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Exploring Small Entrepreneurs' Goals in Electronic Commerce Ecosystem: A Goal Hierarchy Approach

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EXPLORING SMALL ENTREPRENEURS' GOALS IN ELECTRONIC COMMERCE ECOSYSTEM: A GOAL HIERARCHY APPROACH

1. Introduction

Small businesses are important in that they stand at the forefront of enterprise formation and start everywhere: rural, urban, and suburban areas. In an economic perspective, small businesses play a vital role by creating jobs (Wolcott, Kamal, & Qureshi, 2008) and in socio-economic development of their communities (Leong, Pan, Newell, & Cui, 2016).

Furthermore, small businesses serve as a social safety net that provides a source of income for low-income people (Shah Alam, Ali, & Jani, 2011) and as the grassroots to grow bigger businesses (Grosh & Somolekae, 1996). Nevertheless, as COVID-19 has shrink face-to-face interactions, small businesses are experiencing unprecedented economic difficulties.

Particularly, as the pandemic leads to a sharp rise in demand for online channels, offline retailers are experiencing unprecedented economic difficulties. Therefore, currently their e-commerce adoption has been attracting more attention of practitioners and researchers (e.g., Abed, 2020; Rana et al., 2019).

Information communication technology (ICT), especially e-commerce, has been employed to bring about increased competitiveness by offering small businesses with capabilities to access new markets and reduce costs (Brown & Lockett, 2004). Furthermore, e-commerce adoption empowers small businesses to advance the efficiency and effectiveness of business processes and to renovate existing business models (Chong, Ooi, Lin, & Tang, 2009). Although e-commerce can play a significant role in the growth of small businesses (Raymond, Bergeron, & Blili, 2005), small businesses still do not use full potential of ICT for their business (Abed, 2020; Rana et al., 2019). Even in developed countries, small businesses

have challenges for adopting ICT (i.e., e-commerce) because of limited resources such as a lack of affordability, a lack of training for using ICT, or a lack of infrastructure as well as a lack of awareness of the benefits from adopting ICT (Honig, 1998; Lohrke, Franklin, & Frownfelter-Lohrke, 2006; Nambisan, Lyytinen, Majchrzak, & Song, 2017). Ultimately, these various challenges might lead to technological marginalization to small businesses.

Nevertheless, e-commerce platforms for small businesses recently enable them to overcome these challenges or marginalization and facilitate ICT to access new markets and reduce entry related costs. As providing direct connections with customers and easy interface to sell their products and services, the platforms empower small business owners for visibility of involvement toward e-commerce (Leong et al., 2016). For example, e-commerce platforms boost small business owners' confidence in the potential e-commerce by providing various supportive services and knowhow (e.g., financial, managerial, and operational service). Furthermore, small businesses can accomplish branding success in foreign market by using e-commerce platforms as a marketing channel (No & Kwak, 2018).

Despite the sluggishness of small businesses' adoption of e-commerce, researchers have investigated their adoption. Prior studies have mainly explained opportunities and barriers of e-commerce adoption for small businesses (e.g., Lewis & Cockrill, 2002; Rana et al., 2019). Another research stream in small businesses' adoption of e-commerce is an investigation of goals of small entrepreneurs for adopting ICT (Dwivedi, Papazafeiropoulo, Parker, & Castleman, 2009; Govindaraju & Chandra, 2011; Lawson et al., 2003). Small business owners, who has utilized ICT for their business, can be regarded as *small entrepreneurs* because they seek for innovative solutions to develop their business. Thus, small entrepreneur's psychological perspective of innovations has been an important research topic (Bridge & O'Neill, 2012; Frese & Gielnik, 2014), and the understanding of

entrepreneurs' goals is a crucial point for explaining their innovative behaviors (i.e., e-commerce platform adoption) (Kuratko, Hornsby, & Naffziger, 1997; Dwivedi et al., 2009). Although some studies have investigated small businesses' adoption of a digital platform for e-commerce, they partially explain small entrepreneurs' goals and rarely address their diverse goals for the adoption (e.g., Leong et al., 2016). It is still required to explore *why* small entrepreneurs adopt e-commerce platform. Accordingly, there is a call for careful consideration in adopting a digital platform for e-commerce and the diverse attributes in making their goals (Nambissan et al., 2017).

In this regard, this study aims to explore the research question: *What goals do small entrepreneurs seek in their use of an e-commerce platform?* More specifically, the study tries to explain why small entrepreneurs adopt e-commerce in terms of various goals and what relationships exist among their goals. To answer this question, we adopt a widely accepted view of individual goals that are hierarchically organized, with a goal placed between its subordinate goal and superordinate goal (Newell & Simon, 1972). We employed the means-end chain approach, which is a useful method to reveal human goal structure (Gutman, 1982).

The study is organized as follows. The next section reviews the digital platform and entrepreneurship in the context of e-commerce. The following section describes the research methodology, including the laddering interview, coding mechanism, and hierarchical goal map. In the result section, we explain and interpret the hierarchical goal map in detail. Finally, theoretical and practical implications of small entrepreneur's goal-oriented value in adopting e-commerce platform emphasized by the map are discussed.

2. Literature review

2.1 Electronic commerce platform for small entrepreneurs

E-commerce platforms refer to the online platforms that enable small enterprises to reach a higher number of consumers by lowering entry barriers with distribution costs for many small enterprises. Specifically, e-commerce platforms allow small enterprises to enter online marketplace by lowering entry barriers, which embrace not only no admission fees and but also reasonable commission fees to use online transactions (Chen, Seong, & Woetzel, 2015). These environments have driven small enterprises to enable an omnichannel, which indicates the use of both sales channels with offline (e.g., brick-and-mortar shop) and online channels (e.g., e-commerce platform), to apply their businesses beyond a single-channel (Piotrowicz & Cuthbertson, 2014). Accordingly, small enterprises can obtain significant benefits from an omnichannel by gaining the comprehensive understanding of consumer behaviors through the integrated data from consumer's activities across channels (Xiao, Guo, & D'Ambra, 2019). Despite the benefits, small enterprises have still been marginalized because of the lack of resources. Nevertheless, currently various third-party online-to-offline platforms have been launched to offer the connection between small enterprises and consumers by providing online and offline channel integration (Xiao et al., 2019), and technological solutions (Wang, Cavusoglu, & Deng, 2016). For example, *Taobao Village*, which is a type of e-commerce platform created by *Alibaba* in China, helps the isolated small businesses to directly connect to consumers without the intermediaries. The platform also provides various managerial and operational services to enhance the small entrepreneur's skill and knowhow about e-commerce. Through the platform, small entrepreneurs can remove a feeling of uncertainty in adopting e-commerce for their business (Leong et al., 2016).

Recent platforms provide small businesses with the useful tools that allow them to undertake e-commerce, including standardized web store template, convenient technological

systems, as well as free training classes for small enterprises on online sales methods (Wang et al., 2016). In return, small business owners, who have not previously been interested in adopting e-commerce, are motivated to adopt a new way to sell and promote their products and services for a large number of potential consumers with low entry barriers and easy interfaces. In this manner, e-commerce platforms can lead to transforming the small business owners, who seek new business opportunities by adopting e-commerce platform, into small entrepreneurs.

The concept of entrepreneurship has been variously defined in contemporary entrepreneurship literature. The definitions stressed on specific activities such as the creation of new business enterprises (Gartner, 1988), the new combination of existing elements (Schumpeter, 1934), the exploration and exploitation of business opportunities (Kirzner, 1973), the innovative, proactive, and the risk-taking activities (Cauthorn, 1989), and so on. Although the definitions of entrepreneurship can be variously defined, the essence of entrepreneurship originates from individual traits (Stevenson, 1983). Thus, in this study, entrepreneurship is defined as individual-oriented characteristics that exploit business opportunities with innovative approaches.

Differentiating between entrepreneurs and small business owners has been debatable issues in entrepreneurship literature (Carland, Hoy, Boulton, & Carland, 1984; Carland, Carland, & Aby, 1989), because entrepreneurial firms and small enterprises have many common features as well as many different respects (Jackson & Rodkey, 1994). The fundamental difference between entrepreneurs and small business owners is that entrepreneurs create a rapidly growing venture, which will ultimately evolve a large firm, whereas small business owners seek family income (Carland et al., 1984). In addition, entrepreneurs pursue innovation, which is the single constitutive entrepreneurial factor,

separating from nonentrepreneurial activities (Kilby, 1971). In other words, innovation is a unique identifier to distinguish whether entrepreneurs or not (Carland et al., 1984; Gartner, 1990; Hornaday, 1992). In this regard, the small business owners in this study are regarded as entrepreneurs because they pursue new business opportunities to extend their business through an innovative approach, such as an e-commerce platform.

In the context of e-commerce adoption in small enterprises, prior studies have mostly focused on the relationship between entrepreneurial factors and e-commerce adoption intention. For example, Sehora et al. (2009) investigated the critical success factors in terms of e-commerce entrepreneurship. They revealed that achievement orientation and locus of control positively affected e-commerce success, while risk-taking propensity and e-networking did not affect e-commerce success. Abebe (2014) analyzed the moderating effect of small business owner's entrepreneurial orientation between e-commerce adoption and small and medium-sized enterprises performance. Eijdenberg et al. (2015) examined the relationship between entrepreneurial motivation and small business growth; they found that a combination of motivations associated with family background, necessity and opportunity motivations had the strongest effect on the small business growth, Although prior studies extend the understanding of entrepreneurship in e-commerce adoption for small enterprises, there is still much to study. Specifically, there is needed to answer the underlying question of why small entrepreneurs adopt e-commerce for their businesses. Nevertheless, various motivations in adopting e-commerce for small business are still unexplored in previous research, and thus more intensive investigation of their motivations is required for a better understanding of e-commerce adoption of small enterprises. Based on a goal hierarchy system, the study tries to enhance our understanding by verifying various small entrepreneurs' goals of e-commerce adoption and clarifying the relationship among the goals.

2.3 Goal hierarchy system

A goal hierarchy system has been widely adopted to explain individuals' decision making by connecting their activities with their goals and values (Olson & Reynolds, 1983; Powers, 1973). The system has involved various theoretical backgrounds from psychology literature, such as cognitive structures (Kruglanski et al., 2002), personal construct theory (Kelley, 1955) and human values (Rokeach, 1973). A unique property of the system is that goals are structured *systematically*. In other words, the goals are within a hierarchical system where each goal is able to be a superordinate goal as well as a subordinate goal as a means to attain its superordinate goal, as long as individual is involved in a given goal pursuit. The goal hierarchy system postulates that the attributes of products or technologies serve as the means to achieve individuals' benefits and important values (i.e., ends), for example, happiness (Gutman, 1984), peace of mind (Chiu, 2005), and well-being (Jung, Pawlowski, & Kim, 2017). In addition, a goal, which is a desired consequence of a specific action (Locke & Latham, 1990), is treated as a state beyond an action (e.g., adoption). Thus, in terms of e-commerce adoption in small business, the understanding of the hierarchical structure of their goals helps to look beyond mere adoption to explore small entrepreneurs' values (i.e., entrepreneurship).

3. Method

3.1 Means-end chain analysis

A means-end chain analysis (MECA) is an approach to elicit a goal hierarchy system. Goals have a hierarchical system where a goal is placed between its superordinate and subordinate goals, and furthermore, that each goal is a means to achieve its superordinate

goal (Kruglanski et al., 2002; Newell & Simons, 1972). MECA postulates that the attributes of a product or a service represent the means to achieve consumer's important values or goals in the marketing research (Gutman, 1982).

MECA posits the meanings of product or service at three levels of abstraction: attributes, consequences, and values. Attributes indicate a product or service's material or observable characteristics; consequences are the benefits achieved by the attributes, and; values refer to highly abstract goals that lead to individual behavior. This approach assumes that product and service attributes can be considered as the means to achieve individual's benefits and to reach important values. This attribute-consequence-value chain is usually shown of a hierarchical map, which involves of nodes (i.e., attributes, consequences, and values) and relationships among them. For example, many users of e-commerce platforms (attribution) attract small entrepreneurs because this environment increases a chance of exposure of their product and in sales (consequence), which can subsequently lead to entrepreneurial achievement (value).

A supplementary methodology for the original-version MECA approach embraced the calculation of abstractness of values. Employing network theory, prior studies derived from the calculation for the abstractness of each element and utilize it to decide the location of the element in a hierarchical map instead of the specification of three levels of abstraction (i.e., attributes, consequences, and values) (Bagozzi & Dabholkar, 1994; Jung & Pawlowski, 2014). This alternative method enables researcher to identify the relationships of elements without having to carry out additional analysis to classify elements into three levels.

The study utilizes a laddering interview technique based on the level of abstractness. MECA has typically relied on a laddering interview technique. The laddering interview technique has been widely adopted with consumer behavior research to understand

consumers' preferences to products or services (Jüttner, Schaffner, Windler, & Maklan, 2013), and with organization behavior research to explain organizational strategic values and structures of decision-making (Peffer & Gengler, 2003). A laddering interview process typically consists of three questions: the attribute question (What attribute makes the product (or service) attractive to you?), the consequence question (Why is the attribute important or desirable to you?), and the value question (Why is your response important?). In the first question, the interviewees are requested to reply to the attributes of a product or service that affects their decision. In this context, the interviewees may reply to the attributes of the e-commerce platform. Then, the interviewees are asked to explain what benefits they obtain through the attributes. Finally, the interviewees are asked to reply why these benefits are important to them. All interviews are coded, and then we have a content analysis with coded the replies. Based on the content analysis, the study draws a hierarchical goal map of small entrepreneurs when they adopt an e-commerce platform by the levels of abstraction, consequently, the structure will be made (attributes → consequences → values).

3.2 Participants

The participants were 124 small entrepreneurs at Busan in South Korea (63 males and 61 females; average age 31.1), who have been running a clothing business in bricks-and-mortar store and then open online store via e-commerce platform. They have been adopting e-commerce for their business over 50.3 months. They had 3.3 employees for their business, and over 78% of employees were newly hired after starting e-commerce. They also reported that over half of sales was generated through e-commerce. Table 1 shows demographic characteristics of the small entrepreneurs and their businesses.

Table 1. Demographics of Participants

Category	Item	Count	Percent
Age	20s	44	35.5
	30s	76	61.3
	40s	4	3.2
Gender	Male	63	50.8
	Female	61	49.2
Age of business	Less than 2 years	10	8.1
	2 and less than 4 years	45	36.3
	4 and less than 6 years	23	18.5
	6 and less than 8 years	17	13.7
	8 and less than 10 years	16	12.9
	More than 10 years	13	10.5
E-commerce adoption period	Less than 1 year	42	33.9
	1 and less than 3 years	63	50.8
	3 years less than 5 years	14	11.3
	More than 5 years	5	4.0
Number of employees	1 – 2	18	14.5
	3 – 4	47	37.9
	4 – 6	28	22.6
	6 - 8	15	12.1
	8 - 10	13	10.5
	More than 10 (max: 16)	3	2.4

E-commerce proportion in total sales	Less than 20%	5	4.0
	20% less than 40%	12	9.7
	40% less than 60%	33	26.6
	60% less than 80%	43	34.7
	More than 80%	31	25.0

3.3 Laddering interviews

Laddering interview has been extensively used to understand how individuals interpret the properties of objects into meaningful relations (Gutman, 1982). All participants were interviewed in the relaxing place in which the interview could not be interrupted by others. Before the interview, the interviewees firstly filled a survey regarding the demographic and their businesses information. The study used a face-to-face laddering interview technique that is a traditional method to gather data for the MECA to elucidate questions during the interview (Reynolds & Phillips, 2017). As the interviews proceeded, the interviewer recorded notes for the participants' responses. The interviews were performed during 30 minutes on average. In a face-to-face setting, the interviewer began to ask three questions during the interview to derive the goal structures of the small entrepreneurs. The questions are organized open-ended questions based on the modified laddering interview technique designed by Pieters et al. (1995) as follows: (1) What kinds of characteristics do you get into e-commerce platform? What kinds of functions did you use in e-commerce platform? Could you give me three examples?; (2) Why do you use/adopt the function/characteristic? What do you get by using the function/characteristic?; (3) Why is the reason (response of the second question) important? For example, a participant might answer 'many users in e-commerce platforms' for the first question. Then, I proceeded the second

question for each answer (e.g. what do you get by using many users in e-commerce platform?). The participant may answer

I have a chance to expose my products for many people, because e-commerce platform has many users who may be the potential consumers for my business

to the second question. Finally, the interviewer asked the third question to the participant:

why is the exposure of products (i.e., the response of the second question) important to you?

The participant may give an answer such as ‘a feeling of fairness because I can compete other companies including large firms in e-commerce environment’ to the third question.

Regarding the participants’ responses of third question, the interviewer asked more ‘why’

questions to reach an ultimate goal or value. For example, if several participants might

answer ‘it provides a feeling of achievement for my business’ as the third question, then the

interviewer proceeded one more question such as ‘why is a feeling of achievement important

to you?’ As to the additional question, some participants replied, ‘when I feel achievement

through e-commerce, I feel confident to expand my business.’ The interview was stopped

when the researcher felt that a participant provided the similar answer repeatedly to four or

more questions, which means that there might not exist no more ladder (i.e., higher-level goal).

4. Results and analysis

4.1 Coding

Based on the laddering questionnaire, the study classified the responses of the interview questions that were recorded by the researcher, called the coding process. The coding process consists of three steps, as shown in Table 2. In the first step, the first coder grouped the collected data by the related set of categories, which represents a word or phrase

cluster of the responses. The first coder used open coding technique to classify the data in which codes are not predetermined but rather appeared from the data. To electing codes representing a cluster of words and phrases, the study endeavored to reflect expressions that the interviewees had used in interviews so as not to lose the nuances of their expressions as well as minimize the influence of the coder.

In the second step, coding facilitators were joined to reclassify the interview data and help to group the cluster of words and phrases due to reducing the bias of the preliminary category completed by the first coder. The role of two facilitators is to reclassify the data with the set of clusters by the first coder through discussion. In other words, the codes were more elaborated through the second step. As a result of the step, six attributes of an e-commerce platform (large user base, low cost, platform power, easy interface to customers and easy interface to small entrepreneurs) and 13 goals and values, which are created by those functions and characteristics, were extracted. In the final step, the first coder tried to categorize the data again based on the elaborated set of clusters from coding facilitators; at the same time, the second coder separately regrouped the data in accordance with the elaborate set. Then, the study evaluated the consistency of categories between the first coder and second coder with Cohen's Kappa, which is a statistic to measure the reliability of inter-raters (Fleiss, Levin, & Paik, 1981). The Kappa value is about 0.93, which calculated that both coders equally classified 531 of a total number of 572 clusters assigned. The disagreements between both coders were adjusted through discussion.

4.2 Creating a hierarchical goal structure

The next step in the analysis was to create the hierarchical goal structure in adopting e-commerce. The coded responses from the coding process created a means-end chain or a

hierarchy of meanings as follows. First, the answers from the first question were used for a starting point of the chain, and responses to the second question played a role of the connection between the means and the higher level of goals or values reflected the answer to the following 'why' question. For example, the small entrepreneur answered why he or she adopt e-commerce because of the cheap costs to use e-commerce (first question). Then, the respondent replied that the cheap costs could help to expand sales channels (second question), and through the channels, the respondent could increase income and feel funny (last question). Through the response of the interview, a hierarchical chain is generated: *Low cost* → *Channel expansion* → *Increase in sales* → *Excitement*. All linkages of goals were summarized in an implication matrix, which describes one code contributes to how many connections to other codes. (Klenosky, 2002) (Table 4). For instance, C2 (Channel expansion) led to C3 (Exposure of goods) 9 times and to C13 (Justice) 13 times.

The study applied an alternative method for investigating laddering interviews recommended by Bagozzi and Dabholkar's technique (1994). The approach allows a hierarchical goal structure to compare the number of times each code is stated as the means with the number of times it is stated as the ends. The approach calculates the abstractness level of each code employing out-degrees and in-degrees. The out-degree of a particular code indicates the number of times the subject serves as the source and means of connections to other codes. In contrast, the in-degree of the code refers to the number of times the subject serves as the aim or end of ties with other codes (Pieters et al., 1995).

The abstractness of each code draws on the calculation of in-degree divided by the sum of in-degree and out-degree of the code and ranges from 0 to 1 (Pieters et al., 1995). While the codes with low abstractness values are considered principally as means, ones with high abstractness values are judged mostly as ends. Based on this method, we calculated the

abstractness values for each topic (Shown in Table 3). For a more useful analysis, I also determined the centrality of each code, which describes the degree how much the code plays a central role in the goal structure (Knoke & Burt, 1982). The score of centralities are determined by dividing the total degree (i.e., the sum of in-degree and out-degree) of a unique code by the whole number of all active cells excluding blank cells in the implication matrix. An active cell indicates a cell in which there is a relation between the two codes. Table 4. shows the amount of all active cells was 572 in the study.

Finally, the study created the hierarchical goal map depending on the information in the implication matrix. According to the level of abstractness, each code was located in the map. Then, each code consists of means-end relations depending on the connections among the codes. In this step, the critical point was to decide which links should be involved in the map. Since the study can't encompass all linkages, the inclusion of all connections among all of the codes decreases the usefulness and informativeness of the map. Thus, the study employed a cut-off level to decide the criterion of the inclusion in the map (Reynolds & Gutman, 1988). Based on Bagozzi and Dabholkar's (1994) approach, the study chose the cut-off level as shown Table 5. The decided cut-off level was eight. In other words, only the linkages were included on the map when the connections have eight or more frequencies in the implication matrix. This cut-off level encompassed 29.6% of the active cells and 70.5% of the active linkages. With Gengler and Reynolds's guideline, the chosen linkages on the cut-off level should contain more than two-thirds of all linkages in the implication matrix (Gengler & Reynolds, 1995). Accordingly, the study satisfied the recommendation. As shown Figure 1, the hierarchical goal map gives a graphical overview of the means-end chain in adopting e-commerce platform in terms of small entrepreneurs. In the map, the codes are placed depending upon their abstractness scores. Accordingly, a code has the more abstractness level, the higher it is located

on the map. In addition, the study also separated the links among the e-commerce properties and goals in order to improve a clarity as well as avoid the complexity of the map.

Table 2. Coding Process

Step	Participant	Action	Outcome
1 st step	First coder	Open coding (codes are not predetermined but merely emerged from the data)	Data coded Set of codes
2 nd step	Coding facilitators	Re-code using the set of codes identified by the first coder Categorize codes and elaborate the set of codes through discussion among the first coder and 2 coding facilitators	Data re-coded Elaborated set of codes (13 codes)
3 rd step	Second coder	Re-code using the elaborated set of codes Check inter-rater reliability (Cohen's Kappa > 0.9) → Acceptable Reconcile disagreements through discussion among the first coders and the second coder	Final version of data coded

Table 3. Codes

Codes	Examples
C1. Increase in sales	Increase income, increase in sales, earn more money
G2. Channel expansion	Expanding channel, adding online channel
G3. Exposure of the goods	Increase a chance of exposure of my products
G4. Trust on platform provider	Trust on platform, believe platform provider
G8. Gaining consumer familiarity	Gaining consumer familiarity
G6. Business convenience	Ease of use for e-commerce platform, feeling of convenience using the platform
G7. Devotion to resources	Studying much harder for e-commerce environment, Learning needed skill for e-commerce
G8. Consumer convenience	Consumers feel convenience in e-commerce platform
G9. Comfortableness	A sense of comfort, a feeling of comfortableness, a feeling of satisfaction
G10. Accomplishment	Accomplishment, a feeling of achievement, a sense of confidence
G11. Excitement	A feeling of excitement
G12. Ambitiousness	Expansion of business into another domain
G13. Fairness	Feel fairness by possibly competing large companies in online

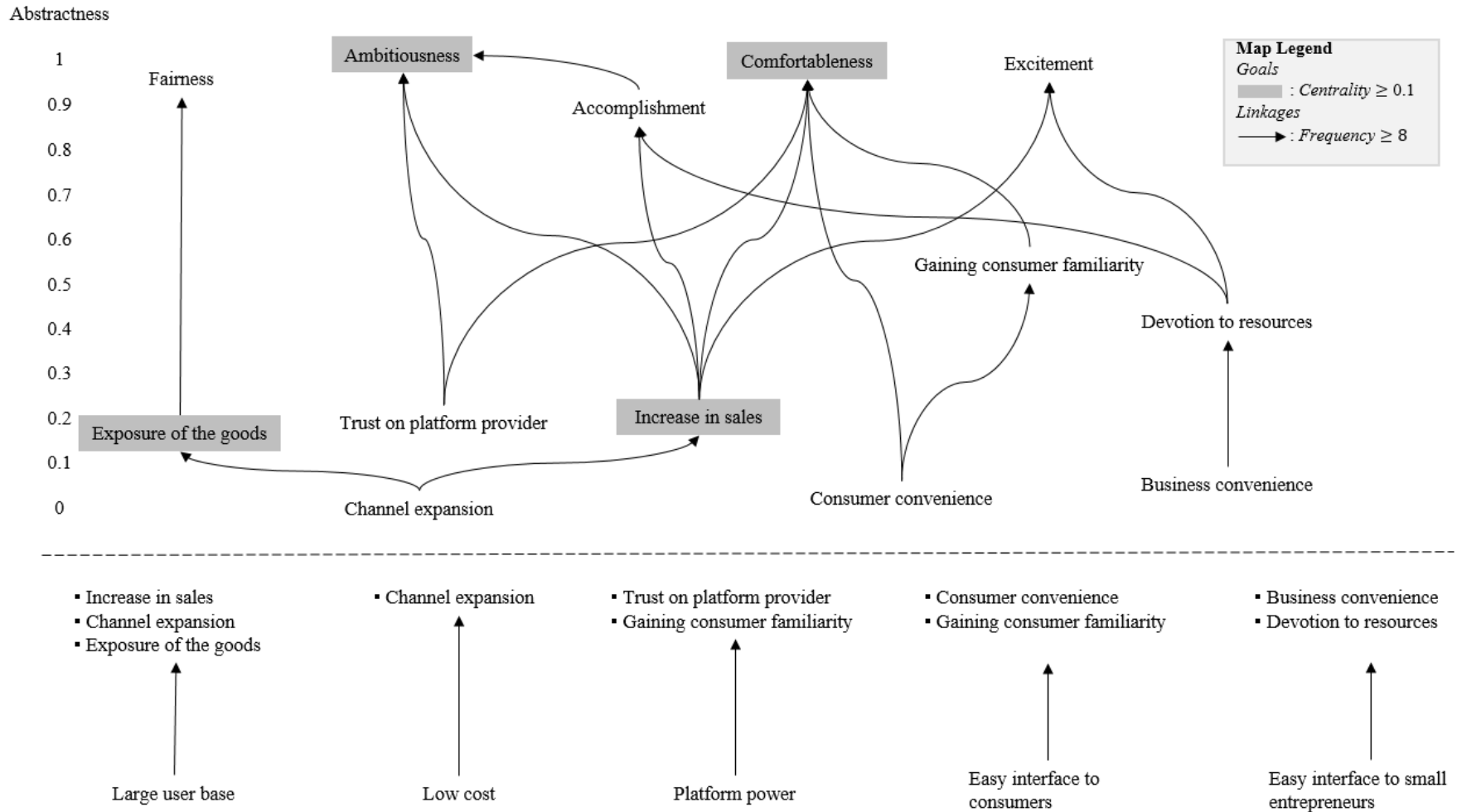
Table 4. Implication Matrix

Topics	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	Out-degrees
A1. Large user base	45	18	46	2			4	2						117
A2. Low cost	4	23		1	2		1							31
A3. Platform power		5	3	16	2		1	9					2	38
A4. Easy interface to customer	2	2		1	12	1		10						28
A5. Easy interface to small entrepreneurs	2	4		5		28	12		1		2	1	1	56
G1. Increase in sales				1		1			8	35	12	25		82
G2. Expand channel	13		9		2		3			2	1	4	1	35
G3. Exposure of the goods	7			3	3	1	2		3	5	6	7	13	50
G4. Trust on platform provider							1		11	4		9	2	27
G5. Gaining consumer familiarity				1					12			1	1	15
G6. Business convenience				1			13		1	7	2	1		25
G7. Devote resources			1						2	8	13	2	1	27
G8. Consumer convenience					11				9		2	1		23
G9. Comfortableness										2				2
G10. Accomplishment											1	11		12
G11. Excitement												2		2
G12. Ambitiousness														0
G13. Fairness										1				1
In-degrees	20	0	10	6	16	2	19	0	46	64	37	63	18	301
Abstractness	0.20	0.	0.16	0.18	0.52	0.07	0.41	0	0.96	0.84	0.95	1.00	0.95	
Centrality	0.18	0.06	0.11	0.06	0.05	0.05	0.08	0.04	0.08	0.13	0.07	0.11	0.03	

Table 5. Cut-off Level

Cutoff	Number of active cells	Percentage of active cells	Number of active linkages	Percentage of active linkages
1	54	100.0	302	100.0
2	37	68.5	285	94.4
3	27	50.0	265	87.7
4	23	42.6	253	83.8
5	21	38.9	245	81.1
6	20	37.0	240	79.5
7	19	35.2	234	77.5
8 (Cut-off)	16	29.6	213	70.5
9	14	25.9	197	65.2

Figure 1. Hierarchical Goal Map for E-Commerce Platform Adoption



5. Discussion

5.1 Summary of findings

Through the means-end chain analysis, the study elucidates the small entrepreneurs' goal structure for e-commerce adoption. The hierarchical goal map not only offers a vivid description but also extend the understanding of small entrepreneurs' goal structure for e-commerce adoption. Also, MECA enables to explore the entrepreneurial values beyond the adoption of e-commerce platform by creating the goal structure. The findings show that *Increase in sales*, *Accomplishment*, *Ambitiousness*, and *Exposeure of goods* are the prominent goals for adopting e-commerce platform in small business in respect of the centrality of the goals. These four goals are linked with 50.0% of all linkages in the implication matrix in Table 19. In terms of the property of e-commerce platform, large user base and easy interface for small entrepreneurs jointly corresponded to 57.4% of the properties as shown the implication matrix. Next, the key findings are as followed:

Increase in sales, which is sustained by *large user base* (e-commerce platform property) and *expand channel* (e-commerce platform lower-level goal), is the most important means in that it leads to achieve a variety of the highly centralized goals such as *Accomplishment*, *Ambitiousness*, and *Comfortableness*. Small entrepreneurs can increase their business sales from the expanding sales channel through a large user base, which revealed the central property of the e-commerce platform, as well as a large user base itself. In turn, the increasing sales arouse a sense of accomplishment for their businesses, which subsequently leads to ambitiousness to extend their businesses toward other businesses. In other words, the achievement of the increase in sales, which is a primary business goal of small entrepreneurs, enables them to feel accomplishment that supports to sustain entrepreneurship (Kuratko et al., 1997). *Increase in sales* also directly supports to *Ambitiousness*, implying represents the

expansion of business that is a core trait of the entrepreneurship (Brandstätter, 1997), is derived from the accomplishment of increase in sales as well as the rise in sales itself. Accordingly, the results show that e-commerce platform help to experience a feeling of achievement for small entrepreneurs, and moreover, contribute for them to motivate their ambitiousness of the expansion of business through the increase in sales in the platform.

Exposure of goods, mediated by Expansion of channel, is used for e-commerce adoption ends in small business such as *Justice*. Justice is defined as giving each individual what they deserve. Justice is also highly correlated with fairness, in other words, injustice gives rise to the strong awareness of unfairness (Leung, Chiu, & Au, 1993). The concept of justice has three subdimensions: distributive justice, procedural justice, and interactive justice. Distributive justice indicates the fairness of resources allocated or outcomes distributions (Deutsch, 1985). Procedural justice implies the fairness of processes or procedures such as decision-making (Blader & Tyler, 2003), and interactive justice refers to the fairness of interpersonal treatments from others with respect to dignity (Brockner & Wiensfeld, 1996). In the perspective of e-commerce platform adoption in small enterprises, the justice is associated with distributive justice rather than procedural justice or interactive justice because small entrepreneurs focused on the fairness of resources allocated of e-commerce platform. They believed that e-commerce platform provides the environment to equally expose goods and services regardless of firm size, and consequently, they perceived the fairness by competing equally with large firms in the e-commerce platform. Thus, e-commerce platform helps to overcome the marginalization of small enterprises in terms of promotion, especially the exposure of goods.

In the e-commerce platform, small entrepreneurs may accomplish the ends of *Comfortableness*, defined as a state of subjective well-being (e.g., relaxation, satisfaction,

contentment) derived under optimal environments (Pennig, Quehl, & Rolny 2012), through the means, including *Increase in sales*, *Gaining consumer familiarity*, and *Consumer convenience*. Particularly, entrepreneurship occurs with a supportive environment that provides a sense of comfort toward the new endeavor (Bull & Willard, 1993), accordingly, a sense of comfort is one of important factors building entrepreneurship. When small entrepreneurs achieved the subordinate goal of the increase in sales, they felt comfortableness. In other words, a sense of comfort is derived, when the decision of e-commerce platform adoption is confirmed by the achievement of the increase in sales, which a basic goal for the business, as the right decision. Also, consumer convenience, mediated by gaining consumer familiarity and easy interface for consumers, contributes to creating a sense of comfort. In the e-commerce context, the platform provides various convenient interfaces to purchase goods for consumers such as payment systems, price comparisons, online reviews, refund systems as well as direct messages with small sellers. These interfaces help to create the perception of convenience toward purchasing small sellers' goods through online channel (Hajli, 2015), and to build the relationship between consumers and small entrepreneurs such as familiarity (Pizzutti & Fernandes, 2010). In turn, small entrepreneurs may feel comfortableness through the familiarity as well as the convenient systems that e-commerce platform offers. Thus, e-commerce platform contributes to building entrepreneurship with a sense of comfort resulted in subordinate goals among small entrepreneurs.

Excitement may be reached through the devotion of small entrepreneurs' resources to e-commerce platform, mediated by business convenience from *easy interface to small entrepreneurs*, including standardized web store template, convenient technological systems, and free training classes for small enterprises on online sales methods (Wang et al., 2016). A sense of excitement is defined as a positive, high-arousal emotional state (Russell, 1980) in the

general context, but in the context of work, it indicates the individual enthusiasm and interest in work shown by creativity, openness to learning, and ability to identify opportunities in everyday situations (Simms & Erbin-Roesemann, & Coeling, 1990). Accordingly, the convenient interfaces of e-commerce platform make small entrepreneurs' effort to for e-commerce, which can achieve a work excitement. Also, a sense of excitement is derived from increase in sales. Thus, small entrepreneurs can attain the psychological state by increasing in sales (Shneor et al. 2016) and devoting their resources into e-commerce platform. In addition, preserving a sense of excitement for the business is important because it sustains the entrepreneurial passion for small entrepreneurs (Yitshaki & Kropp, 2016).

Finally, *Trust on platform provider* is not only another stimulus for the property of e-commerce platform, particularly platform power, but is also connected for two e-commerce platform ends such as *Comfortableness* and *Ambitiousness*. Trust on e-commerce platform provider provides small entrepreneurs with a sense of comfort by reducing the uncertainty of e-commerce adoption within the platform. Also, building trust between platform provider and small entrepreneurs supports them to become confident in expanding their businesses inside the platform. Consequently, e-commerce platform power meets a need for building trust on the platform that leads entrepreneurship with a sense of comfort and ambitiousness of business expansion.

5.2 Implications

The study has several theoretical implications. The most important theoretical contribute is to offer a fundamental understanding of e-commerce platform adoption in small entrepreneurs by investigating small entrepreneurs' goals. Since e-commerce platform is a new model for enabling small entrepreneurs to adopt e-commerce, the basic questions such as

motives for e-commerce platform adoption have remained unanswered. In this perspective, the study offers the fundamental understanding through an initial knowledge of why small entrepreneurs adopt e-commerce platform. The study also proposes potential theoretical frameworks for future research on e-commerce platform adoption.

Second, the study helps to remind researchers about the significance of the topic by confirming that the adoption is broadly connected with various properties and values in e-commerce platform. Prior research has attempted to understand the relationships between individual-related factors of small entrepreneurs (e.g., a locus of control, risk-taking, innovativeness) and the outcomes of e-commerce (e.g., sales growth, growth rate). However, the process of creating entrepreneurship from IT, and furthermore, the influences of the entrepreneurial values on the outcomes have been underestimated. Accordingly, our findings propose that both entrepreneurship and IS researchers not only have interest in the process of forming entrepreneurship in e-commerce but also examine the process in various IT contexts.

Next, the study suggests a new angle on entrepreneurship in small entrepreneurs in the context of e-commerce platform. By investigating entrepreneurial values underlying entrepreneurship, the study provides a vivid explanation of e-commerce platform practices beyond the deterministic paradigm of e-commerce adoption in small business such as intention to use e-commerce. More specifically, small entrepreneurs begin to have ambitiousness about expansion of their business through e-commerce platform. Ambitiousness to expand business is the central element of entrepreneurship (Brandstätter, 1997), which can be derived from the advanced e-commerce system. Also, comfortableness and accomplishment are supported to maintain entrepreneurship, which is explained in the means-end chain of e-commerce platform. Therefore, the current study contributes to extracting a full depiction of small entrepreneurs'

entrepreneurship by elucidating relationships among entrepreneurial values as well as to revealing the values in using e-commerce platform.

The study also makes several contributions for practitioners. The study reminds e-commerce platform providers of the importance of easy interfaces for both consumers and small entrepreneurs. The findings show that easy interface for consumers raises consumer convenience as well as consumer familiarity of the platform, which can provide a sense of comfort for small entrepreneurs. Moreover, easy interface for small entrepreneur increases enthusiasm for business and openness to learning through voluntary devotion to their resources. Thus, e-commerce platform providers are required not only to provide various interfaces for consumers to make easier use of the platform such as simple payment system, minimizing shopping steps, comparing price information, and communication systems of ordering status, but to offer the interfaces for small entrepreneurs to lower entry barriers of the platform, including standardized web template, supporting technical aids, and managing free training classes.

E-commerce platform providers are also guided to increase small entrepreneurs' perceptions of the fairness that focus on other justice (i.e., procedural justice and interactive justice) as well as distributive justice. In the perspective of procedural justice, e-commerce platform providers may apply fair policies in dealing with each entrepreneur. Also, the platform providers should treat small entrepreneurs in their platform with respect (i.e., interactive justice). For example, the providers should give valuable benefits to the entrepreneurs in return for selling their products in the platform, perform the procedures/policies fairly dealing with each entrepreneur, and communicate the entrepreneurs with trustworthiness and honesty. Consequently, the providers gain the entrepreneurs' perception of justice, which contributes that the entrepreneurs may not leave to another platform.

Another managerial implication is that building trust on e-commerce platform providers offers opportunities for the platform providers to retain small sellers. In addition, the finding shows that sellers want to expand their businesses in the platform with trust on the platform provider, which indicates the providers may secure more items or sellers in the platform. Thus, the platform managers endeavor to trust on the platform with various ways.

5.3 Limitation and future research

The study has several limitations. First, the samples of the study may be biased because the recruited small entrepreneurs run their business in South Korea. The age ranges of the samples also mostly consist of 20s and 30s. However, South Korea is one of leading countries in the domain of e-commerce platform and its infrastructures with many users in the platform (Lee & Phang, 2015). In addition, 20s and 30s are categorized in digital natives, who understand how to utilize IT as well as have grown up with digital technologies (Prensky, 2001). Therefore, the findings can suggest useful insight for future e-commerce platform adoption research.

Second, the study deals with only the small entrepreneurs who have successfully applied e-commerce platform into their businesses. Consequently, the study has a limitation in that only positive gains derived from e-commerce platform adoption could be explained. However, the challenges in adopting e-commerce platform have remained an important research topic, thus, it is still important to fully understand the process of overcoming barriers. Thus, future research can revise the typical means-end chain analysis for capturing the barriers and the negative outcomes of small entrepreneurs in adopting e-commerce platform.

Lastly, the study did not consider possible differences by industries. The study entirely focused on the cloth industry, which has a smallest innovation adoption rate in every industry.

Thus, future research strategy for this is to explore the adoption of e-commerce platform in small entrepreneurs in various industries. Furthermore, future research may need to take into account on the comparisons of goals and values among the industries.

6. Conclusion

With the advent of a new form of e-commerce (i.e., e-commerce platform), small enterprises have enthusiastically adopted it for various purposes. In order to provide insight, the study explored the goal hierarchy of small entrepreneurs in adopting e-commerce platform. The results revealed that small entrepreneurs a variety of goals and values are associated with e-commerce platform adoption. We hope this exploratory study will not only be a cornerstone for future research towards understanding e-commerce platform adoption in small businesses but also encourage entrepreneurship research with adoption of IT for their businesses.

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