition and produces government policies or laws. Laws based on a less than ideal form of communication is suspected. The "deliberative democracy" is implied Habermas's (2017) analysis of communication ethics and the opinion explicitly elaborate on this point. Based on this opinion, the goal of democratic politics should be to produce conversations that lead to a rational consensus about the common good.

In practice, political communication occurs when a regional leader gives or conveys his work program to the community during the election of regional leaders. Therefore, the assessment of a leader's performance can be seen from the presentation of the work program submitted as well as the division of the main tasks and functions of the SKPD under him. Based on the results of observations, one of the factors behind the delay in the preparation of the budget at the district/city is the difference in the schedule for the regional head election. Several regencies/cities in East Java refuse to conduct simultaneous regional head elections. This has hampered the program evaluation process in the previous year, if the evaluation process for the previous year's program had not been carried out, the Regency/City government would also not be able to carry out the current year's program planning.

The preparation of the budget that occurs in the field states that each city/regency has a different person in charge on the constituent side. According to the results obtained from 15 cities/districts visited for data collection, it turns out that as many as 5-6 cities/districts have different budget compilers from other cities. Generally, budget performance planners are centered on the planning team BAPPEDA, which is accompanied by the Regional Financial Management Agency, but in five different cities, this is carried out directly and in its entirety by the Financial Management Agency.

## 5 CONCLUSION

This study shows that the different political senses of each city /regency in East Java will result in different political policies. The differences in the characteristics of the preparation of the budget work plan make their color for the submission of the budget process that represents the budget process in East Java. Suggestions for further research can be done with several detailed and in-depth questions related to using a questionnaire. Researchers found the unique characteristics of the implementation of budgeting in East Java. The findings in this study can be an indication of the results of further research in determining the timing of the preparation of budget work plans at SKPD in cities/districts in East Java.

## REFERENCES

- Article 23 Government Regulation Number 17 of 2017 concerning. *Planning process synchronization*.  
Barbakem, D. I., Tinangon, J. J., & Sabijono, H. 2018. Budgeting for the regional revenue and expenditure budget at the sangihe islands regency finance agency for the 2015 fiscal year. *Journal of Accounting Research Going Concern* 13(1): 1–13.  
Bohman, J. & Rehg, W. 2017. "Jürgen Habermas", *the stanford encyclopedia of philosophy*.  
Creswell, J. W. 2016. *Research design: Quantitative, qualitative and mixed methods approach. fourth edition. first print*. Yogyakarta: Student Library.  
East Java Provincial Government. *Number of cities and regencies in east java province*.  
Government Regulation Number 90 of 2010 concerning. *Preparation of work plans and budgets of state ministries/agencies*.

- Halim, A. & Abdullah, S. 2006. Agency relations and problems in local government: an opportunity for budgetary and accounting research. *Journal of Government Accounting* 2(1): 53–64.
- Hansen & Mowen. 2013. *Cost management, indonesian edition. second book*. Jakarta: Salemba Empat.
- Kren, L. 1992. Budgetary participation and managerial performance: the impact of information and environmental volatility. *The Accounting Review* 67(3): 511–526.
- Law Number 17 of 2003 concerning State Finance (Law 17/2003).
- Minister of Finance Regulation No. 163/PMK. 02/2016 about. *Guidelines for the preparation and review of work plans and budgets of state ministries/institutions and ratification of the budget implementation list*.
- Oktora, F. E. & Pontoh, W. 2013. Analysis of the relationship between regional original income, general allocation funds and special allocation funds for capital expenditures at the tolitoli district government of central sulawesi province. *Accountability* 2(1): 1–10.
- Ompusunggu, K. B. & Bawono, I. R. 2006. the influence of budget participation and job relevant information (JRI) on asymmetric information (study on public service agency of state university in Purwokerto City, Central Java). *National Accounting Symposium 9 Padang*.
- Pakasi, D. L. 2015. The effect of budget participation on managerial performance at PT. Bina Avia Persada. *Journal Accountability* 4(2): 41–51.
- Pramono, J. 2014. Financial ratio analysis to assess local government financial performance. *Scientific Journal Among Makarti* 7(1): 83–112.
- Regulation of the Minister of Finance of the Republic of Indonesia Number 94/Pmk. 02/2017 *About instructions for preparation and review of work plans and budgets*.



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

## Author index

- Abbas, M.H.I. 10  
 Afdal, Z. 150  
 Agustina, Y. 108  
 Ahmad, 157  
 Ali, M.M. 208  
 Almuzab, S. 95  
 Amalia, A.P. 219  
 Amelia, N. 1  
 Ardillah, K. 247  
 Ayuningtyas, K. 35  
  
 Badri, M. 178  
 Bagijo, H.E. 123, 185  
 Bani, N.Y.B.M. 197  
 Bernardes, O. 130  
 Bismihayati, Z. 116  
  
 Dellar, G. 225  
  
 Edwy, F.M. 62, 283  
  
 Farhanah, M. 247  
 Feryani, A.T. 1  
 Firmansyah, R. 219, 259  
  
 Ghofirin, M. 140  
  
 Han, C.G.K. 100  
 Hastuti, D. 21  
 Herdiani, A. 35, 225  
 Hermawan, A. 108  
 Hodijah, S. 21  
 Hsi, A.T. 35  
  
 Idrus, S.A. 275  
 Irianto, G. 71  
 Istanti, L.N. 266  
  
 Kamaludin, M.B. 62  
 Kurniadi, H. 178  
 Kurniawan, D.T. 219  
 Kurniawati, L. 185  
  
 Kurniawati, T. 150  
 Kustiandi, J. 10  
  
 Laily, N. 225  
  
 Maharani, S.N. 62, 208  
 Mangalle, H. 185  
 Mariyah, S. 35  
 Marsiti, P. 185  
 Martani, D. 232  
 Maryani, L. 95  
 Merlinda, S. 43  
 Mohamed, N. 283  
 Mukaromah, L. 259  
 Murdiono, A. 266  
  
 Nagari, P.M. 100  
 Narmaditya, B.S. 108  
 Narullia, D. 259  
 Nazzal, A. 169  
 Novianti, E.K. 130  
 Nuraini, U. 100  
 Nurdin, 178  
 Nuris, D.M. 100, 116  
  
 Omar, N. 108  
 Orbaningsih, D. 157  
  
 Palil, M.R. 43, 219, 259  
 Pertiwi, K. 78  
 Prasetyoningtyas, A.D. 57  
 Priadmadhi, N.B. 169  
 Priambodo, M.P. 10  
 Primasari, N.S. 140  
 Priyanto, S. 185  
 Purnamasari, S.W. 208  
 Purwanto, V.A. 185  
 Purwasih, J.H.G. 275  
 Puspaningtyas, M. 283  
 Putri, D.M. 62  
 Putri, R.M. 157  
 Putro, B.C. 123  
  
 Qurrata, V.A. 43  
  
 Rahmawati, F. 197  
 Rahmawati, S.A. 169, 208  
 Rajafi, L.R. 71  
 Rasyid, M. 57  
 Riani, D. 95  
  
 Sadieda, L.U. 123  
 Santoso, H.D. 123, 185  
 Sari, D.R. 1  
 Seprillina, L. 43  
 Setiaji, Y.T. 35  
 Shaleh, K. 71  
 Sibarani, S.E.M. 78  
 Sismi, R.D. 232  
 Situmorang, S.H. 165  
 Siwi, M.K. 150  
 Sopiah 130  
 Sopiansah, V.A. 95  
 Subagyo 266  
 Sukartik, D. 178  
 Sulastris 62  
 Sulikah 225  
 Sumanto, A. 10  
 Susanti, M.D. 185  
 Suseno, S. 123  
 Syara, N.D. 259  
  
 Tianto, L. 123  
 Tio, D. 165  
 Tyas, D.P.P. 197  
  
 Utaberta, N. 266  
  
 Wahyuni, I.S. 123  
 Wicaksono, M.G.S. 219, 259  
 Widiyanto, A.A. 219, 275  
 Winarno, A. 108  
  
 Yuliati, N.T. 185  
 Yusida, E. 43  
  
 Zen, F. 266



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>