

E-commerce Adoption and Effects on South Korean SMEs During the Covid-19 Pandemic

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Abstract *Research objective:* The aim of this research was to explore the underlying factors motivating e-commerce adoption among SMEs in South Korea during the Covid-19 pandemic, and the effects of the technology. The basis for the decisions made by these companies to adopt e-commerce during the Covid-19 pandemic is also described. Focus is placed on the advantages and disadvantages linked to the process. The research explores the reasons for e-commerce adoption and development during the Covid-19 pandemic, analyses the impact of e-commerce on SMEs' marketing strategies during the pandemic, explores the benefits of e-commerce to SMEs during the pandemic, and determines the barriers to e-commerce adoption during the pandemic. *Methodology:* A qualitative research method was employed in this research to explore in-depth data for holistic description of e-commerce adoption phenomena in the context of SMEs in South Korea during the Covid-19 pandemic. Data was collected from three SMEs that had had a first-hand experience with e-commerce through interviews with their representatives. *Setting and location:* Republic of Korea. *Findings:* The primary rationale for implementing an e-commerce strategy differed among South Korean firms. In relatively big firms, the primary motive for adopting e-commerce was to improve efficiency in their internal processes. On the other hand, the smaller firms were more interested in improving their competitiveness. Still, the drive for competitiveness and cost-efficiency proved essential in motivating the adoption of e-commerce. Essentially, commerce proved to be beneficial in terms of improving the performance in two fundamental ways: ensuring increased customer base and sales revenues, and reducing the cost of doing business. However, SMEs also encountered a number of barriers to adopting e-commerce. Cost factor was commonly mentioned to be a major barrier to the adoption of e-commerce. Knowledge gaps also dominated as a challenge to e-commerce adoption.

Keywords SMEs e-commerce adoption, E-commerce effects, E-commerce barriers, Covid-19 pandemic and e-commerce

1. Introduction

The Coronavirus pandemic of 2019 (Covid-19) hastened the shift towards digitalization to both consumers and businesses. In 2020, a study by UNCTAD (2020) identified Korea to be among the 9 countries that witnessed a dramatic shift in consumer behaviour during the Covid-19 pandemic, as more consumers adopted online shopping (UNCTAD, 2020). Other countries included in the survey were China, Brazil, Russia, Turkey, Switzerland, Italy, Germany, and Switzerland. In Korea, more than 50% of the consumers were found to have started using e-commerce, as the world moved from responding to the pandemic to recovery (UNCTAD, 2020). In South Korea, Covid-19 pandemic and the resultant lockdown and social distancing measures

pursued by the government increased e-commerce sales and hastened transition to online shopping. Online sales for food delivery experienced the most significant growth by at least 61.5%, followed by household items by 48.9%, and food and beverages by 39.4% (Global Data, 2020). The growth opportunities for e-commerce attracted many e-commerce retailers, such as the Canadian Shopify and American Facebook Shops to set up their operations in South Korea. To respond to the pandemic, the South Korea set up "Digital New Deal" package to encourage small businesses to set up online businesses. The package targeted 160,000 small to medium-sized enterprises (SMEs) with 4 million won (US\$ 3,315), as these organizations have recently become the backbone of the country's economy (Global Data, 2020).

The complex process of changeover to collaboration exchange and customer-centred business that the relatively large enterprises initially pursued before the advent of the internet are today a normal practice for small to medium-sized enterprises (SMEs) (Garg & Choeu, 2015; Villa et al., 2018).. Incidentally, e-commerce has made the

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likelihood of attaining absolute connection with customers and other relevant stakeholders extensive sharing of information and conception of innovative solutions for customers has today become a reality for both the small and large enterprises (Gavin et al., 2020; Lee, 2020; Kim, 2016). Even so, compared to larger enterprises, small businesses are rather lethargic in adopting advanced technologies. The two differ in the technology adoption pace due to their differing visions, motives, and resources. For instance, while for the larger enterprises the major driver for adopting e-commerce is to improve efficiency, SMEs have totally different motives. They seek to respond to demands by their customers and to improve their competitiveness (Villa et al., 2018). What appears to be important for SMEs, however, is the capacity to experience benefits from adopting e-commerce. In case they miss out on the tangible benefits or when the managers are incapable of realizing and estimating the benefits appropriately, the motive for future improvements and attained highly advanced levels of e-commerce are not high. Perceptibly, many differing barriers for e-commerce adoption are and can be expected to be experienced by the managers in SMEs (Villa et al., 2018).

Regrettably, while SMEs were expected to significantly contribute to South Korea's economic growth, they had to face up to the challenge of resource limitations, which delayed their attempts to shift their businesses to the internet (Whitelaw et al, 2020; World Trade Organization, 2020). While the Covid-19 pandemic provided many SMEs with strong profit incentives to adopt e-commerce, the pandemic still had detrimental effects on SMEs that adopted e-commerce as part of their strategies to bolster sales. SMEs went through a problematic period (Global Data, 2020). Many ceased to operate owing to increased costs of operation, depleted cash reserves, declined sales, weakened growth, high propensity for business closure, high attrition rates, and high layoffs.

During the Covid-19 pandemic, SMEs experienced difficulties in their entire operations either on the demand or supply side. With respect to the demand side, SMEs experienced extreme labour shortages, as migrant workers moved to their home towns. The South Korean government implemented lockdown measures, making it impossible for employees to travel to their work stations (Whitelaw et al, 2020; World Trade Organization, 2020). The demand for SMEs products and related services also declined. A fair proportion of consumers spent their disposable income on buying products. However, because of Covid-19, consumers were exposed to high risks for job losses and salary cuts, which limited their spending power. Accordingly, a major concern for consumers in South Korea was the high risk for job loss. An additional underlying problem that had an equally far-reaching effect on consumers' behaviour included fears over contracting the disease and lock-down and social distancing measures (Digital Commerce, 2020; Eriksson et al., 2019). This affected the income levels of customers, leading to a fall in sales and turnover. The measures also caused consumers in South Korea to adopt

online shopping. In turn, customers also expected business to reinvent their operations using technologies (Gavin et al., 2020; Lee, 2020; Kim, 2016).

Evidently, e-commerce reshaped varied dimensions of operating small businesses in South Korea during the period of the Covid-19 pandemic (Mu-Hyun, 2020). It forced SMEs to fine-tune their strategies to fit the challenges associated with newer realities of social distancing and lockdown measures in order to stay competitive. Yet, small firms that began the process of e-commerce adoption faced a range of difficulties. The relatively small companies had to overcome some of the barriers that came about as a result of lockdown measures in order to realize the advantages of e-commerce (Digital Commerce, 2020; Eriksson et al., 2019). A decision was, therefore, made to focus on South Korean SMEs, which are in their early stages of implementing e-commerce platforms and are just realizing the strategic advantages and disadvantages of the technology, in comparison to the relatively well-resourced larger enterprises. Indeed, due to the perceived different motivation factors influencing the decision to adopt technology between SMEs and larger enterprises, the rationale and outcome of e-commerce adoption during the Covid-19 pandemic were expected to be at variance.

The aim of this research was to explore the underlying factors motivating e-commerce adoption among SMEs in South Korea during the Covid-19 pandemic, and the effects of the technology. The basis for the decisions made by these companies to adopt e-commerce during the Covid-19 pandemic is also described. Focus is placed on the advantages and disadvantages linked to the process. To ensure this, an extensive review of the literature and secondary data are carried out. The study objectives included:

- Explore the reasons for e-commerce adoption and development during the Covid-19 pandemic
- Analyse the impact of e-commerce on SMEs' marketing strategies during the pandemic
- Explore the benefits of e-commerce to SMEs during the pandemic
- Determine the barriers to e-commerce adoption during the pandemic

Because of the dynamic nature of the South Korean marketplace during the pandemic in the midst of the persistent technological advancement, the implementation of e-commerce by SMEs was acceptably necessary. The study explores the effects of e-commerce on SMEs in South Korea by looking at the perceived advantages and disadvantages of e-commerce adoption during the Covid-19 pandemic. The research is significant, as it illuminates the unique and variable factors that influence SMEs' decision to adopt e-commerce. The study is significant for South Korea owing to a large number of SMEs existing in the country that went online during the Covid-19 pandemic. In reality, the numbers of SMEs that support the South Korean have continually increased in recent decades, causing them to be at the

mainstay of the country's economic growth. Besides, studies are yet to conclusively look at the factors that influenced South Korean SMEs' massive transition to e-commerce, and in the process suggested theoretical frameworks to give explanation for the motivation to reinvent business operations using technology during a pandemic.

2. Literature Review

Development of e-commerce and the process of adoption

Over the years, the definition of e-commerce has tended to vary depending on the context. Initially, e-commerce was defined roughly as a process of buying and selling of goods and services over the Internet. Eventually, the term evolved as the term "exchange of information" was added to that of "buying and selling of goods" (Chong 2008, pp.470). As a result, the e-commerce was later defined as a "process of buying, selling, transferring, or exchanging of products, services, and/or information via computer networks, including the Internet" (Rainer and Cegielski, 2011, pp.201). As the process is fundamentally technologically mediated, other scholars like Ivanov (2012) have termed e-commerce as "all electronically mediated transactions between an organization and any third party."

In relation to the objective of this research, it is necessary to demonstrate how e-commerce has evolved during the years and what prompt the managers to adopt more technology in their businesses.

Schneider (2011) suggests that e-commerce adoption by the early-adopting firms was a process of technological development that happened in two waves: first wave and second wave. Large enterprises adopted the first wave in the early 1990s as they had easy access to financial capital (Evans and Wurster, 1999). The second wave took off in the early 2000s boosted by the technological boom of the time such as the advent of mobile broadband, lowered price of the internet and increased internet speeds (Evans & Wurster 1999). The second wave, therefore, provided smaller enterprises with incentives to adopt e-commerce. According to Stockdale and Standing (2004), the advantages of e-commerce were so apparent to an extent that small enterprises were encouraged to escalate from using simple to highly complex forms of e-commerce. The motivating force for adopting e-commerce was to increase revenues. For such firms, commerce was beneficial in terms of improving the performance in two fundamental ways: This included ensuring increased customer base and sales revenues, and reducing the cost of doing business (Ivanov, 2012; Walker et al., 2016).

Overall, the factors that drive the adoption of e-commerce can be split into two key categories. These include the drive for competitiveness, and the drive for cost-efficiency. Additional studies have showed that these two factors are important in equal measure for firms. As revealed in a research by Brand and Huizingh (2008), the process of adopting e-commerce comprises a sequence of adoption

processes. While the large enterprises with extensive capital resources and technological knowhow may leave out or employ certain stages together, smaller enterprises have to undergo all stages. This effectively implies firms shifting dramatically from simple to highly complex e-commerce stages, to attain more complex stages of innovation (Brand and Huizingh, 2008). In the early stages, the firm builds a web-site to showcase its products and services. Subsequently, the management may decide to provide customers with the potential to interact and to customize the information based on their needs. Firms may as well benefit from improved exchange of information with the view of understanding preferences of their customers (Rowe et al., 2012).

Brand and Huizingh's (2008) study showed the association between the intention to innovate and the adoption level. In effect, the intention to innovate increases with improved knowledge and level of satisfaction. According to Ivanov (2012), the adoption process of e-commerce in smaller enterprises consists of a sequence of processes whereby firms move gradually and dramatically increase their electronic capabilities. Ivanov (2012) identified four stages of adoption. The first level 1 is characterised by a lack of online capabilities and while level 4 is characterised by a full-fledged e-commerce strategy. At the start, firms have few or non-existing e-commerce capabilities. In the second stage, firms assume more extensive utility of internet communication tools like e-mails for both internal and external communication. In the third stage, firms start using e-commerce as a tool for marketing their products and services. The most complex stage of e-commerce adoption is characterized by extensive sharing of information and interaction with customers. Firms will also make and receive orders, as well as make payments on the internet (OECD, 2000).

Benefits of e-commerce adoption in small companies

Studies on SMEs regarding the perceived e-commerce benefits have been on the increase in recent years. Ivanov (2012) divided the advantages of e-commerce to enterprises into tangible and intangible. Tangible benefits are related to increased sales, reduced cost, and expansion of market. Essentially, they are all measurable. On the other hand, identifying and accessing intangible benefits are rather difficult. However, they are linked with tangible benefits. For instance, if a firm reduces its product development lifecycle, it can contribute to costs savings and improved customer satisfaction as well as improved sales. As Villa et al. (2018) showed, the most significant benefits are linked to the competitive environment instead of cost-efficiency. Additional other benefits that have been reported include improved sales and capability to compete in the marketplace, as well as improved customer service and customer base.

Turban et al. (2008) also found e-commerce to benefit small enterprises by increasing their capacity to communicate with their suppliers, customers, and competitors to the same extent as the larger enterprises. This improved capability contributes to an improved capability to

compete more flexibly. In a related study, Stockdale and Standing (2004) affirmed that since the size of firms is a factor, the small enterprises tend to be highly adaptable to the varying conditions and to increase speed and flexibility promised by e-commerce. Small enterprises are primarily motivated with the need to realise tangible benefits such as cost savings instead of the long-term one like improved reputation (Duan 2011). The explanation of the author is that even if e-commerce leads to some intangible benefits for the small business, these perceived benefits are far below the initial expectations (Duan 2011).

Barriers for e-commerce adoption in small companies

As Chitura, et al. (2008) elaborate, small enterprises experience greater barriers to finding e-commerce solutions compared to the larger enterprises. Firms should, as a result, determine the risks and benefits of implementing e-commerce. Additionally, their new strategies require significant transformations in virtually all areas of their businesses (Rowe et al., 2012). Whenever the plan is not in line with the overall organizational mission, the result may be catastrophic, as poor customer experience may lead to low returns on investments. The risk for small businesses is specifically higher given that they suffer from lack of capital resources and technical knowhow. Other challenges are linked to security problems, which are linked to making of orders and delays in orders (Chitura et al., 2008). On the other hand, barriers to adopting e-commerce are vast, although they differ in both small and large enterprises. Among the major macroeconomic barriers includes a lack of innovation culture. Because of inadequate rewards from the marketplace, enterprises are less motivated to introduce innovation. Additionally, Stockdale & Standing (2004) confirmed that small enterprises operate in environments that do not encourage innovation and development of e-commerce strategy. Similarly, e-commerce may not be relevant to the business (Ivanov, 2012). Another major barrier includes inadequate knowledge and skills in the organization and poor access to financial capital.

Across the research, other barriers that have been identified include reluctance by the executive management to adopt a new strategy (Chitura, et al., 2008). This is particularly the case for smaller enterprises where decision-making is concentrated on the owner-managers and their knowledge of the relevance of e-commerce to their businesses (Chitura, et al., 2008; Duan 2012). Garg and Choeu (2015) also showed that small enterprises are ill-prepared for the adoption of e-commerce. This is because small businesses make inadequate planning process and miscalculate the technological advancements and the complex nature of the adoption process (Garg and Choeu, 2015). Poor business strategy is another barrier identified by Arendt (2008). Firms that look forward to adapting their strategy failed to ultimately transition to a relationship-oriented strategy. Apparently, a relation-oriented strategy is vital for e-commerce success (Chitura, et al., 2008).

Cyber-security risk is another major barrier to adopting e-commerce. This can be identified from the tendency of small firms to be more visible online, which exposes them to risks for cyber attack. Garg and Choeu (2015) affirmed that small enterprises that feared for their privacy are reluctant to adopt e-commerce owing to security concerns. This has a potential to have a negative effect on an enterprise's internal business environment in terms of restricting or terminating its potential to adopt e-commerce in the early stages of their creation (Sila, 2013; 2015).

The effects of e-commerce on SMEs

Across the research, it is evident that the effects of e-commerce on SMEs are significant. The marketplace differs in a global world, as more firms start to understand the significance of implementing electronic technology to improve their performance. Simultaneously, it is increasingly becoming clear that e-commerce is incapable of changing the business besides being a complementary tool for supplementing the overall strategy and enhancing organizational performance (Garg and Choeu, 2015). The primary issue for SMEs remains overcoming the barriers and realising the benefits of e-commerce. Yet, there are some studies that have indicated that this may be a slow process that lacks universal remedies (Sila, 2013). Owing to the diverse driving force for e-commerce adoption, SMEs may be exposed to differing barriers. Some of these barriers are widespread and include lack of knowledge and skills. On the other hand, others are unique and depend on the nature of the organization, such as a lack of long-term business strategy (Villa et al. 2018). Yet, the realization of prospective benefits may be attained in the long-term. Indeed, Garg and Choeu (2015) suggest that SMEs may lack sufficient knowledge of all the likely benefits, leading them to concentrate on short-term benefits of improving their sales revenue. Yet, knowledge is significant. As Stockdale and Standing (2004) also argued, e-commerce offer an attractive prerequisite for long-term growth, particularly businesses that seek to go global. In case the benefits are not experienced, the effect of e-commerce on organizational performance may not be positive.

3. Methodology

In this research, a qualitative research method was undertaken, particularly as both primary and secondary data had to be used. The rationale for using qualitative method is built on the idea that human factor in SMEs is very significant for strategic decisions. Accordingly, by approaching individuals who have the decision-making power in organization through interviews, obtaining pertinent information to answer to the research questions was feasible. Additionally, the purpose of this research is to provide the description of e-commerce adoption phenomena instead of confirming or rejecting hypothesis. Hence, qualitative method seemed to be appropriate (Yin, 1984). A qualitative method also provides a greater level of flexibility,

making it appropriate for this study. In line with a qualitative research method, interviews were conducted instead of using a questionnaire survey (Flick, 2014; Mariotto et al., 2012; Mason, 2002). Additionally, findings from secondary data sources were taken into consideration.

In this research, a decision was made to use abductive method. It is essentially a blend of inductive and deductive reason. The method was found to be appropriate for this study as e-commerce has been studied at length and some theoretical frameworks have been developed. An abductive approach can improve the interpretation of a phenomena a particular theoretical framework as well as to determine whether there is a new perspective (Bryman & Bell, 2007; Gill & Johnson, 2010; Saunders and Lewis, 2012). In addition, the new insights regarding the effects of e-commerce can be effectively explored and understood. In using this approach, the case offers acceptable, yet unnecessary logically assumptions whereby a phenomenon is linked to rule and provides new insights on a research problem (Creswell, 2002; Saunders et al., 2015). Accordingly, for this research, a review of the literature is initially undertaken prior to carrying out an observation and presenting the results. Later, the facts are collated and extrapolated before being compared to reviewed literature with the view of answering proposed research questions more exhaustively.

Multiple secondary data sources were applied in this research, including journals, articles, statistics from research reports, and corporate reports and websites. A review of secondary data was undertaken prior to collecting primary data (Mariotto et al., 2012; Onwuegbuzie et al., 2012). Primary data was collected using telephone interviews with three selected fashion start-ups or SMEs. Musinsa, D.Code and Balaan. Founded in 2001, Musinsa is a small enterprise that sells fashion wear, particularly shoes on its websites Store.musinsa.com. D.Code also deals in the sale of luxury fashion wear in department stores and its website F6s.com. Balaan is also a fashion startup that deals in the sale of luxury fashion wear through its website Balaan.co.kr.

Semi-structured interviews provided means to collect important data essential for answering the research questions, particular as they made it possible to probe the participants for more clarity (Saunders et al., 2009). In this research, six interviews were performed among three fashion start-ups in South Korea. Four of the interviews – for the case of .Code and Balaan - were undertaken by telephone, while the remaining was carried out through face-to-face interviews with participants from Musinsa. The interviews took 30-40 minutes long. The responses were recorded prior to being transcribed to avoid losing valuable data, and allowing for additional thorough examination. Since an abductive approach was applied in this research, the theoretical framework and findings of were interlinked by going to theory, data, and analysis back and forth. For this reason, Musinsa will be called Company A, Balaan will be Company B, while D.Code will be referred as Company C.

4. Results

Reasons for e-commerce development during the Covid-19 pandemic

All the three fashion start-ups that were targeted in the study have e-commerce websites: Balaan.co.kr (Balaan), F6s.com (d.code), and Store.musinsa.com (Musinsa). The websites are used for publishing information on their products. The companies also used the internet to promote their products. The companies also use the internet to send electronic invoices and to share sales and inventory information across the organization. Their e-commerce sites allow for online ordering and payments. The companies selected also have web-shops, which they use to display their products and to allow their customers to make orders. Customers can also make online payments using credit cards or mobile payment methods.

As evident from the participants' responses, the main force behind the adoption and development of e-commerce at Company A is the company's founder and chief executive. Apparently, e-commerce became adopted as a consequence of his visions and innovative idea. He made the decision to adopt advanced technologies with the view of cutting costs and improving efficiency during the Covid-19 pandemic. As Participant A explained:

"The CEO decided that it was time to adopt e-commerce after the Coronavirus outbreak, to cut costs and improve efficiencies. Basically, the whole idea was his. He told us that he strongly believed that starting an e-commerce business would allow us to realise our cost-efficiency goals and to be more competitive by appealing to more customers whose movements were restricted during the pandemic but could still make online order."

Clearly, Participant A reveals that while the CEO was the force behind the adoption of e-commerce, the market conditions at the time of the Covid-19 pandemic favoured the adoption of the technology. As movements were restricted as part of the measure to control the pandemic, more customers were forced to make online orders. Hence, both competitiveness and cost-efficiency factors proved to be essential in motivating the adoption of e-commerce. For Company B, Participant E also reveals that competitiveness, and time and cost-efficiency motivated the adoption of e-commerce.

"The sales and marketing team was fully aware of the need for change during the pandemic. We strongly believed that e-commerce would cut the time for sending and receiving orders. We also hoped to be more competitive."

Clearly, Company A and Company B adopted e-commerce for similar reasons. As emerging from Participant B, e-commerce was primarily expected to improve the company's competitiveness. His statement reveals that during the pandemic, e-commerce would cut

their cost of marketing and communication expenses as they maintain an extensive distributor network across South Korea. Company C also adopted e-commerce motivated by cost-efficiency and competitive factors.

"We saw having a web-shop as very crucial for saving time and cutting costs during the pandemic. We did not have the knowledge on how to run an e-commerce business, but we found it necessary to maintain and improve our sales revenue."

From Participant C's statement, it appears that SMEs were forced to adopt e-commerce businesses to improve their sales revenues at a time when governments restricted movement during the pandemic. Essentially, e-commerce was viewed as a tool for ensuring efficiencies in deliveries orders to customers.

The impact of e-commerce on marketing

Participant A states that Company A failed to change its marketing strategy even after adopting e-commerce.

"I don't think we changed our marketing strategy even after we started focusing our energies on e-commerce. We were mainly using internet for marketing. We still continued using internet marketing, so nothing changed. We still could use the internet to inform our customers of our e-commerce website."

The company's decision to stick to its traditional marketing strategy may have clearly been based on the idea that e-commerce is essentially based on the internet. Most potential customers would focus on searching the internet during the pandemic use of internet for advertisement proved to be essential for informing customers on how to locate the product. The same could be said for Company B. According to Participant B, while e-commerce assisted them to improve their revenues from sales during the pandemic, their marketing strategy remained intact.

"I don't think there was much to be done. We had to cut costs during the pandemic, so our marketing spending was limited. Despite taking our business online, we decided not to change any of our old marketing strategies."

Participant F's statement reveals that market conditions enabled by Covid-19 pandemic, such as a trend in which customers were forced to use the internet, saved e-commerce businesses from engaging new market strategies. Indeed, as more consumers were forced to go online during the pandemic, we expected online ordering from our e-commerce site to be high. We decided to offer extensive information to our customers through our social media platforms and websites. Only Company C changed its market strategy. A number of explanations are provided for this.

"Since we had taken our business to another level, we had to change some aspects of our marketing strategy. We started by changing our vision and mission statement as e-commerce had offered us new

opportunities. We had to redesign our website to use internet banner, intensify our social media marketing, and even change our logo."

It appears from Participant C that e-commerce has necessitated significant changes in Company C's long-term strategy. Incidentally, the company had earlier not invested in internet market strategies. The necessity to appeal to customers on the internet forced it to change adopt and intensify internet market strategies and to rebuild its image in order to appeal to a new customer base online. From the participants' responses, it becomes certain that in addition to adopting e-commerce to optimise their product lines, SMEs adopt e-commerce to benefit from the prospects of putting their products in web shops to appeal to online customer. This became a necessity during the Covid-19 pandemic when e-commerce gained popularity as a means to bypassing social distancing protocols that limited the business potential of physical brick-and-mortar stores.

Additionally, it becomes clear that SMEs advertisement activities were largely shaped by the growing e-commerce wave during the Covid-19 pandemic. This enabled them to reduce their spending on marketing and to depend on social media marketing, which is based on the internet incidentally. In turn, e-commerce enabled the firm to strengthen their customers based in spite of the pandemic, even as their price strategy remained intact.

Benefits of e-commerce to SMEs during the pandemic

Participant A explains that the main benefits of e-commerce thus far has involved greater convenience and ease for their customers.

"As we had expected, e-commerce has provided us with an added potential to improve our capacity to communicate with our customers and partners, leading to a greater level of intimacy or even proximity."

From the statement, one clear advantage of e-commerce is the enhanced capacity for businesses to improve their communicative capacity, which enables them to improve their relationship with their customers. This became essential during the pandemic when businesses were forced to interact more with their customers. According to Participant B, e-commerce enabled Company B to find new customers. This benefit appears to have been shared by all the companies studied, as the need to find new customers or maintain the old ones served as a clear motivating factor for adopting e-commerce technology.

"The information we provided on our websites and product information helped us to find new customers. Through social media, they could share the information to obtain more customers."

Participant B's statement shows that e-commerce sites capacity to enable sharing of information and to display product information played a crucial role in enabling SMEs in South Korea to promote their products to customers. A related perspective is provided by Participant C. He stated.

“We found it possible through e-commerce to cut advertisement costs.”

It is plausible to argue from Participant A and Participant B's statement that e-commerce's key advantage was that it enabled the companies to facilitate word-of-mouth advertisement, which in turn cut the cost for advertisement. This enabled the SMEs to cut the costs of reaching and informing customers through exhibitions, catalogues, and even printed catalogues. Companies managed to cut their advertisement budget.

Barriers to e-commerce adoption

Among the participants, cost factor is a major barrier to the adoption of e-commerce. According to Participant A, they were forced to invest substantially in technologies and software, as well as a well-established logistics team. This has limited their business potential, including that of operating across the border. Participant B views their main barrier as related to making card payments.

“While we have occasionally accepted payments using foreign cards, it is often too costly and risky.”

On the other hand, Participant C drew attention to knowledge as being a significant barrier to e-commerce adoption.

“We lacked a capable ICT team to set up the technology. But, this was not all, we had never run an e-commerce business. Therefore, implementing the technology all over sudden in response to the pandemic was a challenge.”

Clearly, Participant C seems to understand that while they were aware of the necessity for in-house knowledge on e-commerce. This was essential, as effective implementation of e-commerce called for investment in knowledge resources to facilitate its take-off.

5. Discussion

All the research objectives were met. This included exploring the reasons for e-commerce adoption and development during the Covid-19 pandemic, analysing the impact of e-commerce on SMEs' marketing strategies during the pandemic, exploring the benefits of e-commerce to SMEs during the pandemic, and determining the barriers to e-commerce adoption during the pandemic.

Regarding the reasons for e-commerce development by SMEs, it appears from the participants' responses that one of the underlying motivations for e-commerce adoption was to cut costs, improve efficiency and become more competitive by drawing in customers whose movements were restricted during the pandemic but could still engage in online shopping. E-commerce was expected to the cost of marketing and communication and to help maintain an extensive distributor network across South Korea. A key change agent for adoption of e-commerce was the executive management. In return, they necessitated speedy adoption of e-commerce at the time of the Covid-19 pandemic when

market conditions favoured the adoption of the technology. Since lockdown measures to curb the pandemic restricted movement to public places and customers in had to comply with social-distancing measures, online shopping gained remarkable popularity. Accordingly, both competitiveness and cost-efficiency factors proved essential in motivating the adoption of e-commerce. Participants' responses also clarify that the need for competitiveness and the necessity to realize time-efficiency and cost-efficiency goals also motivated the adoption of e-commerce. Across the participants' responses, it can be inferred that SMEs were strongly aware of the need for change during the pandemic even as customers expected businesses to be more inventive by adopting technology to overcome inhibitions caused by the Covid-19 pandemic. Consistent with these findings, studies have showed that the motivating force for adopting e-commerce was to increase revenues. For such firms, commerce was beneficial in terms of improving the performance in two fundamental ways: This include ensuring increased customer base and sales revenues, and reducing the cost of doing business (Ivanov, 2012; Walker et al., 2016). Studies have also showed that factors that drive the adoption of e-commerce can be split into two key categories. These include the drive for competitiveness, and the drive for cost-efficiency (Brand and Huizingh (2008).

A number of observations are also made regarding the impact of e-commerce on marketing. It develops that in addition to adopting e-commerce to optimise their product lines, SMEs also looked to benefit from the prospects of putting their products in web shops to appeal to online customer. SMEs advertisement activities were also largely shaped by the growing e-commerce wave during the Covid-19 pandemic. Some SMEs that had traditionally used internet marketing maintain their marketing strategies, basically since e-commerce is based on the internet. While e-commerce helped to improve sales revenues for such firms, during the pandemic, their marketing strategy remained unchanged. Indeed, since consumers were forced to stay indoors and could as a result spend their time surfing the internet, SMEs cut their costs of marketing by resorting to the relatively cost-friendly forms of internet marketing and social media marketing strategies. Still, this did not stop such firms from redesigning their websites, installing new internet banners, and intensifying their social media marketing. Previous research divided the advantages of e-commerce to enterprises into tangible and intangible. Tangible benefits are related to increased sales, reduced cost, and expansion of market (Duan, 2011; Stockdale and Standing, 2004).

Participants' responses also indicate that adoption of e-commerce proved to be opportune for SMEs during the pandemic. Indeed, some of the most visible benefits of e-commerce to SMEs, as highlight by the participants, included greater convenience, and ease for their customers. SMEs also acquired an extra potential to improve their market power with our customers and partners, leading to a greater level of intimacy or even proximity. This was critical during the pandemic when relationship-building turned out

to be critical for a sustained business during the pandemic when businesses were forced to interact more with their customers.

Additionally, e-commerce enabled SMEs to benefit from word-of-mouth advertisement, which in turn cut the cost for advertisement. SMEs also benefitted from finding newer customers beyond their traditional brick-and-mortar customers. Besides, the capacity for e-commerce to enable information-sharing online and display of products on the internet made it possible to reach out to more potential customers.

However, SMEs also encountered a number of barriers to adopting e-commerce. Cost factor was commonly mentioned to be a major barrier to the adoption of e-commerce. The SMEs has to make significant investment in technologies and well-established logistics team. Another cost-related disadvantage was that of making card payments. As the firms occasionally accepted payments using foreign cards, this proved to be costly and risky (Chitura, et al., 2008; Duan 2012). Knowledge gaps also remained a major challenge for SMEs. Besides lacking a capable ICT team to set up e-commerce business, knowledge of implementing the business was another barrier, forcing them to invest substantially in knowledge resources to facilitate e-commerce take-off. In an earlier research, Garg and Choeu (2015) had also showed that small enterprises are ill-prepared for the adoption of e-commerce. This is because small businesses make inadequate planning process and miscalculate the technological advancements and the complex nature of the adoption process (Garg and Choeu, 2015).

6. Conclusions

During the Covid-19 pandemic, e-commerce provided innovative means to SMEs in South Korea to conduct business. It provided businesses with a significant amount of information, increased speed of the transactions, reduced costs of doing business, and forced businesses to change their marketing strategies. The primary rationale for implementing an e-commerce strategy differed among South Korean firms. In relatively big firms, the primary motive for adopting e-commerce was to improve efficiency in their internal processes. On the other hand, the smaller firms were more interested in improving their competitiveness. Still, successful implementation of e-commerce tended to be a lethargic process that could not be completed at one occasion. Instead, small progressions of adoption processes where the firms moved gradually from being simplistic in their approaches to adopting highly complex stages of e-commerce.

The drive for competitiveness and cost-efficiency proved essential in motivating the adoption of e-commerce. Essentially, e-commerce proved to be beneficial in terms of improving the performance in two fundamental ways: ensuring increased customer base and sales revenues, and

reducing the cost of doing business. While e-commerce helped to improve sales revenues for SMEs during the pandemic, their marketing strategy remained unchanged. Indeed, since consumers were forced to stay indoors and could as a result spend their time surfing the internet, SMEs cut their costs of marketing by resorting to the relatively cost-friendly forms of internet marketing and social media marketing strategies. Still, this did not stop such firms from redesigning their websites, installing new internet banners, and intensifying their social media marketing. SMEs advertisement activities were also largely shaped by the growing e-commerce wave during the Covid-19 pandemic. However, SMEs also encountered a number of barriers to adopting e-commerce. Cost factor was commonly mentioned to be a major barrier to the adoption of e-commerce. Knowledge gaps also dominated as a challenge to e-commerce adoption.

7. Recommendations

Three key recommendations are made:

Effective implementation of e-commerce calls for investment in knowledge resources to facilitate its take-off. Therefore, SMEs should invest competent ICT personnel to support their entry into e-commerce business.

SMEs that venture into e-commerce business should also make significant investment in relationship management technologies, such as customer relationship management software and social media marketing, to boost their interaction with customers.

SMEs should also set up payment systems that are highly convenient to online shoppers, yet extremely safe to the degree that it can help a company to build trust with customers by averting risks to loss of money or inability to track payments.

8. Research Limitations and Future Research

This research has its limitations. A major shortcoming is the small number of interviewed companies, which implies that the results are not necessarily generalizable, or be taken as representative for all SMEs in South Korea. The results are also greater dependent on investigator representation, which means that the research was exposed to researcher bias, making the ability to reproduce these results questionable. Additionally, this research had a limited scope, as it does not investigate the differences between industries in South Korea. The case companies had recently adopted e-commerce during Covid-19 pandemic. Hence, this study failed to analyse the motivating factors for adopting e-commerce and associated barriers from the perspective of SMEs that decided not to adopt e-commerce. It is recommended that future studies should make a comparison of the reasons why some SMEs decided to adopt

e-commerce and others failed to do so. Future studies could also focus on different industries to find out whether motivations for e-commerce adoption differ depending on the industry.

REFERENCES

- [1] Brand, M. & Huizingh, E. (2008). Into the drivers of innovation adoption. *European Journal of Innovation Management*, 11(1), 5-24.
- [2] Bryman, A. & Bell, E. (2007). *Business research methods*. Oxford: Oxford University Press.
- [3] Chitura, T., Shepherd, M. & Dube, T. (2008). Barriers to electronic commerce adoption in small and medium enterprises: A critical literature review. *Journal of Internet Banking and Commerce*, 13(2), 1-13.
- [4] Chong, S. (2008). Success in electronic commerce Implementation, A crosscountry study of small and medium-sized enterprises, *Journal of Enterprise Information Management*, 21(5), 468-492.
- [5] Creswell, J. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA.: SAGE Publications.
- [6] Creswell, J. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Merrill Prentice Hall.
- [7] Digital Commerce (2020). *Coronavirus dramatically changed consumer behavior in March and April*. Retrieved 20 Feb 2021, from: <https://www.digitalcommerce360.com/2020/05/26/coronavirus-dramatically-changed-consumer-behavior-in-march-and-april/>.
- [8] Duan, X. (2012). Evaluating the critical determinants for adopting e-market in Australian small-and medium sized enterprises. *Management Research Review*, 35(3-4), 289-308.
- [9] Eriksson, T., Matheson, K., Pitt, L., Plangger, K. Robson, K. (2019). E-Commerce in South Korea: A Canadian perspective. *Asia Pacific Foundation of Canada*. Retrieved 20 Feb 2021, from: https://www.asiapacific.ca/sites/default/files/filefield/south_korea_e-commerce_report.pdf.
- [10] Evans, P. & Wurster, T.S. (1999). Getting real about virtual commerce. *Harvard Business Review*, November-December 1999, pp. 84-94.
- [11] Flick, U. (2014). *An introduction to qualitative research*. Los Angeles: SAGE Publications.
- [12] Garg, A. & Choeu, T. (2015). The adoption of electronic commerce by small and medium enterprises in Pretoria East. *Electronic Journal of Information Systems in Developing Countries*, 68(1), 1-23. DOI: 10.1002/j.1681-4835.2015.tb00493.x.
- [13] Gavin, R., Harrison, L., Plotkin, C., Spillecke, D. & Stanley, J. (2020). The B2B digital inflection point: How sales have changed during COVID-19. *McKinsey & Company*. Retrieved 20 Feb 2021, from: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/the-b2b-digital-inflection-point-how-sales-have-changed-during-covid-19>.
- [14] Gill, J. & Johnson, P. (2010). *Research methods for managers*. Los Angeles, CA: Sage.
- [15] Global Data (2020). COVID-19 accelerates e-commerce growth in South Korea, says GlobalData. Retrieved 20 Feb 2021, from: <https://www.globaldata.com/covid-19-accelerate-s-e-commerce-growth-south-korea-says-globaldata/>.
- [16] Ivanov, D. (2012). *The impact of e-commerce on small-size companies in Sweden*. [Unpublished Master's Thesis] Karlstad Business School.
- [17] Kim, M. (2016). Korea's E-commerce exports to china: direction for corporate strategy and government policy, KDI Focus, No. 64, Korea Development Institute (KDI), Sejong. Retrieved 20 Feb 2021, from: <https://www.econstor.eu/bitstream/10419/200864/1/kdi-focus-64.pdf>.
- [18] Lee, J. (2020). The South Koreans left behind in a contact-free society. *BBC Work Life*. Retrieved 20 Feb 2021, from: <https://www.bbc.com/worklife/article/20200803-south-korea-contact-free-untact-society-after-coronavirus>.
- [19] Mariotto, F., Zanni, P., Salati, G. (2012). What is the use of a single-case study in management research?. *Revista de Administração de Empresas*, 4(4), 358-369.
- [20] Mason, J. (2002). *Qualitative researching*, 2nd edn. Thousand Oaks, CA: Sage Publications.
- [21] Miles, M. & Huberman, M., 1994. *Qualitative data analysis: an expanded sourcebook*. Newbury Park, Sage.
- [22] Mu-Hyun, C. (2020). Korea sees steep rise in online shopping during COVID-19 pandemic. *ZDNet*. Retrieved 20 Feb 2021, from: <https://www.zdnet.com/article/korea-sees-steep-rise-in-online-shopping-during-covid-19-pandemic/>.
- [23] OECD. (2000). Enhancing the competitiveness of smes in the global economy: strategies and policies. *Conference for Ministers responsible for SMEs and Industry Ministers*, Bologna, Italy, 14-15 June 2000.
- [24] Onwuegbuzie, A., Leech, N., & Collins, K. (2012). Qualitative analysis techniques for the review of the literature. *The Qualitative Report*, 17(56), 1-28.
- [25] Rainer, K. & Cegielski, C. (2011). *Introduction to information systems: Enabling and transforming business*. New York: John Wiley & Sons Inc.
- [26] Rowe, F., Truex, D. & Mhuynh, M. et al. (2012). An empirical study of determinants of e-commerce adoption in SMEs in Vietnam: An economy in transition. *Journal of Global Information Management*, 20(3), 23-54.
- [27] Saunders, M. & Lewis, P. (2012). *Doing research in business and management*. Harlow, Essex: Financial Times Prentice Hall.
- [28] Saunders, M., Lewis, P. & Thornhill, A. (2009). *Research methods for business students*. Harlow: Pearson Education.
- [29] Saunders, M., Lewis, P., & Thornhill, A. (2015). *Research methods for business students*. New York: Pearson Education.
- [30] Schneider, G. (2011). *Electronic commerce*. New York: World Scientific Publishing Co.
- [31] Sila, I. (2013). Factors affecting the adoption of B2B

- e-commerce technologies. *Electronic Commerce Research*, 13(2), 199-236.
- [32] Sila, I. (2015). The state of empirical research on the adoption and diffusion of business-to-business e-commerce. *International Journal of Electronic Business*, 12(3), 258-301.
- [33] Stockdale, R. & Standing, C. (2004). Benefits and barriers of electronic marketplace participation: an SME perspective. *The Journal of Enterprise Information Management*, 17(4), 301–311.
- [34] Turban, E., Lee, J., King, D., McKay, J., Marshall, P. & Viehland, D. (2008). *Electronic commerce – a managerial perspective*. New York: Prentice Hall.
- [35] UNCTAD (2020). *COVID-19 has changed online shopping forever, survey shows*. Retrieved 20 Feb 2021, from: <https://unctad.org/news/covid-19-has-changed-online-shopping-forever-survey-shows>.
- [36] Villa, E., Ruiz, L., Valencia, A. & Picon, E. (2018). Electronic commerce: Factors involved in its adoption from a bibliometric analysis. *J. Theor. Appl. Electron. Commer. Res.*, 13(1), 1. <http://dx.doi.org/10.4067/S0718-18762018000100104>.
- [37] Walker, M., Saffu J. & Mazurek, K. (2016). An empirical study of factors influencing e-commerce adoption / non-adoption in Slovakian SMEs. *Journal of Internet Commerce*, 15(3), 189-213.
- [38] Whitelaw, S., Mamas, M., Topol, E. & Spall, H. (2020). Applications of digital technology in COVID-19 pandemic planning and response. *The Lancet: Digital Health*, 2(8), 435-440.
- [39] World Trade Organization (2020). *E-Commerce, trade and the Covid-19 pandemic*. Retrieved 20 Feb 2021, from: https://www.wto.org/english/tratop_e/covid19_e/e-commerce_report_e.pdf.
- [40] Xu, J. & Quaddus, M. (2009). *E-Business in the 21st Century: Realities, Challenges and Outlook*. SGP: World Scientific Publishing Co.
- [41] Yin, R. (1984). *Case study research: design and methods*. London: Sage Publications.