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Business model innovation in post-pandemic economies

Jin young Hwang *

University of Edinburgh MA Social Policy and Economics, United Kingdom.

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Abstract

The COVID-19 pandemic has created a new lens on economies especially the SMEs in emerging markets. These businesses have struggled for example through changes in customer palate, supply chain shocks, financial constraints amidst limited access to both capital and technology. In response, many SMEs have embarked on Business Model Innovation (BMI) which involves redesigning a firm's value proposition and delivery logics in order to adapt to the new post-pandemic reality. This change very much entails embracing technological tools that will enable the business to continue running and responding to customers' needs accordingly. However, there are challenges associated with this shift especially to SMEs most of which includes provide of funds, managerial skills and market risks. SMEs therefore need to acquire dynamic capabilities which enhance their operational capabilities to deal with external change. The purpose of this research is to analyse the way in which BMI has been adopted by SMEs in emerging markets, to secure business sustainability and competitiveness under the conditions created by the COVID-19 proliferation and its impact. Through assessing the practices like digitalization, customer relationship management and product differentiation the study aims to determine appropriate management solutions that can allow SME endure in the modern era typified by frequent global integration. The results should offer significant information to authorities and managers aiming to help SMEs improve their stability and development despite further economic risks.

Keywords: Business Model Innovation; SMEs; Emerging Markets; Digital Transformation; Post-Pandemic Economy; Competitive Advantage

1. Introduction

The COVID-19 has shaken the whole world economy and disrupted the business environment profoundly, especially affecting small and medium-sized enterprises (SMEs) in emerging markets. COVID-19 has posed exceptional challenges to SMEs which constitute a major part of the GDP and employment globally, changes in consumer habits, supply chain disruptions and financial pressure. In emerging markets, these challenges have been magnified by attributes like restricted financial capital, unfavourable technology platforms, and inadequate sublime frameworks (Li et al., 2022). These conditions have proposed a threatening scenario of massive business shut down, income loss and great contraction in the economy and thus many SMEs have been compelled to reconsider their business strategic models in relation to a highly dynamic environment.

These disruptions have forced managers and entrepreneurs to embrace BMI as the cornerstone of SMEs' survival and development in the post COVID-19 world. BMI can be defined as the act of creating, modifying or reconfiguring a business model with a view of generating new worth, addressing new opportunities, and increasing the firm's competitiveness (Clauss, 2022). Thus, due to the emergence of COVID-19, SMEs had to evolve new business models as the primary strategy for coping with the new challenges and staying relevant on the market, by introducing new technologies into the business processes, changing organizational forms, and shifting value propositions. This

* Corresponding author: Jin young Hwang

transformation has been evident more especially when organizations have tried to respond to changes that are shaping the customers, the market and technology respectively.

The pandemic has influenced the change process of digitalization as it has already happened before the crisis but becomes unexpected fast during the crisis. Current technological tools are unavoidable by SMEs since they allow business to continue electronically through e-business, working from home, online selling and various advertisement tools (Klein & Todesco, 2021). These technologies that have been adopted by SMEs in emerging markets have not only allow them to manage disruptions in the short term, but have also made them modified on the long term by having to redesign their strategies according to a world that is becoming more digital and globalized.

1.1. Problem Statement

The pandemic contingency forced SMEs in emerging markets to adapt to a new business scenario specific to post pandemic. Although most industries have started shifting their paradigms in the digital direction currently, there are still many barriers. SMEs still struggle with issues of limited funding, managers' lack of digital skills, and new markets vulnerabilities. These challenges are made worse by fluctuating economic environments, changing legal frameworks, and trust deficit and demand deterioration. To be sustainable, the SME business models must address the imposed external forces with corresponding strategies in addition to the emerging suitable opportunities. The issue of business model innovation becomes pertinent in SMEs primarily because the existing business models do not seem to be robust enough to cope with the changes resulting from the pandemic. Growth of new concepts such as consumerism, technology and new markets entrants mean that it is high time SMEs to reform how they do business, what they offer and how they sell it. Innovating the business model can act as a solution for these challenges, for instance, we argue that allows SMEs to adjust quickly, search for new sources of revenue, and increase their preparedness for future shocks.

1.2. Research Aims and Objectives

This study intends to examine the adaptations of SMEs established in emerging markets to the COVID-19 crisis consequences by implementing business model innovations. More specifically, the study aims to understand how these enterprises have realigned their strategic networks to realize business continuity and competitiveness in the context of a post-COVID-19 economy. The objectives of this research are twofold:

- In order to examine small and medium enterprises emerging markets' innovation adaptation to COVID-19 disruptions.
- For the purpose of uncovering important approaches practiced by SMEs to sustain their competitiveness and viability in the current unstable economic environment like digitalisation, change in customer relations or diversification of their offerings.
- 1.3 Research Questions
- To achieve the research objectives, the study will address the following research questions:
- What strategies have emerged market SMEs developed in order to manage their business strategies in the light of the COVID-19 pandemic?
- Where does digital technology stand concerning Business Model Innovation in these markets for SMEs?
- What role has the changing nature of customer demand played in enhancing the development of innovation for SMEs?
- What does the balance of opportunity and threat look like for SMEs when they are experiencing the difficult task of innovating their business models in the context after the pandemic?

The following questions will help to shape the research by specifically looking at the effects of digital transformation on business models, changes in consumers' demand and business model innovation in the emerging markets context.

1.3. Significance of the Study

This study will expand the existing literature that looks at business model innovation especially among the SMEs in the emerging economy. It will be useful to know how these businesses function in the new post-pandemic economic reality and will bring additional and expanded understanding of the strategies and instruments that such businesses have been using to adapt and succeed. Since the study will be centered on SMEs, it will be instrumental in raising awareness of the functions that these kinds of enterprises perform in reviving and developing the economy of the emerging economies.

In policy and management terms, the findings of this study have clear real-world implications for policy makers and SME owners. This information can inform development of more effective support mechanisms for SMEs, policies supportive of innovation, as well as, enabling digital solutions and market penetration. The SME owners and managers

would find it useful in understanding the knowledge on innovations in business model strategies to enable them to weigh their options on how they could evolve to comply with the rapidly changing market situation and new technologies. Finally, it is envisaged that this research will offer a clear strategy for SMEs in emerging markets to develop strong and competitive organizations in the era of COVID-19 and beyond.

2. Literature Review

2.1. Business Model Innovation (BMI)

BMI is the definition as to the creation or redesigning of the business model with regards to delivering new value, improving competitive position and as a response to market changes. The knowledge of how a business is built, sustained and generates revenue is known as the business model, while innovation is critical within the space as it defines the means by which a business can effectively adapt to change over the long-term based on outside forces such as high technology landscapes, market shifts or unprecedented events the globe experienced such as the COVID-19 pandemic.

BMI is a key determinant of business survival and growth since it helps organizations to manage change stimulus such as changes in customers taste, technological changes as well as changes in the economy. If a company does not update its business model it will become irrelevant while those that continually improve their models can achieve competitive advantage, create new sources of revenue and increase robustness (Geissdoerfer et al., 2020). However, it is important to note that following the pandemic, BMI is needed even more due to the unique need for business to adapt to the unprecedented rate of digital change and consumer expectations.

There are several frameworks that can offer a good understanding how BMI works and its link to competitive advantage. One of the most influential frameworks is Osterwalder's Business Model Canvas (BMC), which divides a business model into nine building blocks: they include; key partners, key activities, value proposition, customer interactions, customer groups, channels of distribution, key resources, cost model, and revenue streams (Ferlito & Faraci, 2022). The BMC is employed extensively to understand and redesign business models because it provides a logical, systemic framework for assessing a business and its value proposition.

Another important theory is Teece's Dynamic Capabilities theory that was introduced to extend the Codification view and study an organization's ability to sense its environment, to seize opportunities and then to reconfigure existing capabilities. Teece claims that when there is threat or pressure from the outside environment, only businesses with powerful dynamic capabilities are best placed to make necessary changes by creating more value through formulating new business models. In the context of the SMEs in emerging markets after the pandemic, dynamic capabilities embrace the need to innovate business models at high speeds due to changing markets and technologies.

Literature review reveals significant relationship between BMI and organizational performance and organizational resilience. It also facilitates establishment of new business models that enable the firm to cultivate a niche market within the existing competition, and obtain sources of revenue from diverse aspects (Granig & Hilgarter, 2020). BMI thus increases competitiveness for SMEs in emerging markets through its ability to provide services that can help firms to respond to conditions in the local market including low and volatile demand and economic instability. Moreover, BMI enhances organisational resistance because it allows companies to bounce back much faster from such disturbances as the economic downturn caused by the COVID-19 outbreak.

2.2. SMEs in Emerging Markets

SMEs as the abbreviation suggests, refers to businesses that hire a limited number of employees, and it is annually recognized that financial and organizational capabilities of SMEs are generally inferior to those of large companies. Having outlined the characteristics of emerging markets we identified that the major concerns affecting SMEs include; resource constraints, lack of access to capital and constraints within infrastructure. Such firms face weaknesses in that they possess a small managerial capability, a relatively low technological base, and poor exposure to foreign markets (Granig & Hilgarter, 2020). However, they are flexible organisations and can maneuver around certain constraints which empower them to come up with new ways of penetrating the market.

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they possess a small managerial capability, a relatively low technological base, and poor exposure to foreign markets. However, they are flexible organisations and can maneuver around certain constraints which empower them to come up with new ways of penetrating the market (Mugano& Dorasamy, 2024).

Using the COVID-19 pandemic as a crucial event, it is possible to reveal temporal changes in the development of emerging market SMEs. Many supply chains were a problem and there were shortages of raw materials and a delay of production. More consumers demanded such products as those affecting health and safety standards were drastically altered. The pandemic led to similar problems among SMEs as reductions in revenue threatened the solvency of many enterprises, others had to deal with governmental limitations like quarantine and travel prohibitions. In some other cases, the sudden transition meant that experts in open spaces experienced a high level of disruption, particularly SMEs located in emerging markets which lacked and/or had inadequate digital capabilities. However, the current pandemic has not left SMEs with no choice but to look at some of the opportunities that the pandemic has presented to them in the new business environment.

2.3. Impact of the COVID-19 Pandemic on Business Models

The COVID-19 impact disruption of the global economy reveals the weaknesses of the conventional business models. Cohesive industries/sectors that were previously built on conventional structures observed a considerable decline in revenue, while others adapted seamlessly to calamity business models (Gregurec,et al .,2021)) As observed in the case of the SMEs in the emerging markets, the pandemic up the dynamics of the flexibility, adaptability, and innovation of business models. The pandemic disrupted all the spheres and sectors of the global business environment. Companies struggled in supply chain management, when borders were closed, and trade around the world was limited. Furthermore, the behavioural change in the consumers was sudden and most people preferred online services, online purchases and contactless services which forced companies to reconsider their value propositions. Emerging market-based SMEs were most affected by the pandemic and the economic shocks that came with it. Most SMEs in areas like hospitality, tourism and retail faced a lot of pressure that saw them shut operations in some cases or reduce on their operations. Simultaneously, these varying SMEs started to experience raised competition from firms which were originally operating in the digital environment and thus, were capable to expand rapidly during the pandemic phase. Wages and other employment benefits were also affected these labor markets because employment and self-employment opportunities were tested and lost. Such changes brought to light the centrality of business model innovation as a way of helping firms adapt during emergent crises.

Covid-19 played a crucial role in changing the digitally adopted SME business environment. The change of direction towards online interaction, using digital monetary tools, using purchase and sale technology shifted into a necessity for firms to engage clients. To this end, most of the SMEs that used personal contact and face-to-face contact had to switch to cloud services, social networks, and online platforms to sell their products (Priyono et al., 2020). It also enabled the SMEs to sustain their operations in a virtual setting as well as expand overall opportunities for profitable activity.

2.4. Digital Technologies and Business Model Innovation

The Covid-19 pandemic accelerated the need by making digital technologies the focus of the business model innovation wave. For the SMEs, e-commerce, digital payments, remote work solutions and automation have increased optimality in operations as well as improved on customers relations (Hansen,2022). SMEs have benefited from cloud computing and big data services to structure operations, improve the customer experience, and emerge from the data. Maturity in AI and especially machine learning has led to the better practice in the areas of privacy and more personalization, as well as better predictive and analytical tools that have had a positive impact on decision making. Smartphones and sophisticated websites and use of social media have opened ways for the SMEs to touch new customers.

Emerging markets small and medium enterprises are increasingly using advanced businesses technologies such as AI and cloud computing in their business models. You still have data until October 2023, and AI-powered solutions can fulfill customer engagement, automation of repetitive tasks, and operations optimization (Schönberger, 2023). These are industry solutions that can manage SME business processes and data storage without the cost of maintaining these services locally, the cloud tools give scalable solutions. Likewise, big data analytics help organizations understand consumer behavior so they can design products and services to meet market requirements.

In SMEs, since digital transformation brings new tools, it forces them to rethink the business model structure. Optimization, lowering of costs, customer experience – the entire work is realized based on digital tools. The power of digital mediums will allow SMEs to explore new markets, diversify their products and significantly improve their resilience to any disruption in the future.

2.5. Changes in Customer Behavior and Expectations Post-Pandemic

The COVID-19 pandemic caused significant changes in consumer behavior, which have affected the market also in the post-pandemic times. The demand for more digital services — from online shopping to contactless payments and virtual consultations — has grown significantly among consumers. This has made them more health conscious and include hygiene and safety as key factors influencing their purchase decisions. Secondly there is also increased demand for quick, easy and personal services.

They also found that there was a shift in their business models that was occasioned by the new tastes of the customers. This has become relatively rampant in recent past. To compete with other competitors, the identification of shift in consumers' preference is important. New product and services innovations have made their way to the market to cater for health and safety needs, convenience, and digital experience (Qader et al., 2022). The result? In this regard, by altering their strategic profiles to reflect the consumption patterns, the small and medium-sized enterprises are prepared for longer horizons.

There is evidence that some of the SMEs have shifted their business model to enable them cash in on consumer behaviors. Physical stores can contain the spread through online sales with home delivery, and in case of returns or inquiries, the client has been able to get e-customer service. Some have adapted by offering products with a health appeal such as reusable bags or sanitation specialised merchandise. This means that based on modified customer demands, business model innovation generates new ventures and continued growth within the announced post-pandemic environment, as seen in these cases.

2.6. Opportunities and Challenges for SMEs in Emerging Markets

In this context it is clear that SME companies in emerging markets stand to benefit from the digital revolution. The first of those opportunities is about gaining access to digital markets. Thanks to the Internet, SMEs can find customers beyond local markets and use the Internet as a means of reaching them. Through Web-based marketing sole trader's E-business units are now capable of competing in local, country, and/or international markets without investing heavily in bricks and mortar structures. The consequence can be a stream of new revenues and business development. Digital market access is one of the prominent prevalent trends among the emerging market SMEs alongside subscription and platform-derived business models. The subscription model can help many such business sectors as SaaS, e-commerce, and consumer goods for SMEs because of the recurring revenue it offers. Likewise, modular and platform selling strategies that give SMEs an ability to connect buyers and sellers have a low level of operational costs and high expansiveness.

By use of these business models, SMEs is in a position to extend it services that meet the changes in consumer tastes and preferences. This promotes innovation. International expansion offers a different business prospect especially for the small and medium enterprises from the emerging countries. In the context of using the Internet, digital technologies help SMEs adapt to globally oriented markets, and even in areas unfamiliar to the company. Therefore, when selling to customers across borders it also gives an opportunity to accept cross-border digital payments and partners with companies from other countries. Amazon, Alibaba or other marketplace which are global or Jumia of the emerging markets are available for the use by SMEs in selling products on the international market. However, the changes in the supply chain present significant opportunities for cut-cost and improvement for SMEs. Aptly, advances in cloud inventory solutions, demand planning, JIT production, etc enable the SMEs to exercise online mechanisms to optimise the resources, demand, availability, with increasing infrastructure problems in emergent economy, the supply chain issues get worsened soon.

2.6.1. Challenges for SMEs

That is why even though emerging market businesses may find potential in digital transformation and innovation they are faced with multiple challenges. Small and medium enterprises (SME) are financially limited, and thus cannot afford to invest on technology, or new infrastructures, or skilled workers. As a result, traditional banking systems are not very willing to grant credit to small organizations in emerging markets because they cannot offer good credit scores or guarantees, and the financial structure for SMEs is not available yet. Another challenge is the absence of digital skills among SME owners and most people working for those companies. Today's organizational processes heavily rely on digital enablers and resources, however, SMEs oriented to emerging markets often fail to possess the required expertise and experience.

However, the physical challenges are enormous and a major challenge of infrastructure remains a major barrier. Internet connection, electricity, and transport systems are a constraint to efficiency when SMEs expand to the emerging

markets due to inadequate structures. They increase their costs and have limited market access in the era of globalization because they do not have required infrastructure. A variation in the abilities to connect to the internet may also pose great risks of failure in managing digital sales platforms or in performing remote work to Small Medium Enterprises, SME's. Lastly, market instability is another challenge emerging markets face: most Smes are always vulnerable to external factors such as fluctuating political fortunes, economic upheavals as well as changes in prices of inputs and products. Exemplary, it presents problems to SMEs in formulating strategic direction and development and increases the risks of operations. In some cases, local and market influences are dynamic which affects the stability of cash flow as well as the need for consumers in SMEs.

For Government and Institutional Support, Innovation is priority. New product development among the SMEs is among the major issues that many governments and institutions seek to address. It is suggested that business investments in new technologies and business models can be promoted by policy measures that deal with the availability of finance for SMEs including microcredit and tax credits. Therefore, the government can offer grants for training that will significantly develop the employees' and SME owners' digital literacy to fit the demands of the digital economy.

Moreover, the institutions must offer the SMEs means to gain access to suitable mentors, business networks and other innovative resources. SMEs have an opportunity to get support from incubators, accelerators and ppp, that allow them to tap markets, discover int compliance and interact with larger counterparts. In decision making, governments all across emerging markets have begun to realize that enhancing innovation in product delivery and concrete sectors dependent on it require better implementation of regulatory reformation and incentives.

2.7. Gaps in Literature

As mentioned before, the effects of BMI on SMEs are investigated in numerous studies, however, there are still some research areas, such as the BMI and technology integrated into the analysis of the consumers' behavior in emerging markets are still insufficiently investigated. To the best of the researcher's knowledge, there is no empirical evidence that explores the relationships between BMI and digital adoption, on the one hand, and on the other, business model innovation. However, both areas have been researched greatly. A more comprehensive system of frameworks is required to explore how SMEs can innovate effectively using both technological advancements and changing consumer behavior.

Also, there is a lack of empirical research on the post-pandemic period. While there have been many studies to date on the immediate impact of COVID-19 on SMEs, there is little research on how emerging market businesses have changed since the crisis. Why? New research opportunities have emerged due to the rapid adoption of digital technologies and changes in consumer behavior during the pandemic, with a focus on how small-scale enterprises (SMEs) can maintain innovation and competitive edge in e.g.

There is still a lack of research on the role of government and institutional support in supporting digital transformation and business model innovation among SMEs in emerging markets. Despite the abundance of research on SME barriers, more research is needed to determine how targeted policy interventions can help them overcome these barriers and thrive in the digital economy. Examples include financial assistance, digital literacy initiatives (such as pilot projects), and infrastructure development. These findings would be beneficial to policymakers who are interested in creating an enabling environment for SMEs in emerging markets.

3. Methodology

The chapter explains the methodological approach used to investigate business model innovation strategies in emerging markets, with a particular emphasis on qualitative research on adaptation and innovation in the post-pandemic context. They bear the research design, ethical approach, criteria for selecting cases, types and use of data and analysis techniques and; limitations.

3.1. Research Design

It is a qualitative study, making use of comparative case studies to capture more general lessons about SMEs in emerging markets. This type of lens is suitable for studying business model innovation as a phenomenon because, unlike most quantitative approaches, it focuses on the contextual, dynamic, and interactional phenomenon that can be obscured by more structural methodology. The study explores how SMEs are trained to perform and operate in unfavourable economic conditions that are elusive to most SMMES.

The more subtle understanding of the motives, approaches, and consequences of business model innovation is the purpose behind applying or implementing qualitative approaches. The approach enables the discovery of the experiences that actual SME stakeholders have in real-life situations, leading to the generation of pertinent findings that are useful in developing an understanding of the various phenomena under research.

3.2. Research Approach

The primary focus of this study is on a case study approach that involves conducting specialized research on specific SMEs that have experienced significant business model innovation in response to the pandemic. This methodology is quite detailed. These cases are especially useful in revealing the interdependence between external pressures (economic disruptions) and internal strategic reactions. It allows for the identification of patterns and differences in innovation techniques across diverse environments by examining specific instances.

This move is based on the unique challenges and opportunities that SMEs in emerging markets face. The study of innovation is particularly challenging in emerging markets, where economic changes are rapid, institutional gaps exist, and digitalization is becoming widespread. This perspective holds great significance. In these areas, the importance of small and medium-sized enterprises (SMEs) as key drivers of economic activity enables firms with limited resources to adapt strategies for meeting new demand.

3.3. Case Selection Criteria

In the purposive sample recruitment, the SMEs from a diverse sector like retail, services, manufacturing industries are chosen to include different types of innovations. It is in this method that the study is carried out. What does this mean? In Figure 4, the licensed firms have revealed that their business model has transformed due to the pandemic, especially leveraging on digital tools and the changing customer demands.

These cases are selected with a strong focus on shifts in business models depending on the usage of digital commerce platforms, changes in supply chains, or new values. The role of the digital tools is to focus on the usage of tools by the firms and the identification of which one is most efficient. By taking SMEs from diverse sectors into the study it reduces the chances of bias and the research covers different sector needs and creations.

3.4. Data Collection Methods

Since this research employs a triangulated research design, data is gathered through interviews documents and observation. Twenty structured interviews with SME managers, employees, and business owners through which their firsthand experience with BMI has been elicited. Organized research is that which offers quantitative data for broad-scale methodology of strategies, threats and effects dealing with innovation and allows the researchers to come up with new topics and work on them over and over again with ease.

Document review is an additional method, that consists in the analysis of company documentation, strategies, and promotional materials. This analysis presents another source of data to create an enhanced understanding of business model changes and how they relate to organizational objectives. Furthermore, the possibility to trace the actual business practices and monitor the application of the discussed concepts in digital marketing, customer service, as well as logistic and operational processes provides contextual understanding of the presented innovations.

3.5. Data Analysis

In this dissertation, the data collected are analyzed thematically with emphasis on themes and patterns concerning business model innovation. Frequencies and themes are identified and based on these analyses patterns of best practice, issues and potential are probed with a focus on cross-sectional and area variations. Applying thematic analysis for a more systematic yet not overly rigid method of analyzing and analyzing qualitative results, making sure the results proposed state what participants have said or witnessed.

In an effort to further strengthen the analysis, a cross-case comparison is made between groups of SMEs: those that managed to successfully innovate their business models and those that faced problems doing so. This paper has focused on the comparative analysis of the success and failure factors to provide implications to other SMEs and policymakers. This paper also utilizes sectoral data to study the cross-sectional variations as well as similarities to capture the contextual aspect of the innovation.

3.6. Ethical Considerations

The following ethical issues are brought into consideration when designing the study: These include; informed consent, confidentiality and clarity. Subject to the study's aim and objectives, participants are informed about the study, and their consent to participate is sought. Precautions are made aimed at eliminating defining of the participants and organizations, as well as preventing the disclosure of the valuable business strategies.

Interviewees are informed and involved in potential risks and benefits of the study in regard to the values of transparency pervading the research process. Ethical considerations are accustomed in document analysis as well as observation, so all the methods of data collection are nonintrusive and consider rights of any individuals or organizations to be observed.

3.7. Limitations of the Study

Nevertheless, the study recognizes a number of limitations which are as follows. It must be pointed out that the current study is highly comprehensive in its design. The high utilisation of qualitative research and the relatively small sample size because of time and financial constraints of the study is a weakness which may affect the generality of the results. Although the selected company case studies are enlightening, they may not be illustrative of all the emergent countries' SMEs dynamics.

Also, the validity of some of the measures used due to self-reporting from business owners and managers is understood. Since participants may give an exaggerated account of their achievements or underemphasise their failures, the findings can be inconclusive. To address this issue the study uses triangulation through documents as well as observation through interview therefore reducing bias when we are analyzing the data.

By taking into consideration these methodological factors, the study shall endeavour to develop a sound theoretical background on the research topic with the perspective of enhancing theoretical and practical contributions to the advancement of knowledge in the business model innovation among the SMEs operating in emerging markets.

4. Data Analysis, Presentation and Interpretation

4.1. Overview of Case Study SMEs

Retail SME (SME A): SME A operates within Brazil, as a retail business owned by a family. The company sells mainly local clothing products made by hand. Before the pandemic it was almost fully an in store business, and had very little online operation. Original strategy of the company was also corresponding to its traditional retail base business model with low level seasonal products and customer service orientation.

Service SME (SME B): Market research and strategy advisory is SME B consultancy firm for Small and Medium enterprises established in India. Before 2020, it operated on services business model, mainly focused on meetings and long-term cooperation. More so, the firm mainly relied on conventional networking as well as word of mouth as its business model.

Manufacturing SME (SME C): SME C is a producer of consumer electronics based in Kenya and its specialty lies in the production of products that are cheap and environmentally conscious to meet the need of local consumers. Before the pandemic, it operated a traditional production approach that incorporated minimal digitalisation and sales platforms.

4.2. Strategies for Business Model Innovation

Various activities; Company A diversified its product portfolio by broadening its line, now it covers athleisure wear as its market trend has emerged due to the pandemic situation and its effect on people's lives. The company also launched new sources of income through e-Commerce availability through a new online store.

To expand its operations, SME B has offered virtual workshops and webinars as a complementary to its conventional consulting services. Such a shift helped it offer all its services remotely and expand its client base beyond geographical localities.

Thus, the digital technologies were adopted by all SMEs, but with different intensity. In the case of organization, SME A adopted online selling on its Web site alongside a mobile application so that customers could order products online and

view new product collections online. The company also used social media marketing strategy popular with a new generation of consumers and lovers of technology.

SME B turned its entire business model around and although provided consulting sessions through a video link and webinars. Such a shift helped the company continue its operation during the lockdown and expand the range of clients.

Smart manufacturing technologies were adopted as business strategies within SME C in order to bring about changes within the operational context that related to the way it carried out its production. They also pursued expansion direct-sales subsidiary for B & W through the internet to ignore conventional channels of distribution.

To meet the changing customer preference for environmental friendly products, SME A launched new and quality clothing merchandise lines that were eco-friendly due to their raw materials used in their production. It also grew its services of virtual shopping where through augmented reality, one could see products at the company.

In adapting to these factors, SME B innovated by establishing market research packages tailored to meet specific needs for virtual market research and offering a la carte consulting services to counter a fast changing business environment.

SMC: In the latter half of the year, SME C ventured into the market with a new home appliance product range that is cheap to manufacture and has low power consumption to cater for the new economy consumers. The other advantage was the innovation in its product portfolio, which was able to target an emerging market of environmental friendly and cheaper products.

SME A made some improvement in the existing inventory management and logistics by installing an ERP system to enable real time ordering of the materials. This enabled cutting of costs and enhancing efficiency within the company.

SME B self-generated by appreciating the realization that the client interaction and relationship management needed to be made more efficient through the utilization of an automated CRM tool. This automation enabled the company remain in touch with the existing clients and ensure constant follow up was done.

SME C worked on enhancing production using lean manufacturing techniques with a view of minimizing lead times and wastes. Doing so not only high up the standard of operations but also lead to cost reduction.

4.3. Opportunities and Challenges in the Innovation Process

During digital transformation, it became possible for all three SMEs to explore different market segments. SME A targeted younger audience and more specifically digital natives, by diversifying its product range on the Internet and using social networks in its marketing communications.

Another aspect for SME B to expand into international markets was to offer consulting services from a distance.

SME C responded well to this emerging market opportunity and penetration of affordable green products and services as SME C began developing energy-efficient appliances for the lower income segment.

Through venturing new business models, it became easier for SMEs to deliver personal services that would be easily demanded by their customers. SME A featured a virtual 'shopping' experience, as well as labelled products with eco-warrior appeal; SME B offered specialized professional assistance, as 'voice of client' creating long-term partnerships with consumers.

In general, this research revealed that the application of digital tools increased operational flexibility for all the SMEs. SME A's required inventory reduced response time needed for fulfilling customer needs, whilst smart manufacturing in SME C enabled production adaptability.

4.4. Challenges

Financial constraints were identified as the barriers to digital technology adoption and business model innovation across all the SMEs. While SME A was able to secure small business loans for its needs in digital expenses, SME B failed to finance their shift to online services without external help.

Another challenge that SME A and SME B faced while adopting new digital tools was inability to train the staff effectively. These deficiencies in digital literacy at first hampered the adoption of great strategies to introduce novelty at the initial stage of the rollout.

In SME C few employees were still resistant to change, some of them were worried with job loss and complexities of the new manufacturing technologies. To overcome this form of resistance, more training exercises and effective communication, and about the gains to be made where such changes were concerned.

Market instability affected all SMEs because the pandemic nature and changes in consumer behaviors are, by their very nature, unpredictable. Meeting these challenges was most difficult because rapid adaptation to such changes was essential and decision making had to be swift.

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