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Article

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MANAGEMENT | RESEARCH ARTICLE

Innovation norms during COVID-19 and Indonesian hotel performance: Innovative energy use as a mediating variable

Alim Syariati^{1*}, Namla Elfa Syariati², Rizka Jafar³ and Bahrul Ulum Rusydi³

Abstract: This study investigates the strategic effects of innovation norms—opportunity awareness and creative environment—to execute better innovative energy use and obtain better hotel performance during the COVID-19 outbreak. This exploration may shed light on the coping mechanism of hospitality business under the perspective of Resource-based Views. This study designed a survey, under the quantitative approach, to hotel managers in Makassar, Indonesia, resulting in a 204-response rate. The data was analyzed using the partial-least-square structural-equation modeling (PLS-SEM). The findings confirm the acceptance of all proposed hypotheses. Innovative norms—opportunity awareness and creative environment—are the foundation of executing energy-saving use in the organization. Finally, it mediates the relationship between innovation norms and hotel performance. This finding indicates the importance of green-innovative resources to mitigate the negative consequences of economic turbulence.

Subjects: Strategic Management; Hospitality Management; Hotel Management; The Hospitality Industry

Keywords: innovation; Energy Use; Hotel Performance; Strategy; Covid-19

JEL classification: P18; P28; L25; Z32



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PUBLIC INTEREST STATEMENT

This study presents the evidence of the ongoing efforts of hotel industry to curb the negative effects of COVID-19 in business life. One of the defensive strategies are the effort to save energy in hotel operation. This study argues that to shift the paradigm into more environmentally-conscious conducts, it heavily requires the organizational support to activate innovation in the workplace. This study proves that innovative workplace is essential to the continuous use of energy wise in the hotels. These combining efforts would maintain the hotel performance under global turbulence.

1. Introduction

The last two decades have shown that the world community began to care about the sustainability of their environment and the various ways to repair the damaged nature. Business nowadays is considered value-laden instead of value-free, making them entitled to environmental society, culture, and demographics. Typically, the organization would consider this green strategy in the face of stakeholder demand or scrutiny; however, the recent significant shift in the health environment has prompted a strategic change. As COVID-19 pandemics sweep the globe, the new-normal conducts of business organizations emerge, including hospitality business. The partial or total closure of the individual movements in public space has created a massive slowdown in the hotel vacancy. A report from McKinsey in June 2020 predicts that a growth slowdown to 20% is expected until 2023 in several scenarios, with the economy hotel, fare better than luxurious ones in the United States. A study in Europe also confirms the severe impact on the major attraction cities (Napierala et al., 2020) and the experience of hotels in China and Indonesia (Rahma & Arvianti, 2020). A study in China prompted four pandemic effects on hotels, i.e., multi-business, redesign of the offered product, digital approach, and market reshuffle (Hao et al., 2020). It is not surprising that retrenchment and divestiture strategies are selected to curb the problems during economic turbulence. Energy-saving management may present as a viable defense mechanism in this situation; however, it takes internal innovative behavior to execute this process.

This study investigates whether the underlying innovation norms—the opportunity awareness and creative environment—are the predictors of strategically innovative energy use and indirectly lead to better performance, serving as the conceptual formulation in a structural model. The innovative environment is built upon the capability of doing substantive environmental scanning (Hambrick, 1982) and other best practices to defend the strategic position sustainably (Gavetti & Rivkin, 2007). Hence, innovation norms must read the underlying phenomenon and dynamically apply it in the organizational path and process (Teece et al., 1997). However, changes in radical innovation are the most challenging measures under crisis (Rice et al., 2001) but promising an irresistible outcome if successfully executed (Wang et al., 2013). On the contrary, a study found partial support in the weak relationship between innovation and sustainable products (Barrera Verdugo & Wright, 2020).

Studies indicate that environmentally friendly hotels are directly related to efficiency (Kularatne et al., 2019) and finally lead to a sustainable performance in the industry (Asadi et al., 2020). These green hotel presentations may capture conscious visitors and attract them to make a staying decision (Dharmesti et al., 2020; Navratil et al., 2019) and induce them to be satisfied or even loyal (Han et al., 2019; Niu et al., 2011). This environmentally adaptive behavior ranges from general green practices like towel reuse, linen reuse, recycling, guest training, water, purchasing categories, and hotel lighting are predictors (J. Song et al., 2020). As they were once the attributes of energy-green hotels, the COVID-19 may provide further contexts. Energy regulation in the hotel business serves as a critical retrenchment strategy to sustain a defensive performance (Lai & Wong, 2020). Hotels are pushed to be creative in designing their operational work day-by-day in the hope of a better situation (Duarte Alonso et al., 2020) or redesigning the working space to reduce costs (Parker, 2020). Those not able to be creative are left unfunctional (Hall & Rosson, 2006). Studies have indicated that creativity in product/service and the process is essential in crisis (Seetharaman, 2020), with green human resource management as a foundational accelerator in the hotel industry (Yusoff et al., 2020). Thus, they must create a specific welcoming environment to function the innovative energy use in the hotels.

Hotel performance is comprised of many aspects but primarily relies on the service-rich environment, tourism activities, and human interactions (Choi & Chu, 2001). Chu and Choi (2000) reveals that hotels' performance is subject to service quality, business facility, value, room quality, food and beverage, and security. However, they are the criteria under average circumference. COVID-19 has degraded these normalities into survival mode, with unpaid workers or layouts (Lai & Wong, 2020). Thus, performance-related activities have to appreciate the nature of the

environmental conditions in the assessment, one of which is the innovative energy use as the potential source of income generator.

While previous studies have indicated that the innovation norms of opportunity recognition and creative environment are essential in innovation, there seems to be a lack of discussion about innovative energy management within the hospitality business. Thus, this study contributes to the gap by supplying further evidence from hotels' experience in Makassar, Indonesia. The study's formulation reinforces resource-based views to support the organization's innovation process to support organizational excellence (de Calisto & Sarkar, 2017; Grant, 1991; J. Barney, 1991; Ray et al., 2004; Wernerfelt, 1984; Yong Kim & Oh, 2004). This study collects information from 204 hotel managers' primary sources representing 71 hotels in the region and constructs a structural model in the analysis. The result and discussion section will provide the conversation on the findings.

2. Review of the Scientific Literature

2.1. Resource-based Views

The resource-based view theory (RBV) is the seminal work of Birger Wernerfelt (1984), first introduced as the contender to Porter's external focus (Porter, 1979). Initially, the inspiration came from Chester Barnard in 1983, Philip Selznick in 1959, or Edith Penrose in 1959 (Hoskisson et al., 1999), focussing on the effort to possess strategic resources capable of creating a hard-to-get advantage over competitors. The possession of hard-to-imitate human resources, skills, or marketing would be the key to achieving distinctive competencies, leading to competitiveness (Cappelli & Crocker-Heftler, 1996; Eden & Ackermann, 2000; Smart & Conant, 2011). J. Barney (1991, 2001) divided excellent resources into a range of characteristics, such as valuable, rare, inimitable, and non-substitutable. Shostack (1977) has advocated the need to rearrange the investigation in light of the industrial context, given the different natures of service and manufacturing firms. The proposal of RBV also lies in the product development conversation; thus, the hospitality business strives to uphold excellent resources by its room cleanliness, the professional appearance of employees, or infrastructure (Yong Kim & Oh, 2004). This study follows the contextualization of excellent service, measured by how hotels create a continuous climate for providing exceptional service (Schneider et al., 1998) and investment to enrich their customer service offerings (Ray et al., 2004).

2.2. Innovation Norms

The role of innovation in entrepreneurship cannot be separated from Joseph Schumpeter's thought (Schumpeter, 1934). His book—*The Theory of Economic Development*—is one of the essential writings in economics. He advocated that entrepreneurship is a “creative destruction” process of an existing product (goods or services) or a method to carry out its production and replace it with the latest innovations. Peter Drucker is also one of the referred academics when it comes to innovation and entrepreneurship. Drucker (1985) argued that innovation is a unique weapon of entrepreneurs, namely the act of maximizing resources with the latest capacity to create wealth. He further argued that resources originate from the innovation process because all these capacities had a minimum economic value without them. Innovation stems from the exploitation of various changes through systematic observation of various promising entrepreneurial opportunities. He highlighted seven sources of innovation that needed to be monitored, namely four sources from the internal organization (1) The unexpected, or success, failure, or an event that occurred outside the estimation; (2) The incongruity, as a gap between reality and expectation; (3) Innovative changes stemming from process requirements; (4) changes from the industrial structure or market structure which many people do not realize. Three other sources come from an external organization, namely (1) demographic factors; (2) changes in perception, mood, and meaning; (3) new knowledge, scientifically and non-scientifically (Wahab et al., 2020). This study explicitly uses a measure developed by Russel and Russel (Russell & Russell, 1992) to measure innovation norms in organizations. In his writing, he stated that entrepreneurial strategy includes recurring patterns with clear and continuous rules related to innovation, followed by the allocation

of related resources, and becomes a part of a comprehensive corporate strategy. They proposed innovation norms, i.e., knowledge awareness, attitude toward innovation, the process of innovation, and its implementation within the organization.

This study explores the effects of environmental norms—business opportunity awareness and creative environment—in shaping innovative energy use in hospitality. These constructs present as the changing environment require the organizational capacity to adapt to innovation during changes, in light of the industrial organization view (Porter, 1979). Thus, innovation-supportive behavior is present from the cultural norms that are continuously activated. However, opportunity sensing and capturing are mostly unattainable without significant past investment (Giudici et al., 2016). It presents from the innovative internal structure to support hospitality businesses' income streams during strategic changes (Cheah et al., 2018). Thus, opportunity awareness refers to the good internal capabilities to respond to every change (Al-Kwafi et al., 2020). Qualitative investigations in Canada identified the strategic role of opportunity recognition in organizations to achieve the desired innovation process (Cooper & Park, 2008; Taalbi, 2017). Thus, adaptive decision-makers shall support innovative energy use in hotels to market needs (Dhirasasna et al., 2020; Eskerod et al., 2019).

The role of a creative environment to assimilate the innovative energy use in the hotel industry is inevitable. The ownership of open culture to innovation encourages creating an adaptive organization in sensing and seizing potential opportunities (Duarte Alonso et al., 2020; Matysiak et al., 2018). Creativity environment is also one of the prerequisites in creating innovation in organizations. The literature review necessitated organizational resources such as innovation incubators in creating an environmentally friendly business (Gliedt et al., 2018). Business model innovation was an intermediary for opportunity awareness and performance of SMEs (Guo et al., 2016, 2017). Other research also supported the relationship between these two factors in the context of large companies (O'connor & Rice, 2001). The study results found that social norms are among the main drivers of innovation adoption in organizations (Ozaki, 2011). Various interventions need to be carried out to establish a creative environment to encourage innovation (Dul & Ceylan, 2011; Mumford, 2000). Other research enables creating a physical, creative environment for maximum innovation results (Moultrie et al., 2007). Our reading reveals one study supporting the relationship between creative climate and green hotel adoption as represented by innovative energy use (Aboramadan et al., 2021), thus necessitating further clarification. The seemingly underrepresented conversation on the topics paves the way to the hypothesis formulation.

H1: *Opportunity awareness should lead to innovative energy use in the hotel*

H2: *Creative environment is critical in formulating an innovative energy use*

2.3. Innovative Energy Use

The green movement in the 60–70 is one of the main drivers of environmental management discussion and its impact on organizations (Demeritt, 1994). One of the main issues that develop in the organizational sphere is the social responsibility movement advocated by Howard R. Bowen (1953) in his book, *Social Responsibility of the Businessman*. Hailed as the founding father of Corporate Social Responsibility, he conveyed various moral principles in managing an organization to comply with legal protection and environmental needs. This study proposed and advanced the conversation by investigating how the environmental conservation may take part to safeguard company presence during turbulent times.

A study in Finnish noted that the difficulties in developing new innovative energy efficiency services stem from the unbundling firm operation, the policy cohesion, and the disagreement between the users (Apajalahti et al., 2015). Strict government regulations would uphold

environmental issues (Aguilera-Caracuel & Ortiz de Mandojana, 2013), with the experience in Vietnam also confirmed this proposition (Lin et al., 2013; Tang et al., 2018). Previous researches supported the role of the innovation orientation and the likely financial development as well as organizational performance in encouraging an environmentally friendly industry (Khabazi Kenari et al., 2018; Uhlaner et al., 2012). These considerations lead us to propose the following hypothesis.

H3: Innovative energy use is critical to secure hotel performance

The application of renewable energy management in the hotel industry is still lacking, and need a systems thinking (Dhirasasna et al., 2020). The presence of opportunity awareness has to capture this deficiency, moreover in the desperate times like Covid-19. We believe that awareness serves as the starting point of systems thinking and may open the path to further applications, e.g., Internet-of-Things (IoT) to integrate more systems (e.g., heating, air-conditioning, window-openings) in a single-device smart management (Eskerod et al., 2019). Hotel industry works on the premis of daily-service routines can make them unprepared to potential adversities, thus requiring capacity to sense and exploit potential opportunities (Pech & Cameron, 2006). This focus serves as the gateway to an agile organization, with opportunity awareness as one of the main characteristics (Marhraoui & Manouar, 2017). This process innovation will then lead to the better position of explicit and implicit organizational performance (Chatterjee et al., 2021; Ponciano & Amaral, 2021; Ravichandran, 2018; Weerawardena et al., 2006), thus presenting the basis for the hypothesis formulation.

H4: Innovative Energy Use mediates between Opportunity Awareness and Hotel Performance

The creativity-enabler environment is critical for sustainable development initiatives (Awan et al., 2019), as so far as organizations have to execute multiple interventions to build a dynamic and creative environment (Mumford, 2000). While giant tech firms, e.g., Facebook, Google, embrace the creative physical embodiment of their workplace, this approach can also take form in the non-physical sphere (Marhraoui & Manouar, 2017). The establishment of this creative environment represents the strategic intentions to build innovative workplace (Dul & Ceylan, 2011; Moultrie et al., 2007). Studies have indicated that the green creativity is essential for the establishment of green innovation in firms during turbulent times (Ogbeibu et al., 2020; W. Song & Yu, 2018). Hotel industries are not excluded from this need, as it may serve as the potential anchor in desperate times (Jawabreh, 2020). Enabling this function requires an open-innovation stance which ensures hotels to appreciate the visitors' needs and recommendations (Díaz & Duque, 2021). The dynamic and elusive creation of creative environment sphere serves as the key to innovation as well as hotel performance (Amar et al., 2021; Asadi et al., 2020; Ziyae et al., 2021), and thus present the establishment of this hypothesis.

H5: Innovative Energy Use mediates between Creative Environment and Hotel Performance

3. Research Methodology

3.1. Designs

This study addresses the proposed hypothesis by the quantitative approach. It was specifically designed to explain the ongoing phenomenon of COVID-19 hardships in the hotel industry. A causal model was constructed and tested on the upper echelon management in the firms (see Figure 1). Four variables became the object of interest, i.e., opportunity awareness and creative environments serve as the independent variables, with hotel performance as the dependent

variable. Innovative energy use performed the mediating function between the exogenous and endogenous variables. This study extracted some scales from the previous research and administered them to the supervisory and above respondents. The data collection took two months as obtaining the specific responses needed some approaches, as detailed in the following section. The answers are tabulated and analyzed by using the non-parametric statistical technique of partial-least-squares structural-equation-modeling (PLS-SEM). This method is selected given the normality problem of the data and the size of the sampled data. Specifically, several statistical procedures are conducted, i.e., the outer measurement and the inner model specification. The outer model reveals the study’s validity and reliability by the loading factors, convergent validity, discriminant validity, and multicollinearity test. The results of this process are summarized in Tables 1 and 3. The inner model measurement provides answers to the proposed hypothesis as in Table 4. Table 1 provides the descriptive information of the managers, while the rests are for the foundation of inferential statistics in the study.

3.2. Sample

The higher rankings mostly formulate organizational strategy within the organization; thus, this study retrieves the information from all managerial levels participating in the survey. Each hotel had different structures, no specific and formal statement regarding the data population. Hence, this study employed a convenient sampling to obtain responses from the managers. Strategic issues are also confidential for the firms; some approaches are critical in the data collection procedures. Firstly, request letters are arranged from the faculty to confirm the study’s legitimacy to avoid the firms’ suspicion. Secondly, the authors convinced the human

Figure 1. Conceptual Framework.

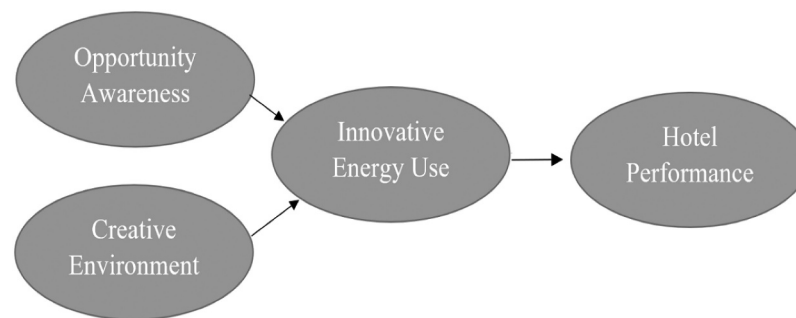


Table 1. Demographic Description of Hotels’ Managers

Descriptions	n	%	Descriptions	n	%
Sex			Positions		
Male	112	54.9	GM	24	11.8
Female	92	45.09	Accounting	27	13.2
Age			HRD	32	15.7
18–30	49	24.01	Marketing	25	12.3
31–45	123	60.02	Division Manager	38	18.6
46–60	32	15.6	Supervisor	49	24
60>			other	9	4.4
Education			Tenure		
High school	32	15.6	1–3 years	41	20.1
D1	10	4.9	4–6 years	37	18.1
D3	42	20.5	7–10 years	37	18.1
Bachelor	120	58.8	>10 years	89	43.6

Table 2. Outer Measurement Summary

Construct	Items	Loading	T-value	Alpha	rho_A	CR	AVE	VIF
Opportunity Awareness	OPA1	0.540	5.554					1.226
	OPA2	0.848	26.758					1.604
	OPA3	0.572	6.746	0.614	0.657	0.771	0.466	1.137
Creative Environment	OPA4	0.724	16.659					1.242
	CRE1	0.835	26.064					2.136
	CRE2	0.779	19.406					1.717
	CRE3	0.784	21.911	0.862	0.877	0.901	0.645	1.969
	CRE4	0.879	49.507					2.636
	CRE5	0.731	16.061					1.698
	INE1	0.700	14.250					1.578
	INE2	0.845	35.838					2.596
Innovative Energy Use	INE3	0.860	39.465	0.786	0.814	0.854	0.545	2.588
	INE4	0.577	9.217					1.335
	INE5	0.671	13.138					1.317
	HOP1	0.714	14.036					1.876
	HOP2	0.841	31.835					2.853
Hotel Performance	HOP3	0.845	31.958	0.857	0.872	0.894	0.587	2.783
	HOP4	0.808	25.107					2.367
	HOP5	0.639	10.797					1.671
	HOP6	0.727	17.583					1.614

Source: Adapted Smartpls Output (2021)

Table 3. Heterotrait-Monotrait Test of Discriminant Validity

	Construct	1	2	3	4
1	Creative Environment	0.862			
2	Hotel Performance	0.422	0.508		
3	Innovative Energy Use	0.620	0.626	0.719	
4	Opportunity Awareness	0.717	0.639	0.439	0.409

Source: Adapted Smartpls Output (2021)

resource managers of hotels that this study only recorded the information from the behavioral responses to some statements in the survey, with no confidential data in the form of reports or financial statements required. The HR Managers then circulated the questionnaires to their peers. By this means, this study managed to record responses from 204 hotel managers in Makassar, representing 71 hotels in the region. This investigated data is higher than the 10-times rule for the use of PLS-SEM (J. F. Hair et al., 2014). This sample size also satisfied the 200 cut-off point of data for structural-equation-modeling analysis (Boomsma, 1985; Kline, 1998). No data went missing, as this study administered Google Forms to ensure precision, with the description of samples in Table 1.

3.3. Measures

This study employs the two-stage approach of partial-least-square structural equation modeling (PLS-SEM) using the Smartpls software. This non-parametric tool analyzes the data and achieve a parsimonious model by repeating the indicators used in the dimensions to obtain the latent variable score (J. F. Hair et al., 2019). PLS-SEM possesses flexibility as it does not assume the data normality. This assumption relaxed the prerequisites required for the more famous covariance-based structural equation modeling (CB-SEM). This fact does not compromise the quality of PLS-SEM, as it has the advantage of superior power analysis. This study follows previous academic investigations to adapt the investigated variables and translate them into Indonesian to assure readability. They form a reflective form in mode A's estimation, where the outer weights become the correlations among the latent variables and the manifest variables (J. F. Hair et al., 2016).

This study employed a 5-point Likert scale depicting “strongly disagree” (1) to “strongly agree” (5) to 21 questionnaire items (see the investigated indicators in Appendix 1). Those items represented the latent variables of the opportunity awareness ($\alpha = .614$), creative environment ($\alpha = .862$), innovative energy use ($\alpha = .786$), and the hotel performance ($\alpha = .857$). Initially, we tested those items to a small group of university students amounted to five times the indicators (J. Hair et al., 2010) to reach more valid and reliable signs in a pilot study. We rewrite or delete the low-score items (under 0.5) to obtain better responses in light of the confirmatory composite analysis (CCA) (J. F. Hair et al., 2020; Schuberth et al., 2018), as presented in Table 2.

4. Results

The first stage in conducting the SEM-PLS test is to test the internal consistency reliability or construct validity and reliability tests. Table 2 describes the outer model of the formulated constructs.

The first clarification of the outer model is the outer loading capacity of the data. The test assumes that all indicators used are reliable (the construct's outer loading). The higher loading factor of the various items above 0.708 is considered reliable. The data from Table 2 reveals that 4 out of 21 items are below the criteria. However, this study decided to retain the indicators as it is

Table 4. The Path Summary

Path	Effect	T-value	P-Values	Hypothesis
Opportunity Awareness -> Innovative Energy Use	0.271	3.786	0.000	H1 Accepted
Creative Environment -> Innovative Energy Use	0.465	6.735	0.000	H2 Accepted
Innovative Energy Use -> Hotel Performance	0.471	9.420	0.000	H3 Accepted
Op. Awar. → Innov. Energy Use → Hotel Perf.	0.127	3.453	0.001	H4 Accepted
Creative Env. → Innov. Energy Use → Hotel Perf.	0.219	4.954	0.000	H5 Accepted
R ² to Innovative Energy Use		0.430		
R ² to Hotel Performance		0.218		

Note: t-value above 2.57 is significant at 0.1 level

Source: Adapted Smartpls output (2021)

still within the accepted value of higher than 0.5. The deletion of the items did not increase the Cronbach's alpha of the study (J. F. Hair et al., 2014). These results indicate the ability of the indicators to represent the variables.

Further reading revealed that all data meet Cronbach's alpha as all values were higher than the 0.7 thresholds, aside from the Opportunity awareness construct. The alpha of 0.614 was also still acceptable despite a slightly lower weight (Schuberth et al., 2018). J. F. Hair et al. (2014) suggest the Composite Reliability (CR) as an alternative test because it can capture differences in outer loading values than the more conservative Cronbach's alpha test. The value of 0.7–0.9 is considered satisfactory; however, the values above 0.9 or 0.95 are not favorable because it indicates the existing variables to measure the same phenomenon (Ketchen, 2013). This study reported that the composite reliability test in Table 2 shows a value above 0.7, indicating passing the discriminant validity test. Other tests such as rho alpha and average variance extractor (AVE) were also in an acceptable range, with minor deviation in the opportunity awareness construct. The combination of the assessment of outer loading, Cronbach's alpha, rho_a, composite reliability, and the AVE test indicates that this research is valid convergent. The next step was to ensure that the data abstained from the multicollinearity problems.

This multicollinearity test required the variance inflation factor (VIF) to be lower than 0.20 or a VIF above 5.00. Suppose the value obtained is below or above the required value. In that case, it is advisable to delete the construct, combine the dimensions into one dimension, or create a new construct to handle the collinearity (J. F. Hair et al., 2014). Table 2 reports the VIF values lower than 5 and above 0.2, indicating the model's suitability continued at the discriminant validity stage. Furthermore, the VIF score also supported the absence of common-method bias in the study (Kock, 2017; Podsakoff et al., 2003). This study then provided the heterotrait-monotrait test (HTMT), as in Table 3. This test has been recommended by the researchers of PLS-SEM for it provides a more stringent test of discriminant validity (Henseler et al., 2015).

According to J. F. Hair et al. (2014), the use of variance-based investigation in the SEM analysis can be approached by the uses of Fornell-Larcker criterion and the cross-loading result. HTMT comes the last, and has show its superiority in detecting the discriminant validity of the variables (Henseler et al., 2015). The investigated variance-based study passes the HTMT test if the value is lower than 0.9. Table 3 reveals that all variables meet the HTMT's cut-off values. These outer-model analysis ensured the research sufficiency in the underlying requirements and might proceed to the inner model evaluation to answer the proposed hypotheses. The summary of the inner model findings is in Table 4.

Table 4 reveals an acceptance of all proposed hypotheses with different magnitudes of influence. J. F. Hair et al. (2014) stated that in addition to the degree of significance, the study's relevance must be an essential point of observation by their effect side. This study found that innovative energy use capability hotels were a suitable bearing mechanism for decreasing the hotel industry's declining performance in the pandemics with 47.1%. Creative environment followed by a 46.5% effect size, corresponding to the resource-based view of the firm. The mediating effects were also statistically significant, either from the specific or total effect sizes. Finally, the R^2 revealed a moderate relevance, and all findings were discussed.

5. Discussions

Surviving in the turbulent era may cost enormous tolls. The fear of diminishing life cycle and external threats played a significant discussion in the firms. As changes are eternal, the adaptability to various changes became a crucial capability to survive (Teece et al., 1997; Teece, 2007). The novel COVID-19 outbreak made dramatic changes to the social fabric of society. Teleworking activities, attention to sanitation, and health protocols became the new-normal in human activities. This pandemic has also had a severe impact on business organizations in running their business. One of the hardest hits in the tourism industry is limited by significantly reduced or even negative visitors and travelers across the region. Hotel businesses suffer the most, leading to layoffs, downsizing, or business bankruptcy. As such, innovative measures are imperative to sustain the performance of the hotels. However, the internal organizational structure must support the critical changes, as the proposal of the resource-based view of the firms (Wernerfelt, 1984, 1995).

Organizational resources must exhibit the VRIO characteristics of being valuable, rare, inimitable, and non-substitutable to secure a competitive advantage (J. Barney, 1991). These attributes are somewhat related to the innovation within the organization, as it corresponds to the effort of finding niche activities underrepresented in the previous strategy (Ho, 2021). However, the resource-based view is a perspective that upholds the internal excellence and capacity of the firm to create substantial changes. At the same time, innovation exhibits a free-form shape, as it may present from internal or external sources (Love et al., 2014). This study treats environmental changes, being the components of externalities in the form of the COVID-19 health crisis, as a push toward organizations to increase the innovative surviving strategy. Moreover, COVID-19 pandemics that struck hard the hospitality business make information enrichment capabilities critical to absorb strategic business planning and implementation. This precondition, coupled with the presence of attentive leaders (Khdour & Wright, 2021), may safely route the organization's path (Teece et al., 1997) toward a better retrenchment or divestiture strategy under the treats of economic turbulence. The organizational environment supporting innovative behavior is critical and becomes the object of interest in the present study.

This study explores how a potential defense mechanism is a cost-reduction policy through innovative energy management in the hospitality business. Several hypotheses were proposed as the possible driver of energy management. The nexus between the hotels' opportunity awareness and the innovative energy use is the first investigated relationship. The statistical analysis confirmed the proposed hypothesis 1. Studies on the measurement of environmental uncertainty have been the object of several studies (Duncan, 1972; Milliken, 1987), providing support to the external-

proponent school of thought (Porter, 1979). A study in Israel supports entrepreneurs' role in recognizing potential opportunities and using them in business activities (Yitshaki & Kropp, 2016). The entrepreneurial agenda is supported by the sensitivity to various information to support strategic decision-making (Pech & Cameron, 2006). Russell and Russell (1992) categorized opportunity awareness as a foundation in organizations' innovation norms, although further study is more familiar with opportunity recognition (Ardichvili & Cardozo, 2000). The meta-analysis test indicated that opportunity recognition served as the core of the entrepreneurial business (Lehner & Kaniskas, 2012). The findings of this study confirmed the role of environmental opportunity scanning by leading experts (Hambrick, 1982; Porter, 1979). Hospitality businesses must possess the ability to be aware of environmental changes, map them, and exploit them for company excellence.

This study also examined other innovative norms, namely the creative environment, to encourage the hotel business's capacity to execute energy-saving actions within the organization. The result supported the provision of hypothesis 2 in a more dramatic size compared to opportunity awareness. These results indicated the role of the internal environment to be more substantial during a crisis. In the COVID-19 outbreak, the possession of creative resources and the creative process's supporting atmosphere were the most significant contributing factors for the hotel to consider or implement. This study's findings were consistent with previous research that emphasizes the role of the creative environment as a supporting capacity for innovation (Chen et al., 2016; Ogbeibu et al., 2020; W. Song & Yu, 2018). The creation of energy-friendly hotels is a cost-saving effort, requiring support from staff engaged in this issue. The active and engaged employees exhibited a robust psychological contract to save the organizations from potential crises or bankruptcy (Dwiedienawati et al., 2021).

As the country's economy develops, energy needs also increase. It is not surprising that the consumption of electrical energy in a country is positively correlated with the development of the economic system and its growth (Hoang, 2021). The positive contribution of energy efficiency to business is accurate, as an essential value-added function, especially in turbulence situations (Tiep et al., 2021). The findings supported the role of innovative energy use on the hospitality business's performance and confirmed hypothesis 3 in this study. The statistical consequence of hypothesis 3 confirmed hypotheses 4 and 5 in the exogenous variables' indirect relationship to the endogenous variables. This pandemic formed new-normal activities, and radical innovation was also imperative to survive this condition (Boons et al., 2013). Hotel management, which did not care about excessive energy use, has to prepare various innovative responses in minimizing energy consumption without sacrificing the quality of service provided to hotel guests. Organizations must firmly adhere to the organization's entrusted mandate, as a failure to deliver expected promises will deteriorate the customers' retention rate (Badir & Andjarwati, 2020). The study has indicated that communication is the essential lubricant in strategic formulation, implementation, or evaluation during a crisis (Haza et al., 2021) and must be advocated through all levels of leaderships (Dwiedienawati et al., 2021).

Innovation without considering the organization's various internal resources may lead to the company's negative implications (Laosirihongthong et al., 2014; Pradana et al., 2020). This argument was evident from the meta-analysis study that found that the role of innovation for organizational performance is context-based, namely by its age, the type of innovation, and the underlying culture within an organization (Rosenbusch et al., 2011). The research supported the innovation norms as underlying culture is critical in forming the behavior within the organization (i.e., opportunity awareness and creative environment). It serves as an essential mechanism for developing an adaptive organization to changes in the framework of strategic entrepreneurship (Alwi et al., 2021; de Calisto & Sarkar, 2017; Eisenhardt & Schoonhoven, 1996; Kuratko & Audretsch, 2009), or dynamic capabilities (Helfat & Peteraf, 2009; Teece, 2007; Winter, 2003). Implementing good environmental management has been proven to be one of the main strategies in answering Indonesia's stakeholders' concerns (Ridloah et al., 2020). The hospitality business has to execute

the energy conservation policy without compromising the offered quality to hotel guests. Concerned customers may reallocate or alter their purchasing decision regarding the organization's purchased value (Newman et al., 2014). Finally, once a firm decides to go green, it will never return as the potential outcome is sustainably irresistible (Cheng et al., 2014; Hoang, 2021; Tiep et al., 2021).

6. Conclusions

This study integrates the strategic school of thought in the resource-based view and the external in applicative ways. The findings support the critical internal climate to innovation to capture external potentialities in managing hospitality business during the COVID-19 breakout. This article's evidence points toward the reception of inherent strategic innovation norms such as opportunity awareness and a creative environment to push the hotel management to be more innovative in managing their energy uses. These innovative energy uses would ultimately lead to better hotel performance in the current social-economic and health turbulence that impacts the world. Even without the pandemics, the capabilities to save more energy are expected to play more significant roles in the upcoming hotel management. This study suggests that all hotels create a constructive service climate that supports innovative behavior, e.g., managerial support, ICT development, comfortable workplace, new idea embracement, and failure system support. This effort makes the employees feel comfortable generating and speaking their concerns. The benefit of green energy use in the hotels may come from the continuous use of reusable toiletries, reuse of towels, advocacy toward natural lighting, prohibition of groundwater use, and other potential sources of innovative energy use.

7. Further study

Admittedly, this study comes with many shortages. The survey responses are obtained from one city only, although it could be generalized as the pressure of COVID-19 is imminent across the world. Further research may benefit from an expansion of geographic observation. Investigating the government policy's issue to tighten the cities or loosen them will also bestow an exciting explanation. The upcoming articles may also discuss management's behavior in regulating their emotion under particular uncertainty and the impact on strategies. The shifting toward outsourcing employees are also observable phenomenon, while other relies on the governmental helps, or are plunged in the debt-ridden activities. There are also potential conversations regarding the capital structures of the hospitality business, and how they kickstart the business when the governmental restrictions are lifted. These future discussions can be the objects of interests to other aspiring researchers.

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Appendix 1. The Adapted Measurement Items

Construct	Items	Statements
Opportunity Awareness (Russell & Russell, 1992)	OPA1	Explore all sources of information in the complexities
	OPA2	Look for information outside of our group
	OPA3	We encourage fresh ideas
	OPA4	I seek fresh ideas to sustain my hotel performance
Creative Environment (Russell & Russell, 1992)	CRE1	Moderate risk is allowed for potential innovation
	CRE2	Time and resources are provided for potential novel ideas
	CRE3	I evaluate new ideas by their advantage potentialities
	CRE4	Innovative ideas is rewarded
	CRE5	Materials are provided for potentially-adapted ideas
Innovative Energy Use (Self-developed)	INE1	I experiment with new approach for our hotel's energy management
	INE2	Sustainable innovation for hotel management can solve our problem
	INE3	We find breakthrough to save our energy expenditure
	INE4	We automate the room management to conserve energy
	INE5	Investment for innovative and efficient hotel management is provided
Hotel Performance (Li et al., 2009)	HOP1	I am happy with our hotel investment return (ROE)
	HOP2	I am happy with our return on assets (ROA)
	HOP3	We secure return on sales
	HOP4	I am quite happy with our gross profit margin
	HOP5	I am quite happy with our sale growth
	HOP6	I am quite happy with our employee growth