THE INFLUENCE OF DIGITALIZATION ON THE INNOVATION STRATEGY OF SMALL AND MEDIUM-SIZED ENTERPRISES

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NEHA VERMA AND SANDRA EBOJOH.
**ABSTRACT**

**Title:** The influence of digitalization on the innovation strategy of small and medium-sized enterprises.

**Level:** Master Thesis in Business Administration

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**Aim:** This study aims to increase the understanding of the influence of digitalization in the development of the innovation strategy of SMEs.

**Method:** The method used is a multi-case qualitative study using the inductive approach. Nine organizations were examined from three different countries, Sweden, India, and Nigeria, to give the study international comparison. Ten semi-structured interviews were conducted on managers and employees of the selected organizations for the study.

**Result & Conclusions:** The study revealed that digitalization is an opportunity and a tool for developing innovation, which is crucial for the survival of SMEs. The study also showed that most SMEs do not have a clear innovation strategy, and are constrained by several factors such as; time, resources, competence, regulations, prioritizing tasks, managing the human capital and numerous others. However, SMEs can overcome their challenges by developing their dynamic capabilities and utilizing their resources with support from cluster organizations. Such support includes creating the awareness of digitalization, emphasizing the need and importance of crafting an innovation strategy, training, mentoring and funding.

**Suggestions for future research:** While the study examined SMEs in general, SMEs and clusters within a specific industry or sector are suggested for further study. Also, other factors that can
influence the innovation strategy of SMEs should be examined. Furthermore, more research is needed to focus on the implementation of public policies to boost SME development in the area of innovation and the application of digital technologies, as SMEs are crucial to the growth of any economy, and the study revealed different levels and means of implementation of these policies.

**Contribution of the thesis:** This study adds new insights to the literature on international business by conducting a multiple case study on SMEs and organizations supporting SMEs from three different countries with different economies and levels of advancement. A theoretical model was developed and has been to shown support existing studies illustrating that SMEs can adopt digitalization to develop an innovation strategy, through support from cluster organizations. The study provides new perspectives, some of which are ways for SMEs to manage digital transformation and some questions which are suggested for future research.

**Keywords:** Digitalization, Digital Transformation, Innovation, SMEs, Clusters, Strategy.
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1. INTRODUCTION

This chapter entails the background of the study, the problematization, aim, and research question. The scope, limitation, and overview of the research are also presented.

1.1 BACKGROUND

In the present global and keenly competitive business environment, innovation has increasingly become essential for businesses to achieve competitiveness and thrive into the distant future, because innovation is regarded as a vital tool for creating opportunities to new inventions and markets (Kuhn & Marisck, 2010; Ismail, Omar, Soehod, Senin, & Akhtar, 2013). Tidd and Bessant (2018), explain that Innovation depicts discovering new ways to do things, to gain strategic advantage and that innovation contributes in several ways, for example, new products are related to market performance.

Innovation, which can be described as the transformation of ideas, and knowledge to increase competitiveness and sustain competitive advantage, is a vital element of a firm’s strategies (Tavassoli & Karlsson, 2015). But innovation needs a strategy, and Porter (1996), explains that a strategy is both about doing new things, as well as doing existing things better and that a strategy makes firms better than their competitors in a way that their competitive advantage is sustained.

Pisano (2015), emphasizes that crafting an innovation strategy entails ascertaining how innovation will add value for potential customers, how much value can be obtained by the firm, and what type of innovation to follow. He further states that, an innovation strategy should outline how the company’s innovation activities will sustain the overall business strategy, and that without an innovation strategy, the separate units of a firm can end up chasing conflicting priorities. Similarly, Wu (2019), describes innovation strategy as a plan or collection of business initiatives to generate new sources of revenues and increase the value of the firm within a set time frame. He also explains that an innovation strategy can assist a business to develop new products, improve existing products, optimize revenues and reduce cost.

While innovativeness can be said to be a firm’s tendency to be innovative (Walsh, Lynch & Harrington, 2009), an innovation strategy is more of a blueprint by a business venture to gain competitive advantage through the application of new ideas in its business offerings. SMEs with a
coherent innovation strategy have better effectiveness and efficiency with their overall innovation management, particularly if the main members of the firm are included in planning the innovation strategy (Diedrichs, 2019).

Pierre & Fernandez (2018), describe small and medium enterprises (SMEs) as simple establishments with centralized power and little hierarchy while noting that it is difficult to outline innovation capacity in SMEs because most innovative activities in SMEs are informal and fuse into the overall business activities. Additionally, the authors assert that most innovative activities in SMEs are not clearly defined and are merged into the general business of the firm. Hence, crafting and implementing a clear innovation strategy that is properly aligned with operational activities is still an issue for most SMEs.

The international community takes seriously the development of science and technology because innovation has been widely recognized as a crucial force driving economic growth in the current increased global competition (Huang & Liu, 2005). It is noteworthy, that the demand for digital offerings has risen due to changing market dynamics and the increased influence of digitalization, causing firms to innovate their business models and combine their capabilities in the environments to effectively manage digital transformation (Gierlich, Volkwein, Schüritz & Hess, 2019). It is therefore not unexpected, that managers are concerned with handling digital innovation, as digital technology is vital to accomplishing corporate objectives (Nylén & Holmström, 2015).

Digitalization can be described as the capacity to convert existing products or services into digital variants, offering advantages over physical products, changing the value proposition of the business and its organizational structure (Parviainen et al., 2017; Gierlich et al. 2019). We shall use the terms “digitalization” and “digital transformation” interchangeably in our work. Digital transformation is the revolution of business processes, activities, models, and competencies to utilize the opportunities presented by digital technologies in an ordered and strategic way, in order to improve effectiveness, sustainability, efficiency, and product and service innovation (Demirkan, Spohrer & Welser, 2016). While Henriette, Feki & Boughzala (2016), describe digital transformation as a disruptive or incremental change or process, involving the adoption and application of digital technologies, evolving into an embedded complete transformation of a firm to achieve value creation. Digitalization is a source of innovation for established companies that
want to "reconstruct" their business model (Warner & Wäger, 2019). In the same vein, Matt, Hess & Benlian (2015), explain that digital transformation strategies pervade other business strategies and should be aligned with them. The authors also note that formulating a digital transformation strategy that integrates the implementation of digital transformations, coordination, and prioritization is crucial.

1.2 PROBLEMATIZATION

Our present understanding of innovation in SMEs is quite poor (Edwards et al. 2005), and regardless of their significant role, innovation in SMEs have received only slight attention, unlike innovation in larger enterprises where a majority of studies have been focused on (Forsman, 2011). Also, further investigation is needed to clarify how innovation improves organizational performance, it is even more serious for SMEs because the factors for increasing the innovation processes are still vague (Forsman, 2011; De Jong & Marsili, 2006; Pierre & Fernandez, 2018). Katz, Preez & Schutte (2010), point out that there is a lack of existing literature defining innovation strategy, due to the fact that only a few firms have an explicit, documented innovation strategy. And according to the authors, Pierre & Fernandez (2018), systematic and calculated strategy for innovation has been adopted by only one-third of SMEs, and innovative activities in most SMEs are ambiguous and difficult to identify. The authors also point out that, few studies have focused on describing the roots of SMEs’ innovation strategies and capabilities, hence a global framework for analyzing the innovation capabilities of SMEs needs further research.

And although SMEs are known for their contribution in the global economy, innovations in SMEs are more uncertain particularly because of their nature, hence they require support and encouragement, thus calling for more research on their needs (Zhu, Wittmann & Peng, 2012). Thus, boosting the innovative potential of SMEs is the unrelenting focus of public policy initiatives for encouraging economic development at all levels, especially in developed Western economies (Jones & Tilley, 2003; Edwards et al. 2005). Meanwhile, Parida (2018), emphasizes that, in this progressively digital age, interactions between firms and customers are being redesigned, new business models are being devised, and organizations need to be swift, and flexible to follow new business opportunities in the rapidly evolving global business environment.
While, digital transformation is said to deliver the techniques for improving the effectiveness, efficiency, sustainability, and innovativeness of product and service offerings (Demirkan et al. 2016), a crucial task for any firm pursuing digital innovation involves having a good grasp of the unique properties of the digital innovation processes (Yoo et al., 2010; Nylén & Holmström, 2015). Li et al. (2018), investigate how entrepreneurs of small and medium enterprises (SMEs) with inadequate capabilities and limited resources drove digital transformation in their companies, a phenomenon that remains under-researched in the extant literature, and invite more research in this area. And contrary to the constructive digitalization platforms, SMEs are challenged with different framing conditions on the path to digitalization, they often encounter problems when attempting to innovate, and their digitalization level is still below the industry average (Bley et al. 2016; Bogner et al. 2016; Sommer 2015; Gierlich et al. 2019).

Furthermore, Dibrell, Davis & Craig (2008), in their study ‘Fueling innovation through information technology in SMEs’, suggest that IT gives businesses a competitive competency, such as through innovation, which differentiates them in the market but however notes a lack of substantial body of theory-driven empirical studies showing the interaction between IT resources and innovation for improved firm performance. Similarly, Scuotto, Santoro, Bresciani & Del Giudice (2017), in their research, ‘Shifting intra-and inter-organizational innovation processes towards digital business: an empirical analysis of SMEs’, highlight that, a small number of studies in the open innovation literature have examined the influence of ICT on knowledge acquisition, creation, and dissemination in SMEs, this is because the current literature tends to focus on large corporations rather than on SMEs, even though SMEs are widely acknowledged to be more innovative and make a significant contribution to economic growth.

We have thus identified that there is a deficiency of adequate knowledge of innovation in SMEs, more research is needed in the area of the digital transformation of SMEs, and that SMEs encounter challenges with digitalization. Thus we developed a model in figure 1 to increase our knowledge of innovation in SMEs and to understand the relationship between digitalization and the development of the innovation strategy of SMEs.
1.3 AIM

The aim of this study is to increase the understanding of the influence of digitalization in the development of the innovation strategy of SMEs.

1.4 RESEARCH QUESTION

To achieve our aim, we have formulated the following research question;

RQ1: How does digitalization influence the innovation strategy of SMEs?

1.5 LIMITATIONS

Innovation management is a broad field of research, but this study will focus on the innovation strategy and the digitalization of SMEs. The study is also not peculiar to an industry or sector but views SMEs in general. Also, there are several definitions of SMEs in different regions, we have therefore adopted three definitions applicable in the three countries for the study and this can be found in our methodology chapter. Furthermore, not every aspect of the business environment or government policies can be covered in this study.
1.6 SCOPE OF THE RESEARCH

This thesis attempts to add to the existing knowledge in this field by examining the influence of digitalization on the innovative strategy of SMEs. We shall thus, conduct a qualitative multiple case study based on four innovative SMEs, and five organizations offering support to SMEs, from Sweden, India, and Nigeria. This will enable us to validate our findings, make international comparisons between advanced economies, and developing/emerging economies, and observe if our findings are applicable to SMEs in different economies. More so, the study will benefit from building our investigation from multiple industries and countries. We shall also take insights from the existing literature on entrepreneurship and innovation management.

1.7 DISPOSITION OF THESIS

The first chapter introduces the research, while the second chapter gives the theoretical framework of the study. The third chapter illustrates the research approach used, and the fourth chapter presents the empirical data collected. The fifth chapter shows a detailed analysis of the data, and chapter six gives the conclusion, contributions, limitations and suggestions for further research.

Figure 2. Disposition of thesis.

Source: Own, 2019.
2.0 THEORETICAL FRAMEWORK

To guide our study, we will examine theories and concepts such as the resource-based view and dynamic capabilities, the platform theory and digitalization, cluster theory, SMEs, and innovation strategy. We shall examine the interrelationship of these theories to observe how SMEs can adopt digitalization, become innovative, and sustain their competitive advantage. We shall also develop a theoretical model to capture the interrelationship at the end of this chapter.

2.1 The resource-based view and Dynamic Capabilities:

Kim, Song & Triche, (2015) conclude that the resource-based view (RBV) and the dynamic capabilities (DC) are two ideologies that enable experts to understand how companies use resources and capacities to gain competitive advantage. The RBV aims to primarily foster its sustainable competitive advantage through the internal resources of the organization (Kull, Mena & Korschun, 2016). According to Bromiley & Rau (2016), the RBV intends to attain a competitive and sustainable edge based on unique, worthwhile, profitable, difficult to duplicate and hard to replace resources of the firm. The RBV acknowledges that organizations have useful, vital, inimitable and unique resources that enable them in a predictable and sustainable period to maintain a competitive advantage (Kim et al. 2015).

Dynamic capabilities can be described as "resource management processes – specifically processes for incorporating, re-configuring, acquiring and sharing resources – for matching the market and even creating changes in the market" (Burisch & Wohlgemuth, 2016). Warner & Wäger (2019), stated that complex or dynamic capabilities include three wide-ranging clusters: (1) anticipate opportunities (and threats), (2) grabbing opportunities, and (3) reconstruct and revolutionize the business model and broaden the base of firm's resources. The dynamic capabilities of an organization convey that in addition to external technologies and co-creation systems, companies are able to use internal resources to maintain a competitive advantage in a complex unpredictable environment (Kim et al. 2015).

In terms of the RBV theory, market volatility and competitive intensity are two major market factors that can affect the company's need for innovative technology and the preferences, tastes or consumer behavior influence these market conditions (Zawawi, Wahab, Al-Mamun, Yaacob,
Kumar & Fazal, 2016). An organization without an innovation plan cannot make trade decisions effectively and without an innovation plan, different parts of an enterprise can easily fail to achieve competitive goals even if a clear business plan exists (Pisano, 2015). Companies without an innovation shield could be affected by market changes, in terms to safeguard their sustainability as companies have been and will be benefited by access to the latest and most effective technological advantages to gain a sustainable competitive edge (Akhter, 2017). Continuous innovation is also important for a company, like the P&G (Proctor and Gamble, a large multinational corporation) which continuously transforms and makes improvements over current market demand, has been consistently sustaining its global market over 170 years ago, to retain its competitive advantage, profitability, and customer satisfaction. (Zawawi et al. 2016).

As earlier explained in our study, the current business environment is highly competitive and the market dynamics are changing, at such firms must be flexible to adapt in order to thrive and survive. In the same vein, Zawawi et al. (2016), emphasize that environments are constantly evolving, innovations must be implemented on time, and that the most important innovations are the ones that can lead companies to attain a competitive edge thus further improving the performance of the company. The authors further note that, in order to sustain its competitive advantages, a company must match its resources and capabilities according to the needs of the business environment.

Our focus on SMEs reveals that they are constrained by resources unlike large corporations. And according to Kazlauskaitė, Autio, Gelbūda & Šarapovas (2015), the distinctive characteristics of emerging SMEs are from; (i) the resources that are made available and usable to emerging economies; and (ii) the quantity of resources that can be utilized in the sense of emerging economies. Overall their lower costs (for example, labor, production, R&D, marketing and product development) differentiate their resources from advanced businesses because emerging companies prioritize cost advantage – temporarily and raw materials and supplies become increasingly more significant (Kazlauskaitė et al. 2015).

Karimi & Walter (2015), conclude that dynamic capabilities created by changing, expanding or adapting the existing resources, processes, and values of a company are positively linked to building digital platform capabilities and affect the performance of response against disruptive
innovations. As the digital revolution happens, disruptive innovation is covering more and more businesses. Reinventing the IT function in order to deliver digital products and services can give businesses a new competitive edge.

While we have identified some of the resource constraints facing SMEs in our study, we attempt to understand what can be done to improve their situation and keep them in business. McLaughlin (2014), explains that most SMEs operate in a competitive global environment, size or sector notwithstanding and that SMEs are affected by a scarcity of resources, but can only survive and succeed when the necessary resources are identified and effectively used in establishing a competitive business. Similarly, Borch & Madsen (2007), note that the capabilities types vital to enabling innovative strategies are still unknown, and a better awareness of such capabilities will buffer SMEs against market shocks. Also, Teece (2012), explains that dynamic capabilities, (which are notable competencies defining the ability of a business to integrate, build, and reconfigure both internal and external resources to tackle the rapidly changing business environments), control the extent to which the resources of an enterprise are aligned to match the needs and opportunities of the business environment to create yields. Thus, our focus is on SMEs aligning their resources and dynamic capabilities with the strategic application of digitalization to become innovative and survive in the competitive business space.

However, Fern, Ferreira & Rese (2017), assert that though the dynamic capabilities approach is based on the significance of integrating resources for growth and survival of firms, not much has been discussed how these resources materialize. Fern et al. (2017), from their study on the inception of dynamic capabilities in SMEs, point out that the creation of dynamic capabilities, the life of the firm, and the learning of the entrepreneur/strategist (which in itself is a resource for the business) seem to be interrelated.

2.2 Cluster theory:

Successful innovation is dependent on the firms’ combination of a range of capabilities such as; effective networks with other firms, access to finance, availability of skilled employees, and understanding the market needs (D’Este, Iammarino, Savona, & von Tunzelmann, 2012). Glăvan
(2008), simply describes a pack of industries that gain efficiency through co-location as a cluster. He asserts that clusters have gradually become an objective of economic policy, especially in Europe, and that the cluster theory emphasizes the expected benefits from the regional concentration of related industries, which is crucial to the overall economic growth. Osarenkho & Fjellström (2017), highlight that cluster initiatives offer a platform for businesses (SMEs & MNEs) to effectively interrelate with themselves and other institutions by way of working and learning together. The authors explain that SMEs although flexible, cannot manage the entire innovation process in isolation, but need the cooperation of external actors, such as other firms and organizations, which clusters can provide.

Maskell & Kebir (2006), in their analysis of Porter’s work (Porter (1990a): The competitive advantages of nations) on competitive strategy and his cluster existence argument, point out that, benefits flow forward, backward and horizontally, there is exchange of R&D, joint problem solving leading to quicker and efficient solutions, transmission of information and innovation among firms and suppliers, and accelerated pace of innovation within the national industry when firms form a cluster. Also developing clusters attract skills, ideas, entrepreneurs, and opportunities. The innovative milieu approach (a concept devised by the GREMI group, the European research group on innovative milieux), pertains to organization, technology, and territory. The approach examines actors with strategic choices concerning material and immaterial resources, a learning dynamic for the actors to adapt to environmental changes, and an organizational logic in which actors cooperate to innovate and build networks of interdependent commercial and non-commercial relationships (Maskell & Kebir, 2006).

SMEs have the potential to be successful innovators but are constrained by a lack of resources (Rosenbusch et al. 2011), and because of such constraints they need support and encouragement to be innovative, hence there is a need for more collaboration and research on their needs, seeing that they contribute to the global economy (Zhu et al. 2012). Thus, public policy initiatives are concerned with enhancing the innovative potential of SMEs to encourage economic development at all levels (Jones & Tilley, 2003; Edwards et al. 2005). An innovative milieu enables cooperation, mutual acquaintance, growth of trust-relations, exchange and dissemination of information, and an increase in production and innovation. Local firms can be assisted through public policy
measures, encouraging the inflow of ideas and the exchange of resources, expediting both immediate and long-term growth in the region (Maskell & Kebir, 2006).

According to Glăvan (2008), development strategists and government consultants are presently of the view that clusters can have a vital function in promoting industrial development. International organizations such as the World Bank, UNCTAD, IMF, UNIDO, and OECD are involved in funding research, evaluation and development of cluster and cluster policies worldwide. The world bank report for cluster development on India, Sweden, and Nigeria between 2007 and 2017 is captured in figure 3 below.

Through cluster policy, public authorities have built centers of expertise, enterprise zones, science parks, industrial districts, business incubators, eco-industrial parks, and many others to boost industrial concentration and cooperation (Glăvan (2008). In our study, we shall examine the work of clusters (organizations and agencies) offering support and assistance to SMEs in their region, to boost their development and economic growth.

Figure 3 reveals that India witnessed a year-on-year average growth rate of 0.1% between 2007 to 2017, and had a value of 4.43 in 2017 on the state of cluster development indicator where the index is (1-7). (1- nonexistent, 7- widespread in many fields). In the same time frame, Sweden had the highest year-on-year average growth rate at 1.08%, and indicator value of 5.04 in 2017. Whereas Nigeria had the lowest year-on-year average growth rate at -1.11% and the least indicator value of 3.41 in 2017.
### 2.3 Digitalization:

A platform is an ongoing digital networked integration of articles (numbers, images, audio/video data), persons (consumers, staff, associates and shareholders), processes (software enabling) and interfaces (physical, and digital), which are defined as "APPI" components. This component network provides a number of interactive system environments through which interactional value
creation is carried out (Ramaswamy & Ozcan, 2018). According to Parida et al. (2019), in order to deliver value from digitization, businesses must be able to develop flexible platforms that use modularity to attain efficiency and productivity in what they provide. The emergence and widespread use of mobile computing, cloud computing, storage technologies and social media networks – collectively known as digital platforms – have given organizations many opportunities to innovate, a technological age that embody versatile, convenient-to-deploy and economic IT services (Sedera, Lokuge, Grover, Sarker & Sarker, 2016).

Companies must evolve their business models and take advantage of their strengths by building on digital technologies, such as artificial intelligence, digital platforms, and big data analytics (Parida et al. 2019). Studies have also shown that digital platforms have the potential to drive innovation in businesses because these platforms are more cost-effective, easier to use and their trial ability (Sedera et al. 2016). But as Parida et al. (2019), highlight, benefitting from digitalization requires business model innovation such as transitioning to advanced service business models. In addition, enterprises must be able to build scalable platforms that are modular to achieve efficiencies and efficiency in their offerings in order to deliver value through digitalization successfully (Parida et al. 2019). The aim of digital platforms is not to provide a platform for automating the entire business cycle, but to innovate by disclosing the component/s of a certain system for developing functions that would provide the company with the full innovative ability (Sedera et al. 2016). Parida et al. (2019), further acknowledge the significance of using a platform in the search of strategic opportunities for digital transformation; they suggest using a platform to share knowledge and enhance the flexibility and organizational effectiveness by combining front-end and back-end systems.

Online booking platforms encouraged independent hotels to access a much bigger market establishing a more equal competition with the main hotel chains (Akbar & Tracogna, 2018). An increase in the number of digital platform transactions and trading has not only increased market competition but also prompted consumers to look for products and online transactions in a direct way that pushes incumbents, in turn, to use digital platforms to gain access to clients and to promote their online offerings (Meyer & Cennamo, 2019). For example, Travel agencies are being replaced, for example, by online travel portals which enable customers to develop their very own personalized holiday plans (Akbar & Tracogna, 2018). The Uber platform as a new organization
was considered threatening to the taxi industry, yet this digital innovation created a new way of organizing taxi services through the use of digital technologies (Hinings, Gegenhuber & Greenwood, 2018). These independent organizations were lacking in extensive promotional channels including weak brand positioning and limited marketing resources which were facilitated by the help of digital platforms (Akbar & Tracogna, 2018).

According to Scuotto, Caputo, Villasalero & Del Giudice (2017), the relationship between customer/seller, and utilization of information and communication technology is positive, which is consistent with certain previous studies. Demirkan et al, (2016), highlight that digital transformation will enable firms to address market needs faster than before, resulting in greater innovation because firms can access pools of knowledge and resources beyond their walls through advanced ICT. Moreover, SMEs manage the complex world of the digital system when communicating with their suppliers, allocating Information and communication technology in their Supply Chain Management, a key factor as a result of which value is created. With a multiple supplier digital platform, SMEs gain increased power over consumer choice and greater control over their business relationships (Scuotto et al. 2017). And though both digital platforms and digital service providers are crucial in influencing the environments where firms compete and the way they compete, many SME entrepreneurs are not conversant with IT and / or e-commerce. Thus successful digital transformations involve upgrading the entrepreneurs’ competencies (Li, Su, Zhang & Mao, 2018), while digital innovation consists of constant learning, and retraining for staff to obtain digital skills (Nylén & Holmström, 2015).

This study shall adopt the following definitions of digitalization. Digitalization underscores the significance of placing advanced technology at the core of all processes, products, and services (Parida, 2018). Also, digitalization describes the diverse socio-technical phenomena and processes of adopting and using digital technologies in extensive individual, organizational, and social contexts (Legner, Eymann, Hess, Matt, Böhmann, Drews, Mädche, Urbach, & Ahlemann, 2017). And according to Gartner’s glossary, digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities. From these three definitions, we have come up with our own definition of digitalization and propose that digitalization is the application of digital technologies such as software and digital marketing
channels to change a business model which includes the processes, products, services, marketing, and organization of the business, which will create new value, profit, and opportunities.

Digital technologies have altered the face of business, creating huge opportunities for innovative managers and entrepreneurs with a vast majority of the world’s population connected by mobile devices with access to knowledge through smart machines (Demirkan et al. 2016). The digital transformation process involves changes in the business models of firms, which may include operational culture, resources, and processes, and is, therefore, a critical strategic decision in order to meet the changing demands of the market (Henriette et al. 2016).

Digital transformation is a complicated and sensitive matter influencing several or all sectors of a company and managers are not often aware of the different solutions and components of their digital transformation projects, so managers must simultaneously balance the exploration and use of the digital resources of their firms to achieve the organization’s flexibility in order to ensure the prerequisites for successful business transformation. (Hess, Matt, Benlian & Wiesböck, 2016).

2.4 SMEs (Small and Medium-sized Enterprises):

Since it has been established that most SMEs do not have a clearly defined innovation strategy (Katz et al. 2010), a unique way to support them with resolving this issue is the adoption of digitalization. According to Karimi & Walter (2015), the dynamic capabilities of firms are clearly related to building digital platform capabilities, which is a consequence of the digital revolution that has made disruptive innovation cover more businesses and thus offering them a competitive edge. Also, Scuotto et al. 2017 assert that digital platforms can enable SMEs to overcome resource constraints and create value in their business relationships with suppliers and customers.

SMEs, have been acknowledged for their role in the global economy, and have advantages such as internal flexibility, entrepreneurial dynamism, and responsiveness to changing circumstances (Zhu et al. 2012). Also, Pierre & Fernandez (2018), describe small and medium enterprises (SMEs) as simple establishments with centralized power and little hierarchy. SMEs usually have a simple structure where the manager monitors the operational day-to-day activities and has a unique overview of all available resources and their potentials (Borch & Madsen, 2007). The authors also point out that SMEs encounter peculiar problems, lack resources, need unique capabilities to create
resources for innovative and progressive strategies, and that forming a business strategy is a crucial choice for firms. They further highlight that small business ought to safeguard their current undertakings and ensure a hitch-free transition to new strategies in the process of accessing new market opportunities. Rosenbusch et al. 2011, note that allocating more resources to the innovation process leads to increased performance in SMEs and that it is essential for entrepreneurs and SMEs to carefully manage the innovation process. Consistent innovation activities are the main foundation for lasting entrepreneurial success, and innovation is an opportunity for entrepreneurial firms to gain rents through a temporary monopoly, and because SMEs are smaller, they can retain a monopoly of such rents for a long time (Rosenbusch et al. 2011).

To Schumpeter, the dynamic innovations, and application of new ideas of entrepreneurs form a powerful competitive force in economic development (Schumpeter, 2017). The function of small and medium-sized enterprises (SMEs) cannot be valued without the background of the innovation process, which includes the industry, technology, and the marketplace (Edwards et al. 2005). Entrepreneurship is not science or art but a practice, requiring the use of the fundamental concepts of management to new problems and new opportunities, at such, knowledge in entrepreneurship is a means to an end (Drucker, 2014). Throughout Schumpeter’s theory of economic development, entrepreneurial activities are a major part of comprehending the dynamics of innovation, whilst innovation and entrepreneurship are viewed as the interconnected function of the entrepreneur (Hagedoorn, 1996).

Drucker (2014), also views entrepreneurship as the application of management concepts and management techniques, such as value creation, standardizing products, designing processes and tools, training and setting the requisite standards. While Teece (2012), describes entrepreneurship as the sensing and understanding of opportunities and finding new and creative ways of doing things. In his review of entrepreneurship theories, Simpeh (2011), highlights the attributes of entrepreneurs as, opportunity-driven, creative, innovative, transformational, and displaying a high level of management skills and business acumen. De Jong & Marsili (2006), point out that, small firms who are successful at innovation, raise their chances of survival and growth. They further assert that while some SMEs compete in a target market, others develop major innovations and ultimately become market leaders. Thus, SMEs tend to be more innovative as a result of their varied character and flexibility to embrace changes in the environment but are constrained because
of their limited financial and human resources (Kaufmann & Todtling, 2002; Rosenbusch et al., 2011; Ismail et al. 2013).

Borch & Madsen (2007), describe corporate entrepreneurship as the integration of opportunity-seeking and advantage-seeking activities offering new, valuable and unique business ideas. Entrepreneurs are innovative, searching for change, to exploit it as an opportunity, and entrepreneurship is more of behavior rather than a personality trait (Drucker, 2014). The author also explains that entrepreneurs in various fields, such as health care, business, or education, apply almost the same tools and have pretty much the same challenges. Simpeh (2011), notes that entrepreneurs look out for possibilities in changes such as consumer preferences, and technology, rather than the associated problems.

Generally, innovations are risky and unpredictable, more so in SMEs given their nature (Zhu et al. 2012). And though SMEs are challenged with substantial constraints of resources, they often turn out to be successful innovators, thus implying that SMEs following an innovation strategy stand to benefit in various ways (Rosenbusch et al. 2011). Additionally, numerous small and medium-sized enterprises (SMEs) rely on their innovative capacity to attain and sustain their competitive advantage (Parida, Westerberg & Frishammar, 2012). And by way of delivering innovative products to attractive niches, SMEs can create new demand, avoid price competition, compete with bigger firms, and expedite business growth (Rosenbusch et al. 2011).

However, as previously noted, successful innovation is a function of the firms’ combination of a range of capabilities such as; effective networks with other firms, access to finance, availability of skilled employees, and understanding the market needs (D’Este et al. 2012). From their study of the innovation process of Upper Austrian SMEs, Kaufmann & Tödtling, (2002), point out that, few SMEs are involved in research activities (which are proactive innovation strategies targeting new markets), and that firms pursuing technology-driven innovation need to reassess their business strategies. Thus, for the purpose of this study, we will dwell on SMEs successfully applying digitalization, and its influence on their innovation strategy, with support from other organizations to overcome some of their constraints and challenges.
2.5 Innovation Strategy:

Katz et al. (2010), describe innovation strategy as the strategy governing innovation in business and note that the difficulty in defining what exactly is an innovation strategy is a result of the numerous definitions of both innovation and strategy. The authors highlight the lack of existing literature defining innovation strategy, due to the fact that only a few firms have an explicit, documented innovation strategy. According to Sundbo (1997), innovation refers to the application of any new problem-solving ideas. Schumpeter (2017), posits that innovation is the strategic spur to economic advancement, and defines innovation as the industrial or commercial application of something new, such as a new product, process or production method, a new supply source or market, a new form of commercial, business, or financial organization. Similarly, Ismail et al. (2013), describe innovation as a multiplicative regeneration and competence of a firm in response to the environment, resulting in improved and enhanced organizational performance, and yielding new products, processes, and services.

Unlike Innovation, innovativeness has been recognized as a complex phenomenon and a multidimensional concept, not having an exact definition and may be affected by various situational elements. Innovativeness consists of implementing new solutions where they were previously none and can be measured by distinct competencies, productivity level, revenue or improved competitive position (Nasierowski & Arcelus, 2012). Walsh et al. (2009), highlight that some existing literature on innovativeness have termed it as a firm’s ability to innovate or its capacity to introduce new processes, ideas or products into the business.

Dibrell et al. (2008), point out that there are several forms of innovations varying from negligible modifications to existing products, processes, or services to advanced products, processes, or services with new features or remarkable performance. Product innovation is identified with alterations to the end product or service, while process innovation relates to the procedural changes in an organizations’ manufacture of goods and services (Dibrell et al., 2008; Forsman, 2011). In their research for the European Commission, Barjak, Niedermann & Perrett (2014), identified four types of innovation from the Oslo Manual (OECD, 2005). They are; product innovation (introduction of a new or significantly improved good or service), process innovation (implementation of a new or significantly improved production or delivery method), marketing
innovation (implementation of a new marketing method), and organizational innovation (implementation of a new organizational method in the firm’s business practices).

Chesbrough (2007), highlights that business models are important and that presently, innovation must involve business models instead of just R&D, and technology. The author describes a business model as a series of activities, which will result in a new product or service where there is a net value created. This is depicted in figure 4. He further notes that although business model innovation is difficult, it is an attainable and worthy investment.

Figure 4. Business model triangle derived from Chesbrough (2007).

Source: Own, 2019.

Barjak et al. (2014), explain that it is important to map business model innovations on the previous definitions of innovation of products, processes, marketing, and organizational arrangements. The authors also note that the different types of innovations may occur in different business units, but for a firm to be deemed as innovative, there must be an intersection of the four existing types of innovation. This is shown in figure 5, which illustrates that the business model innovation of an enterprise is based on the intersection of the other four innovation types namely; product, process, marketing, and organizational innovations.
Drucker (2014), states that innovation is the precise instrument of entrepreneurs, however, (Edwards, Delbridge & Munday, 2005), argue that SMEs that identify, interpret and apply knowledge appropriately and effectively all through the organization are deemed as innovative. According to O'Dwyer, Gilmore & Carson (2009), innovation pushes most marketing in SMEs and the competitive edge for SMEs is a result of these innovative abilities. They also stated that innovative smaller firms create new competencies, which can be used to offset any disadvantages encountered due to the size of the SMEs.

Rosenbusch et al. (2011), assert that the identification of a profoundly innovative product, production process, and/or business model characterizes the search for the great knowledge that assures entrepreneurial accomplishment. The authors also note that this approach reflects the assumption that the entrepreneur or SME manager needs an innovative edge to successfully compete against larger existing corporations. More so, it is crucial that enterprises devise the
ability in innovation, quality, and velocity to develop competition capability when challenged with a highly competitive economic environment (Han, 2001; Huang & Liu, 2005).

As a result of increased competition, innovations are highly dependent on a varied set of specific innovation inputs (ideas, resources, information, knowledge, technology) and capabilities, to maintain a competitive advantage, and form a key part of a firm’s strategies (Tavassoli & Karlsson, 2015). Also, Porter (1996), posits that a firm’s strategy involves renewing its core competencies and positioning itself in the market, such that the business is at an advantage and can defend itself from competitive forces. If a strategy is defined as a guide for the allocation of resources so as to attain a firm’s aims, then an innovation strategy guides the decisions as to how resources should be applied to achieve a firm’s aims for innovation and thus provide value and build competitive advantage (Katz et al. 2010).

Similarly, Pisano (2015), argues that a firm’s innovation strategy should be specific on how the different types of innovation fit into the business strategy and the resources that should be apportioned to each. The process of creating an innovation strategy should begin with a clear knowledge of the specific objectives that will help the firm attain a sustainable competitive advantage (Pisano, 2015). Simply put, a firm’s innovation strategy can be said to be a plan, which will enable it to achieve its long-term goals through the use of innovation if its organizational strategy is defined as a plan to achieve a long-term objective (Katz et al. 2010). And although innovation carries with it, risks, and uncertainty, high initial and constant investments, the gains such as price premium for innovative offerings, customer loyalty, distinction from the competition, and entry barricades for potential imitations, far outweigh the costs (Rosenbusch et al. 2011).

2.6 Theoretical Model:

From the review of the extant literature so far, this study has developed a theoretical model given in Figure 6, depicting the interrelationship between the resources and dynamic capabilities, the clusters, the SMEs, digitalization, and the innovation strategy. The examined theories have outlined that SMEs are vital and contribute to the growth of economies and that there have unique strengths but have resource constraints. Also SMEs have the potentials to be successful innovators but most of them lack a clearly defined innovation strategy, and need the support that cluster organizations can give. The themes identified and which the model illustrate, are that SMEs can
adopt digitalization to formulate an innovation strategy, through the support offered by cluster organizations and the efficient use of their dynamic capabilities and resources for digital transformation. This is based on previous studies where the authors state that, a vital part of a firm’s strategies is formed from innovations, which are subject to innovation inputs (information, ideas, technology, resources, knowledge) and capabilities, and that though SMEs are flexible, they cannot manage the entire innovation process alone, but require the cooperation of external actors, which clusters can provide (Tavassoli & Karlsson, 2015; Osarenkhoe & Fjellström, 2017).

Figure 6: Theoretical model on the influence of digitalization on the innovation strategy of SMEs.

Source: Own, 2019 but developed from (Tavassoli & Karlsson, 2015; Osarenkhoe & Fjellström, 2017).
3.0 RESEARCH METHODOLOGY

This chapter gives the details of the method and approach used in this study. Also the trustworthiness and ethical considerations of the research are covered here.

3.1 Ontology:

Sumner & Tribe (2004), describe Ontology as a group of basic assumptions about inter-relationships between phenomena in the world, which is the subject of the research. Some schools of thought view ontology as the study of existing entities, but (Sumner & Tribe, 2004), explain that it is an unambiguous description of how phenomena are presumed to relate to each other. And according to Easterby-Smith et al. (2012), ontology is the starting point for most debates among philosophers and it is about the nature of reality and existence.

Our research study attempts to describe the interrelation between digitalization, SMEs, and innovation strategy. Subjectivist ontology supposes that the outcome of human cognitive processes is what we consider to be the truth and real. Thus, it means we tend to socially construct reality with subjectivism ontology based on our experience in daily activities, but in its essence nothing "real" exists (Kamil, 2011). The social interaction between the individual concerned defines the aspects of digitalization, SMEs and development strategy. Therefore, this research attempts to explain the subjective explanation of phenomena that are discussed, on the basis of the individual views of participants as components of the social world. While digitalization involves objective aspects such as software and tools which are used for implementing it, but digitalization remains part of operations acquired by social actors. The researchers must therefore understand the difference between respondents as individuals and as part of the organizations and the consequences. The authors assume, in support of this option, that while participants engage in similar digital transformation programs, their interpretations of similar questions may not be the same. For example, careful attention was paid when conducting interviews to gather information on the position and job role of the project participant. The current study is based on the ontological position of subjectivism, because it contributes to better understanding of individual approaches, experiences and opinions.
3.2 Epistemology:

According to Sumner & Tribe (2004), epistemology is a branch of philosophy that pertains to the nature, origin, and scope of knowledge and ‘how we know what we know’. Epistemology asks questions such as ‘what is meaningful knowledge?’ and ‘how do we know?’ This is because an important pursuit for ages has been knowing what it entails to have knowledge in a specific area and the contexts that shape knowledge (Perla & Parry, 2011). Easterby-Smith, Thorpe & Jackson (2012), describe epistemology as various ways of inquiring into the nature of the physical and social worlds and has formed the basis for two differing views among social scientists, which are positivism and social constructionism. Positivism is viewed as the best way of investigating human and social behavior, and it holds that the social world exists externally, and the measurement of its properties should be through objective methods and through subjective inference. While social constructionism views reality as socially constructed and given by people (Easterby-Smith et al. 2012). Our study will view reality as socially constructed and given by people to gain knowledge of the phenomena, thus adopting social constructionism.

Epistemology delivers the philosophical support which validates knowledge and the structure for a process that will go through a rigorous methodology and create answers that can be believed to be reliable, valid and representative (Sumner & Tribe, 2004). Knowledge can be claimed if it is both true and believed, indicating that it is justified (Perla & Parry, 2011). In our research, epistemology adds credibility to our work because it offers the process framework and research methods that will produce valid and reliable answers that are justified to the questions we intend to address.

The philosophical view of social constructionism is adopted in this research. The explanation is that the disparity between social actors and how differently firms incorporate digital transformation in their organizations is put in the context of qualitative research layout, just like in ontological context. The social constructionism lens helps people understand the situation, the features of initiatives, the resources and technologies used or can be used by respondents to effectively manage digital transformation. However, the method of digital technology and conversion instruments used from a strict scientific perspective is impossible to study because they are all context-specific and no particular scenario exists. An interpretative approach is therefore most appropriate.
3.3 Motivation:

We, being management students have been inspired by the fact that there is very little existing research on both innovation strategies and digitalization in SMEs, also the resources and capabilities such as information, data, skills, and support for entrepreneurs/SMEs are not clearly known, which motivated us to research further and come up with some better outcomes.

3.4 Methodology:

A blend of techniques used to investigate a specific situation is termed methodology (Easterby-Smith et al. 2012). This explains and motivates the rationale for the chosen methodology for our study. This part describes the research approach, the chosen research design, process, research units, data collection, and ethics consideration used for this research.

3.4.1 Research Approach:

This study aims to shed light on how digital technologies such as software and digital marketing channels are used to develop the innovation strategies of SMEs and how the business models/processes of these SMEs can be facilitated through the application of digitalization. We also focused on the challenges encountered by SMEs during the implementation of digitalization and how these challenges are confronted. Bell, Bryman & Harley (2018), explain that an inductive style of relating data and theory is typically linked with a qualitative research approach and it involves drawing theories from observations and findings. This study takes an inductive stance where our findings will be analyzed with existing theories to draw out new generalizable inferences.

Stewart (2012), explains that a case study facilitates a rich and detailed study of a specific phenomenon, issue or problem to be studied and it is determined by the purpose of the study, while a multiple-case study investigates a particular phenomenon or set of phenomena at a number of different sites. We have chosen to do a multi-case study by examining nine organizations from India, Nigeria, and Sweden, four among them are small and medium scale businesses which are innovative and have adopted digitalization, while the other five are organizations which support SMEs from various industries to formulate innovative strategies and integrate digitalization into their business model. A rich type of multi-case study relates multi-instance studies together, so as
to obtain a deeper perspective of the issue. And unlike a single-case study, multi-case studies are comparative, implying that they are selected for similarities and not their differences (Stewart, 2012). Thus, contributing to a better understanding of the influence of digitalization on the development of the innovation strategies of SMEs, and to the existing literature.

3.5 Research Design:

A research design provides guidance for the research process by describing how a study progresses from analysis to findings. It is an important planning process used for data collection and analysis to improve the understanding of a specific topic (Abutabenjeh & Jaradat, 2018). According to Akhtar 2016, a research design can be described as the structure or plan of the proposed research work, which keeps all the elements of the research together. The research design should be made after the topic, aim, problems, and concepts have been properly defined and formulated. It should capture the plan for the collection, measurement, and analysis of the data. The author further notes that there are four types of research designs, namely, exploratory, descriptive, explanatory, and experimental research designs. This study shall adopt a descriptive research design. Descriptive research describes existing phenomena and is used to identify and obtain information on the features of a particular issue. Descriptive research is used to observe the present situation and describes what the researchers found, and it answers questions such as, what, who, where, how and when. Such a study could be concerned with the opinions of people towards something (Akhtar, 2016). The descriptive research design is appropriate for this study, because we set out to obtain the opinions and perspectives of respondents from the three selected countries, as concerning the concepts of innovation strategy, and digitalization in order to get a better understanding, and research outcome.

Also, Fjellström & Guttormsen (2016), assert that a lack of ‘access’ in international business research can hinder the possibility of the research and that the type and nature of ‘access’ that a researcher seeks must be consistent with other internal elements in the research design. For the purpose of our research, we shall conduct a total of ten interviews for the SMEs and organizations supporting SMEs from both India, Sweden, and Nigeria, and this is subject to the availability of the respondents to partake in the interview process. We chose these countries to conduct our research because we have some level of access to these countries being our countries of origin and
current residency respectively. The research design for our study is depicted in figure 7 below. It displays the number of countries, SMEs, the number and type of cluster/organization, number of respondents, and total number of interviews for the study.

Figure 7: Research design of the study.

Source: Own, 2019.

Akhtar (2016), itemizes the five steps of descriptive research as follows;

**Step 1-** Select the aim/purpose of research

**Step 2** – Method of data collection

**Step 3** – Selection of sampling

**Step 4** – Real collection of data

**Step 5** – Analysis of achieved conclusion

The research steps for our study are illustrated below in figure 8.
Figure 8: Research steps of the study.

Source: Own, 2019.

We have chosen a qualitative research approach because previous analysis detailing qualitative information regarding digitalization/innovation strategies on SMEs was oftentimes not recorded. The data collection and evaluation processes were ambiguous (Forsman, 2011; De Jong & Marsili, 2006; Pierre & Fernandez, 2018). A comprehensive qualitative study was conducted consisting of on-site face-to-face, telephone and Skype interviews with top-level management and mid-level management staff.

3.6 Research unit:

An analytic research unit can be defined as the focus of the case study (what the research study is focusing on), like an individual, a group, an organization, a city, etc. (Grünbaum, 2007). The case units of this thesis are categorized into two units: the SMEs and the organizations supporting SMEs.
with becoming innovative and adopting digitalization. There are some reasons for choosing these organizations as research units.

First, the SMEs chosen for this research are from the small scale segments. The Indian SME among them was just established in the year 2018 and is still making efforts to grow in its operating industry by being innovative and integrating digitalization in its business plans. It is a small educational service provider, offering training to students for international exams and standardized tests. The two Swedish SMEs are a digital firm and a small fashion outlet retailing women wear respectively, where brands are empowered and sales are driven through digital technology. The Nigerian hospital is highly innovative and has differentiated itself in its industry through the use of digital technology. While the organizations offering support to the SMEs are as follows;

Two Swedish non-profit clusters supporting and increasing the competitiveness of SMEs in the region, helping them acquire the right skills for innovations, bringing together IT suppliers, firms, academia, and the public sector, thus creating a network for supporting and developing SMEs.

Two Indian-based IT organizations that develop software for other business firms. They offer training, provide and install IT solutions such as, in-house built software, website development, digital security systems, integrate machines with software or applications for the firms that want to shift to full automation from manual processes.

The Nigerian federal agency is concerned with stimulating and coordinating the micro small and medium enterprises (MSMEs) sub-sector and initiating ideas for the growth and development of SMEs in the country. It links MSMEs to internal and external sources of finance, appropriate technology, technical skills, and also to large enterprises.

Second, although the role of digitalization in various industries has been great, few studies have investigated the connection between the implementation of digital technologies and how it facilitates innovation in SMEs, what identified challenges have been encountered by SMEs with implementing digitalization, and what can be done to overcome such challenges. The selected units were a suitable choice for conducting this research as the firms understand digitalization (having either adopted digitalization themselves or helped SMEs in adopting digitalization).
Third, the selected units are located in different countries which enhances our research as we are able to make international comparisons, get an in-depth understanding of our research phenomena, and obtain more validity and reliability for our findings. The research unit will cover a brief overview of the selected countries and case study of the organizations for the study.

### 3.6.1 Sweden - Overview and Country Profile

Sweden is a lightly populated country, having a population of ten million, about 0.13 percent of the world’s population. Its capital is Stockholm. Its official language is Swedish, the currency is the krona (SEK), and the major religion is Christianity. Its form of government is a constitutional monarchy with a parliamentary democracy. It is the largest third country in the European Union after France and Spain and has a GDP per capita of SEK 455, 200 (2017). Its major exports are machinery and transport equipment, chemicals, plastic and rubber products, electronics and telecommunications equipment, energy products, industrial machinery, vehicles, minerals and foodstuffs (Source: Statistics Sweden). And according to BBC news, Sweden looks essentially secure in its position as one of the world’s most highly developed post-industrial societies. Sweden’s economy is strong and unemployment is low. Public-private partnership is at the center of the ‘Swedish model’ which was developed by the social democrats. The country has a mixed economy and a heavily tax-subsidized social security network. The standard of living and life expectancy is among the highest in the world, and the Swedes enjoy an advanced welfare system.

### 3.6.2 Nigeria - Overview and Country Profile

According to the world bank report 2019, Nigeria is a densely populated nation with a population of approximately 202 million people, accounting for about half of West Africa’s population, a key player in the region, and has one of the largest youth population in the world. The country is culturally diverse and multi-ethnic, having 36 states and a federal capital territory called Abuja. Nigeria has an abundance of natural resources, it is Africa’s biggest oil exporter and has the largest natural gas reserves on the continent, with a GDP per capita of 1,968.56 USD (2017). The country returned to democracy in 1999, its official language is English and has its main religions are Christianity and Islam. After the oil price collapse in 2014-2016, Nigeria’s GDP growth rate fell to 2.7 percent in 2015, and in 2016 the country witnessed an economic recession, where the economy contracted by 1.6 percent. Agricultural growth is still below potential as a result of
continued insurgency in the Northeast, and current farmer-herdsmen clashes. The country’s growth is too low to lift the bottom half of the population out of poverty. There is high food inflation, and employment creation remains weak and inadequate to absorb the rapidly growing labor force. Nigeria’s economy is susceptible to external risks, with increasing public debt, and complex policy interventions by the central bank restricting the private sector growth. And although the country has made some socio-economic progress in recent years, it continues to face developmental challenges, such as the need to diversify the economy and reduce oil dependency, to address insufficient infrastructure, establish effective institutions, resolve governance issues and public financial management systems (World bank report, 2019).

3.6.3 INDIA - OVERVIEW AND COUNTRY PROFILE

According to World Bank data (2019), India is the world's largest democracy, with a population of more than 1.2 billion. In the past decade, economic growth followed the inclusion of the nation in the global economy and now it has emerged as an international player. The population of India is situated in a variety of geographical areas, with various cultures, traditions, linguistic and religious affiliations. The health and stability in the country vary widely. India’s GDP growth rate increased to 2.726 trillion in 2018, while it was 2.653 trillion in 2017.

The Press Information Bureau Government of India, reports the total export figures of India (Combined goods and services) are estimated to be USD 92.33 billion in April-May 2019-20 and have been shown to grow positively by 4.32% over the same period last year. However, net imports were expected to be USD 109.75 billion in April-May 2019-20 *, which shows a strong 5.30% increase as compared to the previous year. Also, as per the data provided by the Press Information Bureau Government of India, the principal commodity export groups showed positive growth during the month of May 2019 are electronic goods, organic and inorganic chemicals, textiles, drugs and pharmaceuticals and engineering goods. However, the principal commodity import groups during the month of May 2019 are pearls, precious and semi-precious stones, fertilizers, crude oils, vegetable oils, electronic goods, and transport equipment.
3.6.4 THE CASE STUDY OF THE CHOSEN ORGANIZATIONS

We have chosen to examine nine organizations from India, Nigeria, and Sweden, four among them are small and medium scale businesses which are innovative and have adopted digitalization, while the other five are organizations which support SMEs from various industries to formulate innovative strategies and integrate digitalization into their business models. The chosen SMEs are from the health care, education, and service industries. While the cluster organizations offer training, support, and digital services to SMEs in their respective regions/countries. We selected these countries to conduct our research because we have some level of access to these countries being our countries of origin and current residency respectively. The study is also not peculiar to an industry or sector but views SMEs in general, and different organizations supporting SMEs in the chosen countries. The definitions of SMEs according to the three countries are given below.

In Nigeria, an SME is a firm employing 10 to 199 persons, and with total assets, excluding land and buildings of more than 5 million Naira ($31,300) but not exceeding 500 million Naira ($3.1 million) (SMEDAN, 2013). SMEs are defined by the European Commission as having less than 250 persons employed, and an annual turnover of up to EUR 50 million, or a balance sheet total of no more than EUR 43 million (Commission Recommendation of 6 May 2003). According to the MSMED Act in 2006, the concept of enterprises in India is composed of both manufacturing and service entities. In the manufacturing sector, SMEs are enterprises with investment in plant and machinery of up to RS. 25 Lakh ($62,500) and above RS. 5 Crore ($1.25 million and up to RS. 10 Crore ($2.5 million). While in the service industry, SMEs are enterprises with investment in equipment of up to RS. 10 Lakh ($25,000) and above RS. 2 Crore ($0.5 million) and up to RS. 5 Crore ($1.5 million). There are several definitions of SMEs depending on the region, the SMEs examined in this study are all within these definitions.

3.7 Data collection and sampling:

The empirical data of the study was from the primary source of information, which include semi-structured, comprehensive interviews with the respondents. Moreover, follow up emails and telephone calls were made to explain or answer further questions for clarification of ideas. The triangulation approach was used to ensure the overall research value. According to Merriam & Tisdell (2015), triangulation is reviewed as best in literature from a post-modern perspective in
order to ensure the accuracy of qualitative research. Triangulation strengthens a study through the combination of methods, by means of various methods or data, either by means of quantitative and qualitative approaches (Golafshani, 2003). This study used non-probability and purposive sampling techniques. According to Etikan, Musa & Alkassim (2016), In a non-probability sampling technique, not all members of the population have the chance of being included, but the researcher deliberately selects the members. Purposive sampling is typically used in qualitative research for the proper utilization of available resources, where the researcher selects participants that suit the purpose of the study, and are willing to offer information based on their knowledge and experience (Etikan et al. 2016). In this study, we set out to interview managers, owners, and top-ranked employees of SMEs and organizations supporting SMEs, who are experienced and crucial to decision making and implementation in their different organizations.

3.7.1. Primary data:

The primary data for this study was obtained from the interview sessions and the chosen respondents are managers and senior employees representing the selected organizations for this research. This was so because they were seen to be well experienced in their business area and knowledgeable about SMEs, clusters, digitalization, and innovation. The data was obtained from ten semi-structured interviews. Bell et al. (2018), point out that semi-structured interview enables the researchers to keep an open mind, about what needs to be known, to allow concepts and theories develop from the data, which is an inductive approach to conceptualization and theorizing. And as earlier mentioned, this study uses an inductive approach.

3.7.2. Secondary Data:

The secondary information has been gathered during the research process which included the content and reports stated on the websites of the companies. In addition, the secondary information includes the University's academic articles and books. Keywords such as digitalization, digital transformation, Innovation, SMEs, Strategy, and clusters were used to search for relevant articles and text for this study through scientific databases with access from the university’s library. According to Stewart & Kamins (1993), in order to arrive at conclusions of overall high quality,
the data from various secondary sources are often combined, which is also less expensive and less
time-consuming. Moreover, through several resources, we were able to increase their quality with
regard to the questions raised in the interview, which was later supported by the secondary sources.

3.7.3. Interview Process:

This was conducted through the use of semi-structured questions formulated from our theoretical
review, and research question with the aim of filling our research gaps. The interview questions
were designed to obtain the respondents’ views and perceptions on innovation strategy,
digitalization, and their applications to SMEs, and also to gain more insights on the constraints of
SMEs, how these could be overcome by adopting digitalization, and challenges/resolutions with
digital adoption. The interviews were conducted through physical, telephone and Skype interviews
with top-level management and mid-level management staff of the selected organizations. They
were all done in secluded and quiet areas to ensure comfort and privacy. The aim of the research
was first explained to the respondents, after which we promised them anonymity and a copy of the
completed thesis if they want. They were then asked open-ended questions to enable a better
understanding, explanation and conversation. As Bell et al. (2018), explained that, conversations
with a purpose reflects on the open-ended nature of the research questions. All interviews were
conducted in the English language spanning 1hr 6 minutes to 22 minutes, giving us an average of
44 minutes. The interviews were all recorded and transcribed. The respondents chosen are
managers and senior employees with academic and professional qualifications, and years of
experience in their fields and managerial positions. The profiles of the respondents are given in
table 1.
<table>
<thead>
<tr>
<th>Respondents</th>
<th>Organization</th>
<th>Location</th>
<th>Position</th>
<th>Experience (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>Cluster</td>
<td>Sweden</td>
<td>Manager</td>
<td>12</td>
</tr>
<tr>
<td>R2</td>
<td>Cluster</td>
<td>Sweden</td>
<td>Manager</td>
<td>20</td>
</tr>
<tr>
<td>R3</td>
<td>IT Firm</td>
<td>India</td>
<td>Manager</td>
<td>7</td>
</tr>
<tr>
<td>R4</td>
<td>SME</td>
<td>India</td>
<td>Director</td>
<td>13</td>
</tr>
<tr>
<td>R5</td>
<td>SME</td>
<td>Nigeria</td>
<td>CEO</td>
<td>27</td>
</tr>
<tr>
<td>R6</td>
<td>IT Firm</td>
<td>India</td>
<td>Manager</td>
<td>6</td>
</tr>
<tr>
<td>R7</td>
<td>SME</td>
<td>India</td>
<td>Manager</td>
<td>5</td>
</tr>
<tr>
<td>R8</td>
<td>SME</td>
<td>Sweden</td>
<td>CEO</td>
<td>13</td>
</tr>
<tr>
<td>R9</td>
<td>SME</td>
<td>Sweden</td>
<td>CEO</td>
<td>30</td>
</tr>
<tr>
<td>R10</td>
<td>Federal Agency</td>
<td>Nigeria</td>
<td>Head ICT</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 1. Profile of respondents.

Source: Own, 2019.
### 3.8 Operationalization of interview questions:

<table>
<thead>
<tr>
<th>Questions</th>
<th>Theoretical references</th>
<th>Theories/Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4, 5, &amp; 6</td>
<td>D’Este et al. (2012), Osarenkhoe &amp; Fjellström (2017), Edwards et al. (2005), Maskell &amp; Kebir (2006), Glăvan (2008).</td>
<td>Clusters (Support for SMEs, from organizations and government policies)</td>
</tr>
</tbody>
</table>

*Table 2. Operationalization of interview questions.*

*Source: Own, 2019.*
The questions were divided into segments traversing the area of the study, and were further operationalized into themes with theoretical references. This is captured in table 2.

3.9 Data Analysis:

The data analysis stage is essentially about data reduction of a large amount of information gathered to make sense of it and in quantitative data, it is by sorting textural material into groups in order to interpret the material (Bell et al. 2018). This involves coding, transcribing, tabulating and the use of graphical representations to interpret the collected data. After which it will be linked to our theoretical framework. The data analysis would be carried out either manually by the researchers or with the use of software applications.

3.9.1 Thematic Analysis:

To enhance our qualitative research, we have employed the thematic analysis for our collected data. According to Braun & Clarke (2006), the thematic analysis is a flexible method of organizing and describing data and it is used to identify, analyze and report patterns or themes within data. The thematic analysis for this study is guided by the six steps recommended by Braun & Clarke (2006). In the first phase, we transcribed the records of the interviews, and read through the data severally, to find meanings and patterns, and noted remarkable comments. Next, we manually arranged the notable parts into codes. After which we formed relevant themes in the third phase. We then reviewed the themes in the fourth stage to ensure that the codes fit the themes. And at the fifth level, we outlined the codes and gave the necessary definitions for the themes. In the sixth and final phase, we presented our reports in a clear and valid way. Table 3 gives the form of our thematic analysis.
<table>
<thead>
<tr>
<th>Codes</th>
<th>Themes</th>
<th>Caption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce, tacit knowledge, unique offerings, low cost, flexibility.</td>
<td>Strengths</td>
<td>The resource based-view and dynamic capabilities.</td>
</tr>
<tr>
<td>Regulations, time, resources, competence, logistics.</td>
<td>Challenges</td>
<td></td>
</tr>
<tr>
<td>Cooperation, joint learning, word of mouth, digital technology, innovative thinking.</td>
<td>Opportunities of SMEs</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>Support to SMEs</td>
<td>Clusters</td>
</tr>
<tr>
<td>Networks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market Access</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy formation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research, national agencies, advocacy, executive orders</td>
<td>Implementation</td>
<td></td>
</tr>
<tr>
<td>Automation, use of digital technology, digital solutions, online access.</td>
<td>Meanings, implications and adoption for SMEs</td>
<td>Digitalization</td>
</tr>
<tr>
<td>Change, choice of technology, what, how and where to digitalize.</td>
<td>Challenges and resolution</td>
<td></td>
</tr>
<tr>
<td>Leadership skills, training, competent hires.</td>
<td>Influence of digitalization on SMEs</td>
<td></td>
</tr>
<tr>
<td>Gain competitive edge, business intelligence, efficiency, developmental tool.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT training</td>
<td>Support received</td>
<td>SMEs</td>
</tr>
<tr>
<td>Mentoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business model innovation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New thinking, transformation strategy Growth, Survival, Customer satisfaction, Cost reduction.</td>
<td>Meanings and Use</td>
<td>Innovation strategy</td>
</tr>
<tr>
<td>Vision, Mission, Budget, Size.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation tool, quality strategy, estimation, paramount.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Thematic analysis Source: Own, 2019
3.10 Trustworthiness:

Trustworthiness refers to the extent to which the findings reflect the personal or experienced experiences of the phenomenon being investigated in an authentic manner (Curtin & Fossey, 2007). A thesis is trustworthy only if it is judged by the reviewer of the research report as trustable (Gunawan, 2015). Positivists generally question the trustworthiness of qualitative research, perhaps because their concepts of validity and reliability in naturalistic research are not addressed in the same way (Shenton, 2004). The idea of exploring true facts through reliability and validity measures is replaced by the idea of defensible 'trustworthiness', which develops confidence in findings and outcomes (Golafshani, 2003). Trustworthiness is further divided into credibility, dependability, transferability, and confirmability (Gunawan, 2015). According to Shenton (2004), credibility refers to internal validity, dependability refers to the reliability, transferability refers to external validity and confirmability refers to objectivity or issues related to the presentation. According to Korstjens & Moser (2018), credibility, transferability, dependability, and confirmability collectively act as a criterion to be followed for the good quality of qualitative research.

In order to increase the credibility of a research, adoption of well-researched methods, the development of the documents about the culture of participating organizations, random sampling, tactics to ensure honest answers by informants, iterative questioning, continuous debriefing by supervisors, peer scrutiny, reflective commentary by researchers, qualifications, and experience of the investigator, thick description of the phenomenon and examination of previous research results play a very significant role (Shenton, 2004). Also according to Korstjens & Moser (2018), constant observation, continuing engagement, triangulation, and member checks are the strategies to confirm and verify the credibility of the research. Therefore, we tried to achieve internal validity by adopting the qualitative research method in which we prepared an interview guide in order to get first-hand knowledge. We asked questions from the research participants and we observed their actions, thoughts, and answers related to a particular business environment setting. We tried to get documents by visiting the websites of various SMEs and organizations helping SMEs with digitalization. We also made preliminary visits to the SMEs. Additionally, we selected managerial level employees as participants from different SMEs and the organizations serving SMEs (collective case study). We also used triangulation methods focusing on individuals as well as
groups from the organizations which includes a wide range of informants or participants. Through triangulation, we found that different participants have different views and experiences regarding different aspects and we used their views against each other.

Also, we encouraged participants to be open regarding the processes of the firms, the experience, and the knowledge they want to share. In order to get the right information, we adopted iterative questions, we rephrased the questions and asked them again and again to the informants. We also had frequent debriefing sessions with our research supervisors and steering group to enable us to discuss alternate approaches, ideas, and perceptions. We also welcomed scrutiny of our research thesis by peers, colleagues, and academics and received their feedback at every presentation seminar during the project. In contrast to the scrutiny by peers and colleagues, we adopted reflection commentary in which we made changes and developed our thesis in a better way. In order to keep member check, we recorded the face to face conversations and telephonic and Skype interviews, we also obtained some information from the respondents through email to ensure that they are aware of what we are going to conclude and add in our research report. Also, we put forth the thick description of the phenomenon under scrutiny for promoting credibility because it aids to convey the real situations that have been investigated during the research. We also examined the findings of previous research studies to assess the extent to which our research results are identical or different from research done in the past.

In transferability, authors provide an exact and detailed research context description of the phenomenon; authors clarify all arguments made; practitioners judge the understanding of findings — transfer to some kind of new set of similar nature (Watkins, 2012). For supporting transferability of our research, we provided a thick description of the phenomenon under our research investigation which allows readers to understand the information provided and message conveyed effectively, thereby facilitating readers to compare the different situations of the phenomenon described in the research report and try to transfer it to their own real-life situations. In order to increase the transferability further, we described the phenomenon from the case studies from different national perspectives and situations (India, Nigeria, and Sweden). We have conducted interviews with several managerial level employees from different companies with different experiences and information which have ensured the enhanced and augmented transferability of data.
To increase the **dependability** in the research, an explanation of the research design and its implementation, in-depth detail of data gathering and reflective appraisal of the research are very important to be followed (Shenton, 2004). Therefore, we explained our research design and how it is implemented. We also described what was planned to be followed during the research process and how we executed our plans on a strategic level. More so, we addressed the minutiae of the research process like what was done in the field by us and every single operational detail for gathering the information. Also, reflective appraisal of the project was done by ourselves, peers colleagues and instructors which helped in evaluating the effectiveness of the process of research conducted.

Lastly, for **confirmability**, we adopted triangulation which plays a very significant role of triangulation in promoting confirmability and to reduce the effect of investigator’s biases during the research. We used triangulation, as stated in data collection and sampling, in search of coherence between the primary and secondary data, ensuring the improved reliability of the research conducted. According to Shenton (2004), in order to reduce the effect of research biases, the role of triangulation in promoting confirmation must be emphasized.

### 3.11 Ethical Considerations:

Research is a profession, researchers are professionals, and research ethics as a branch of applied ethics has well-defined rules and guidelines that define researchers’ actions and conduct (Akaranga & Makau, 2016). In any research study, the integrity of human subjects by applying appropriate ethical principles is essential. Ethical considerations have a special significance in qualitative research, due to the rigorous nature of the study process (Arifin, 2018). Research ethics are critical throughout our everyday research efforts and require researchers to preserve the integrity of their subjects and to well-publish the data being researched (Akaranga & Makau, 2016). According to Arifin (2018), informed consent and voluntary participation, anonymity and confidentiality, data analysis and dissemination, data protection, ethical approval by research institute, cultural and linguistic barriers and managing distress during an interview are the important ethical issues which should be considered while conducting research.
For informed consent and voluntary participants, we properly informed the participants about the research and we informed them about the phenomenon to be emphasized and they had the freedom to decide whether to give us access to information related to their organization. We also asked them for their consent to record the interviews. But, once they are no longer necessary, the interview recordings will be deleted. In the process of data compilation, evaluation, and reporting of study findings, participants’ confidentiality and anonymity are maintained. Their names and identities were not released. The interviews were individually conducted in a noiseless and isolated area. Data transcription was performed using earphones in a private room to prevent other people from hearing recordings. The participants’ identities, including their names or any important identity elements, were omitted during data transcription. The participants are referred to in abstract quotes by their coded names when discussing the results of the report. Our appreciated supervisors requested and granted ethical approval in writing to the participants. Transcripts were communicated by password-protected email between the authors. The storage of information on a university computer, computer or laptop, hard disk, and portable drives was protected using the passwords held only by the authors. During the interview, we were also aware of different backgrounds with various mother languages and three different cultural backgrounds. There were two instances of an Indian woman and an Indian man, they could participate, but could not have been found comfortable to speak fluently in spoken English. Consequently, they have chosen to answer questions via email. We provided the opportunity to stop the interview to the participants if they felt that it would lead to physical or psychological damage. They also had the choice to end and proceed with the interview only when they were ready. Besides, one of our Swedish participants postponed the interview because he was ill, another participant likewise postponed the interview to make funeral arrangements for his father but we did not force them, rather we were patient with them.

3.12 Quality Criteria:

Researchers claimed that the quality of qualitative research is linked to the concepts of reliability and validity and these both are necessary components of quality. However, errors and mistakes during the research can be committed by the researchers. Therefore, qualitative researchers must
take reliability and validity into account during research design, analysis of results and evaluating and ensuring the quality of the study (Cypress, 2017). Each phase of research logistics (from theory creation, study design, sampling, data acquisition and evaluation to findings and conclusions), should be clear or systematic enough and must be validated and reliable for the good quality of the research (Leung, 2015).

**3.12.1. Validity:**

In qualitative research, validity refers to "the degree of appropriation and logic" of the methods, processes, and information (Leung, 2015). Validity refers to a well-founded or reasonable justification that is relevant, meaningful, logical and confirms accepted principles or the quality of being sound, fair and well-founded (Cypress, 2017). In general, researchers determine their validity by asking a number of questions and often look for answers in other scholars' research, which includes usage and generation of valid and reliable information (Golafshani, 2003).

As discussed in detail previously in trustworthiness, we have tried to take into account the perspectives of the respondent when making our analysis so as to make our study as reliable as possible in terms of validity. We have also been aware from the start that our own opinion will affect the analysis and how we interpret our results, why we have attempted in every phase to be as objective as possible. We justified each finding by the statements given by the scholars and we followed the recommendations of academic researchers in order to attain validity in our research.

**3.12.2. Reliability:**

According to Leung (2015), reliability refers to the accurate replicability of the operations, procedure, and performance. Reliability refers to the concept of replicability, repetitiveness, and reliability of tests or observation. Thus, the more often one replicates the results of a study, the more reliable or accurate is the phenomenon of the study (Cypress, 2017).

As far as reliability is concerned, we claim that a similar study would lead to similar findings in the same sense for SMEs but in different countries, which is also discussed previously in
trustworthiness. We have attempted to be as descriptive as possible in explaining how this study is carried out to ensure that our research meets the accuracy criterion. In order to ensure better reliability of the research carried out, we also used triangulation.

3.13 Limitation of research method:

The inductive method has been criticized that no amount of empirical data can necessarily enable theory building and that theories are often used as a background for qualitative investigations (Bell et al. (2018)). Besides, our interviews conducted were also subject to the availability of the respondents to participate within the given time frame. Furthermore, although a multi-case study spanning three countries and organizations from various industries gives a broader perspective of the phenomenon being studied, a narrow and more specific conclusion can be drawn from a single case study.
4.0 EMPIRICAL FINDINGS

This chapter entails the primary data collected for the study. It shows the various opinions of the respondents. The findings are grouped into five themes which are; (Strengths, challenges, and opportunities of SMEs), (Support for SMEs, from organizations and government policies), (Meaning, adoption, challenges, and influence of digitalization for SMEs), (SMEs, innovation and digitalization), (The use and factors influencing innovation strategy for SMEs).

4.1 Resource based-view and Dynamic capabilities

The themes covered here are the strengths, challenges and opportunities of SMEs as opined by the respondents.

4.1.1 Strengths

Here, six of the respondents agreed that employees are a unique strength for SMEs, others views are management, unique offerings, willingness to develop, tacit knowledge, service delivery, lower costs of running business, lower liabilities, agility, quick adaptation, resilience, focus, and less competition.

“Loyal and experienced employees, tacit knowledge” (R1).

R1 remarked that experienced employees, who have gained tacit knowledge over time and remain loyal to the firm are strong points for SMEs.

“The willingness to develop, decentralized management, the platform for connectivity” (R2).

According to R2, SMEs have the will to do better, less hierarchical system of management which makes communication within faster, and there is already a platform for connectivity in the region.

“Lower costs of running business, lower liabilities, less competition” (R9).

R8 commented that SMEs do not have a lot of liabilities, have smaller operational costs because it does not require much capital to start small and that they experience less competition.

“An SME is agile and can adapt more quickly than a larger enterprise” (R9).

For R9 flexibility is an advantage for SMEs as compared with bigger corporations.
4.1.2 Challenges

Some challenges experienced by SMEs in their different regions are presented as follows.

According to R1, “new laws are always coming up, for small companies, things like these could be very difficult to handle in a quick way, it’s very difficult for them to stand up to international competition”.

R1 suggested that frequent regulatory changes are an issue for SMEs because it is hard to adjust swiftly, and that it is tough for SMEs to compete internationally.

“Time, resources, competence and how to find people are the challenges for SMEs” (R2).

As stated by R2, these are constraints encountered by SMEs because of their size.

Where R3 stated that “failure in timely delivery, tracking of purchase, sales orders and logistics, theft or fraud done by the employees, warehouse management, records maintenance and integrating different departments are the various challenges faced by SMEs”. R6 and R8 are in agreement with R3 and said the challenges were, “keeping track of their different processes like logistics, stock management, managing accounts, late deliveries, data maintenance and logistics impediments”.

R3, R6, and R8 are in concurrence implying that proper monitoring and evaluation of processes, deadline failures, logistics problem and stealing done by staff are impediments for SMEs to grapple with. R4 stated that “targeting customers, marketing, accounts making, maintaining reports are the challenges faced”.

R4 hinted at issues with finding the right niche or markets, as well as handling of reports are the difficulties SMEs have to deal with.

While R10 concurred with R5 who stated that “lack/cost of funds, and properly trained employees, multiple taxations, government approval, lack of power, and lack of information, are the main challenges faced by SMEs”.

Both R10 and R5, shared the same views that poor funding, lack of information, dearth of competent staff, power outages, numerous taxes, and securing approval are hurdles for SMEs.
For R9, “meeting the demands of varying workloads and balancing the human resources”.

Here R9 indicated that prioritizing tasks and managing the workforce are drawbacks for the SMEs.

4.1.3 Opportunities

The respondents stated that SMEs can take advantage of the opportunities in their business environment by working and co-operating and learning together, by management, by digital systems, by good online marketing, by good word of mouth and by innovative thinking or design thinking, and building an agile team. While both R1 and R2 emphasized more co-operation between SMEs, R3, R4, and R6, focused on management, digital systems, and online marketing, good word of mouth, workforce, and digitalization respectively. On the other hand, R5 focused on innovative thinking, R8 said monitoring changing trends, repeat customers and activities of competitors, while R9 said building an agile team and quick response to customer changing needs, and R10 said by staying focused and resilient.

“Work and learn together” (R1).

R1 suggested that SMEs can achieve more with opportunities such as working and learning together in their locations.

“More cooperation” (R2).

For R2 a good opportunity for SMEs to overcome their challenges is more cooperation with themselves such as planning, and joint purchasing.

“With the help of management and digital systems” (R3).

R3 opined that opportunities such as digital systems and management are advantageous to SMEs.

“Through innovative thinking, what people would call design thinking” (R5).

While R5 felt that SMEs can come up with new ideas through design/innovative thinking that is suited to their businesses.

“Referrals, online adverts and good word of mouth” (R7). For R7, good word of mouth, online adverts through social media and referrals from existing clients are opportunities for SMEs.
4.2 Clusters

Several forms of support are offered to SMEs as noted by the respondents with varying forms of implementation.

4.2.1 Support to SMEs

The cluster / organizations’ respondents jointly indicate that they support SMEs through training, networking, support, grants, business information, capacity building etc. All respondents agree that there are government policies supporting SMEs in their regions.

According to R1, R2, R3, and R6, they all provide support for SMEs through inspiring them, providing training, financial contributions, and negotiations, creating awareness by organizing programs and seminars, creating a network to connect people with each other and to IT firms, resolving technical issues, offering software solutions and website development. R1 and R2 are more into connecting IT organizations and SMEs, providing training and encouraging SMEs to adopt digitalization while R3 and R6, provide training, technical support, develop and install software and websites for SMEs. R10 said through grants, business plan/support, advocacy, market access, cluster development and formation of policies for SMEs.

“Inspire, train, connect them with IT firms and offer financial contributions” (R1).

For R1, support is given to SMEs by way of mentoring, training, provision of platforms and funding in order to surmount some of the challenges.

“Create awareness to companies, in terms of transformation, organize programs, training, seminars and create a network to connect people to each other” (R2).

R2 explained that assistance is offered to SMEs to overcome their challenges by way of sensitization programs, training, and forums for networking.

“We resolve technical issues, and offer software solutions and development, competency skills, website development, biometric attendances, automation, digitalization updates, end of day tracking and e-CRM. We provide standardized/customized packages, depending on the customer’s requirements” (R3).
According to R3, help is given to SMEs through the software training, installation, and customization, to build their competence and surpass their challenges.

“By providing grants, business information/support, advocacy, cluster development, market linkage/access, business plan/ capacity building, and formation of policies for SMEs” (R10).

R10 specifies that support to SMEs is through the provision of market access, business information, funding, policies and advocacy.

4.2.2 Implementation

As per the interviews conducted, R1 said they work with specific industrial SMEs while R2, R3, R6, and R10 stated that they are open to providing support to all SMEs, irrespective of their industry types.

“We are open to SMEs from any industry” (R2).

R2 explained that they work with SMEs from all industries and that they are not selective.

"We provide digital solutions to all types of industries” (R6).

For R6 assistance is offered to SMEs from all types of industries.

All the respondents stated that the government is encouraging the growth and development of SMEs in their country at a good pace, unlike R5 who stated that the government is supporting but not at a good pace. R1 and R2 stated that government agencies implement governmental policies by funding research projects and through national agencies. While R3, R4, R6 R7 and R9 explained that the government provides training to potential entrepreneurs and funds new enterprises on a small and medium scale. However, R5 stated that he has not personally experienced such help from the government so he has no idea about it. And R8 said government is creating an enabling environment for SMEs. R10 said implementation is through executive orders and advocacy.

“By funding research projects if it includes SMEs and it would benefit SMEs” (R1).

R1 stated that the government funds research projects that help to develop SMEs.
“Funds through national agencies and transferring them to clusters, for built systems and programs that are connected to these monies for SMEs” (R2).

According to R2, the funds flow through national agencies to systems and programs made for SMEs.

“Personally for me, I have not seen any way they help in SME development. Maybe they have a way of doing that” (R5).

R5 had a different opinion and does not know how the implementation is effected because he has not received any support.

“They are implemented through executive orders and advocacy” (R10).

R10 said that the policies supporting SMEs in his region are applied by means of advocacy and executive orders meaning though recommendations and government directives.

**4.3 Digitalization**

The respondents gave various definitions of digitalization, but all agreed that it was important to SMEs and that it aided innovation. Some challenges were also identified with SMEs implementing digitalization and several suggestions were given to overcome them.

**4.3.1 Meaning, Implication and Adoption for SMEs**

The respondents defined digitalization in different ways, R1 defined digitalization “as the use of technologies”, R9 concurred with R1 and added that it is “to create business models around digital solutions”.

Both R1 and R9 said that digitalization is the application of technologies, in addition R9 explained that it also involves developing business models that are digitally oriented.
Whereas R3 said, “digitalization means making everything available on the internet where there is no need for people to appear physically for e.g., online banking.” Both R6 & R7 agreed with R3 and said ‘it means using internet and software for making processes online and easier’

For R3, R6 and R7, digitalization denotes internet access where things are done online, and processes are simpler. R2 described digitalization as data plus data put together to information towards an effect for a need. And according to R4 & R8 digitalization is the integration of digital technologies into everyday life.

Also, R5 defined digitalization as “movement from the manual process to the digital process in all manners of paperless processes.” R10 said, “changing from analogue”.

The change from manual or analogue systems to digital technology is digitalization as explained by both R5 and R10.

As for the implication of digitalization for SMEs, the interviewees had the following to say.

As per R1, “digitalization for SMEs is an opportunity, as something they could use and be beneficial to them”.

R1 hints that digitalization for SMEs is an avenue for SMEs to gain a competitive edge.

While R2 stated it as “a developmental tool for SMEs”.

By implication R2 means that it is a device through which SMEs can develop and grow.

According to R3, digitalization for SMEs is making use of digital technologies, which is important for the business of SMEs (input/output). R5 explained it as efficiency, taking out the manual barriers, automating the system, and so things happen a bit faster. R9 said, more effective ways to run the business, and new revenue sources. From these statements, digitalization implies efficiency for SMEs which results in better outcomes, and discovering new profits.

The SMEs respondents, R4, R5, R7, R8, and R9 have adopted digitalization successfully.
4.3.2 Challenges and Resolutions

As for challenges encountered with implementing digitalization, R1 stated that change is the biggest challenge while implementing digitalization.

“Understanding, grouping and prioritizing what (the need), how to digitalize (the technology), and where to apply the technology for the business” (R2).

R2 suggests that SMEs adopt digitalization because it is important but do not know what, how, and where to effect it, which becomes an issue for them.

R3 said that the SME owners often get confused in making a choice on software, and the users do not understand how to use software or websites. According to R4 & R7, learning to use the software and operating a website was difficult, also implementation stopped their business activities for some time. R5 stated that moving from manual processes to automation was difficult while they were trying to train their staff for using digital platforms. More so, R8 said budget allocation and agreed with R6 who said, staff are not ready, need training and further training, owners of the companies think it is expensive, sometimes do not get satisfaction and demand customization of the software, and want it installed in a short time. R10 said, expensive broadband, power issues, and low literacy level are the issues.

“Choosing the right technology and platform, and changing processes that’s been around for a long time is also very challenging” (R9).

R9 agreed with R1, that the change process is challenging but also noted like R3 that choosing the right technology and platform is also difficult for SMEs.

When asked how to overcome the identified challenges,

“More leaders have taken leadership courses, and should continue to hire the right competence” (R1).

R1 said that the leaders took courses in leadership for managing the staff, and honing their leadership skills, and that the SMEs should try to hire the right competence.
While R2 stated that SMEs should continue to take small steps by identifying what to digitalize, how to digitalize, try to use other methods, not standards, get new supply chains, new partners, and new cooperates. Whereas R3 stated that they had several meetings at different levels in the SMEs, trying to convince them by explaining benefits, provided training for workers in every department, and that the workers were motivated by the management. Also, negotiations are usually made with company owners, for subsidized rates. R4 & R7 explained that they took extra training and made changes by customizing their software and websites.

“A lot of training for staff, and getting them to key into the idea” (R5).

R5 stated that they provided a lot of training for their staff, and tried to convince them to accept the idea.

R6 agreed with R3 and explained that they try to convince the users before installation of the software benefits, provide knowledge through training, offer some free training classes and negotiate with them if they cannot afford more paid training. R8 said they had awareness seminars and shared the company’s vision. R9 said, the change process is all about patience and communication, as well as testing and benchmarking platforms and technology before decision. R10, said it is still a work in progress.

Furthermore, all respondents agreed that digitalization has helped SMEs gain a competitive edge and stay in the market.

**4.3.3 Influence on SMEs**

As for the influence of digitalization on SMEs, all respondents had their own views, R1 stated that SMEs can use it in their production, marketing, after-sales service and can get innovation ideas from their customers.

“It is a way of thinking about development, more or less the way of thinking innovation. It’s definitely a tool for innovation and changing the business model” (R2).

R2 means that digitalization is a way of thinking about development for SMEs, and that it provides the instrument for effecting the needed changes in the business.
R3 stated that SMEs can use digitalization for managing their resources, to predict upcoming risks, which customers should be the next target and the ways to reach those customers. According to R4 and R6, digitalization helps SMEs in keeping records, observing future risks and opportunities, this way it helps in making something new or make changes in processes. Furthermore, R6, explained that it helps SMEs to observe future risks and opportunities and in making changes in their business process and innovate new. R7 & R8 said digitalization helps in monitoring changing market trends. And for R9, it is looking at all parts of the business for optimization. R10 said, it is by engaging in research.

“Through business intelligence and data, if you can get data from your digital process, then you can know how to be more innovative” (R5).

R5 hints at collating data obtained through the application of digital technology and customer feedback to acquire business intelligence, and identify areas needing improvement, which brings about innovation.

R4 stated that website and software helped them to change their business model and now it is running successfully. R5 stated that digitalization made their business model more efficient. R8 said it helped to maintain the business model and R9 said it was a part of their DNA.

### 4.4 SMEs

The respondents have differing views about support from other organizations, probably due to their different locations/countries but they mostly agree that they innovate their business models over time.

#### 4.4.1 Support Received

R4 & R7 said that they receive support from an IT organization, R8 said no, and R5 went further to say that due to the nature of his country, one does not get support. While R9 got mentoring and funding at the start.

“I receive support for the IT segment of my company from an IT company” (R4).
According to R4, assistance for technical issues is provided by an IT outfit within the region, to help overcome the challenges encountered as an SME with digitalization.

“Everything you need is paid for, so the answer is typically no!” (R5).

R5 explained that he has not received support as an SME, although there are public policies supporting SME development in his region.

“At the start, we got both mentor support and funding for starting and developing the company” (R9).

For R9, there was assistance offered at the inception of his business in the form of funding and mentoring.

4.4.2 Approach to Innovation

As for the SMEs’ approach to innovation was effected on the business model. R4 &R7 said they do often innovate their business models but when there is an opportunity or a lack, some changes are made.

“We have periodic business retreats, once in six months, and at that time, make a little tweak around our business model” (R5).

R5, explained that they have periodic business retreats twice a year, which avails the opportunity to review their activities and adjust their business model. While R8 said once a year.

“Our core business model has stayed the same for a very long time. Maybe it’s time to innovate it!” (R9).

R9 explained that their central business model has been intact for a long time and suggested that they would probably review it for changes afterwards.
4.5 Innovation strategy

The respondents all have several definitions of innovation and innovation strategy, but in summary, innovation is making something new or an existing one better, while innovation strategy is a plan to do it. Some respondents say not all SMEs have an innovation strategy, but they all agree that it depends on the firm and that an innovation strategy affects the business of SMEs.

4.5.1 Meaning and Use

R1 said innovation means making something better. For R2, it is thinking new and setting up the time to think in new ways, making small efforts and gradual steps for new transformation, to develop the business.

“Thinking new, and to establish some kind of space, forum, or ability to actually set up time to think in new ways. Like small continuous steps, towards some new transformation, a horizon, to develop the business” (R2).

Similarly, R3 said it is making something new or better, out of the box, and not in the market through R&D. R4, R7, R8 & R6 also agreed with R1 and R3, that it means making something better, new and unique. R5 and R9 agreed with R2, that it means transformation, harnessing new and bolder ideas to get different and better results. While R10, said, improving the system for better performance.

Innovation strategy according to R1, it’s about finding driven people with ideas for future entrepreneurship. For R2, it’s finding the time to think in an innovative way. R8 agreed with R3 who described it as a way or plan to innovate, while R4 concurs with R3 by defining it as a plan to grow market share/profits through product and service innovation. R5 suggests that innovation strategy is a means to satisfy customers and stay ahead of the competition.

R5 views it as “a transformation strategy to outwit competition or satisfy customers more”.

And R6 & R7 said, a plan to innovate new products. While R9 said, innovation strategy would be to have a clear internal process to review all parts of the business constantly and a crucial part of an innovation strategy should also be trend spotting. For R10, it is a plan to improve.
As for innovation strategy on the business of SMEs, R1 said it makes them evolve, R2 said the effect grows quite fast (‘hockey stick effect’), from the awareness to taking the first step, to see more possibilities. R3 itemized the effects positively in several processes of the SMEs. R4 concurred with R3, stating that it makes processes quicker and standardized. R5 also agreed that the effect was positive but highlighted that SMEs must have the capacity to manage change because innovation can be disruptive sometimes. R8 also said that it can bring about noticeable changes and R9 says it makes work effective, and R10 said, it reduces cost and increases output. However, R6 said, “It helps in making profits, covering market, reducing the cost of production, increasing customer satisfaction by customization”.

R6 implied that an innovation strategy would reduce expenditure, increase profits, market share and customer satisfaction. R7 agreed with R6.

4.5.2 Factors Influencing Innovation Strategy for SMEs

When asked if all SMEs have an innovation strategy, R1, R2, R6, R7 & R8 responded in the negative, R3 & R10 said not every SME, and R4 said it is dependent on the SME. However, R5 thinks they should have or will die because it is a survival means for business done formally or informally. R1 and R2 thought that bigger firms are more disposed towards an innovation strategy, R3 agrees but states that it totally depends on the company. R7 & R8 agree with R4, who reiterates that size does not matter, but that it depends on the vision and mission of the SME.

“I think an education service provider and a manufacturer both can have an innovation strategy. Size does not matter, innovation strategy depends upon the vision and mission of the SME” (R4).

R5 agrees with R4 that even startups need to transform, and innovate to grow, stating that innovation is core to business transformation. While R6 said no, R9 believes many SMEs do not have a clear innovation strategy.

4.5.3 Influence of Digitalization on Innovation Strategy

All respondents stressed the importance of digitalization and its influence on the innovation strategy of SMEs. R1 said that ‘SMEs are all aware now of the need to catch up with the digital
world for survival’. R3 said it aids higher efficiency and quality strategy. While R7 concurred with R2 who said that “digitalization is a tool that can develop innovation”.

According to R4, it helps in estimating opportunities and future challenges, which assists SMEs in innovation. However, R5, stated that it enables data mining and analysis and that it is all about business intelligence. While R6 explained that, it helps in keeping customer base, helps to get how much scale of production should be done, helps in getting risk and opportunities and thus help in making future plans and innovating new business models. For R9, right now, digitalization is the main focus for many SMEs. And R10 said, it helps SMEs compete globally and get things done faster. R8 highlighted the influence of digitalization on innovation strategy for SMEs.

R8 stated that, “digitalization was paramount in shaping our innovation strategy”.

4.6 SUMMARY OF FINDINGS

Employees are a unique strength for SMEs, besides which are decentralized management, unique offerings, connectivity, willingness to develop, tacit knowledge, service delivery, lower costs of running business, lower liabilities, agility, quick adaptation, resilience, focus, and less competition. Some challenges experienced by the SMEs in their different regions/countries were new laws, standing up to international competition, time, resources, competence, process failures, employee theft/fraud, targeting customers/markets, lack/cost of funds, and properly trained employees, multiple taxations, government approvals, lack of power, lack of information, logistics impediments, meeting the demands of varying workloads, balancing the human resources and keeping track of their different processes.

However, ways to take advantage of opportunities in their business environments were cooperation with other SMEs, management, applying digital systems, good word of mouth/customer loyalty, innovative thinking, building an agile team, quick response to customer changing needs, workforce, monitoring changing trends, repeat customers, activities of competitors, and digitalization. The cluster/organizations support SMEs through training, inspiration, networking, grants, business information, capacity building, and financing. There are government policies
supporting SMEs in the regions/countries but at different levels of implementation, and implementation through research, national agencies, advocacy, and executive orders.

There are numerous definitions of digitalization, but it all points towards data, digital technology, and automation, and it is viewed as vital for SME development and growth. Some challenges encountered with implementing digitization were the reluctance to change, determining what, how, and where to digitalize, choice of software, choosing the right technology and platform, managing the change process, budget allocation, expensive broadband, power issues, low literacy level, and the cost. But these were overcome with leadership training for managers, digital learning, training and motivation for employees, awareness of the benefits, some free training and price subsidies. Testing and benchmarking the platforms and technologies before decision. And also discussing and convincing staff on the importance and benefits of digitalization, sharing the firm’s vision, and managing the change process with patience and communication.

Innovation is generally viewed as making new or better things or transformation, while the innovation strategy is the plan for innovation. Not all SMEs have a clear innovation strategy but it is crucial for survival. Bigger firms tend to be more innovative but it really depends on the company, its budget, its vision, and its mission. Also, SMEs with an innovation strategy adjust their business models from time to time. The importance of digitalization and its influence on the innovation strategy of SMEs, cannot be overemphasized as it is a developmental tool for SMEs driving efficiency, business intelligence, growth and survival, increasing customer satisfaction, estimating opportunities and risks, and helps SMEs compete globally.
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*Table 4. Summary of findings. Source: Own, 2019*
5.0 ANALYSIS AND DISCUSSION

This chapter reveals an in-depth analysis of our findings. Our results will be discussed in relation to our theoretical framework and research question. Here, our themes will be operationalized into three parts for the analysis.

5.1 The resource based-view and dynamic capabilities

Kim et al. (2015), assert that the resource-based view (RBV) and the dynamic capabilities (DC) help in the understanding of the firms’ utilization of resources to acquire a competitive advantage. Bromiley & Rau (2016), further note that the RBV aims to gain a sustainable and competitive edge based on the resources that businesses have which are vital, useful, profitable, unique, and difficult to duplicate. These views are supported by the respondents who agree that SMEs have internal resources and unique strengths such as such as loyal workforce, decentralized management, unique offerings, connectivity, willingness to develop, tacit knowledge, service delivery, lower costs/liabilities, flexibility, resilience, and less competition.

However, successful innovation is a function of the firms’ combination of a range of capabilities such as; effective networks with other firms, access to finance, availability of skilled employees, and understanding the market needs (D’Este et al. 2012). Thus to properly harness what they have, the SMEs, need support from other organizations to create awareness and guide them. This is because, as highlighted by (Borch & Madsen, 2007), SMEs encounter peculiar problems, lack resources, need unique capabilities to create resources for innovative and progressive strategies. Similarly, Zhu, Wittmann & Peng (2012), point out that innovations in SMEs are more uncertain particularly because of their nature, hence they require support and encouragement, thus calling for more research on their needs. These are also revealed in our findings, where the respondents noted that challenges encountered by SMEs include, new regulations, meeting international competition, time, resources, competence, process failures, poor funding, multiple taxations, lack of power/information, logistics impediments, prioritizing tasks, and managing the human capital.

Therefore, cluster organizations are crucial to SMEs because of the support and platform for connection that they provide, as (Edwards et al. 2005) notes that public policy initiatives are concerned with enhancing the innovative potential of SMEs to encourage economic development
at all levels. While our theoretical framework does not state how these public policies are implemented or the degree of implementation, our study revealed that there are government policies in place for the covered regions but are at varying levels of implementation, some at a good pace and for others not so. Some means of implementation of the policies were observed to be through research, national agencies, advocacy and executive orders. Although the reasons for the different levels of implementation is not clear, it could be suggested for future studies.

While Glăvan (2008), views a set of industries that gain efficiency through co-location as a cluster and notes that they have become an objective of economic policy. Such support as gathered from our data are; mentoring, training, financial contributions, awareness through programs and seminars, grants, business information, capacity building, creating networks to connect people with each other and to IT firms, resolving technical issues, offering software solutions and website development. This is echoed by Osarenkhoe & Fjellström (2017), who point out that cluster initiatives offer a platform for businesses (SMEs & MNEs) to effectively interrelate with themselves and other institutions by way of working and learning together.

5.2 Digitalization

Our study reveals that market needs are changing and that firms need to be innovative to take advantage of the available opportunities in their business environment, which is asserted by (Parida, 2018), who states that businesses ought to be swift in this digital age and fast-paced global business environment, where new business models are being designed, and the relationship between firms and consumers are being reformed. Some highlights from respondents are that, digitalization is a way of thinking about development, more or less the way of thinking innovation for SMEs. Digitalization helps SMEs in predicting future risks and opportunities, in making changes in their business process and to innovate. Through business intelligence and data, one can know how to be more innovative. These statements are in agreement with (Scuotto et al. 2017) who assert that digital platforms can enable SMEs to overcome resource constraints and create value in their business relationships with suppliers and customers, and also (Karimi & Walter 2015), who note that the dynamic capabilities of firms that are clearly related to building digital platform capabilities.
While there are several definitions of digitalization, our findings show that it is, “data plus data put together to information towards an effect for a need” and “digitalization is the integration of digital technologies into everyday life”. These descriptions are reflected in one of the definitions adopted by our study, which is the diverse socio-technical phenomena and processes of adopting and using digital technologies in extensive individual, organizational, and social contexts (Legner et al. 2017).

Although Demirkan et al. (2016), highlight that digital technologies have altered the face of business, creating huge opportunities for innovative managers and entrepreneurs, SMEs have been known to encounter challenges with implementing digitalization and their digitalization level is still below the industry average (Gierlich et al. 2019). These are strengthened by our findings where noted challenges with adopting digitalization are choice of technology and platform, understanding how to apply digitalization, and managing the change from manual to automation. However, suggestions for surmounting the impediments from our study, include taking small steps, training, hiring the right competence, developing leadership skills, motivation, communication and patience.

And though our respondents are from various organizations, industries and countries, there seems to be a consensus amongst them as regards the importance of digitalization for SMEs. Our respondents noted the significance of digitalization and what it means to SMEs by stating that, digitalization for SMEs is an opportunity, a way to efficiency, a developmental tool for SMEs which is important for the business of SMEs (input/output). These statements support Sedera et al. (2016), where they point out from previous studies that digital platforms are cost-effective, easier to use and have the potential to drive innovation in firms.

From our findings, all respondents have adopted digitalization and agreed that digitalization can be used to develop innovation and that it has helped the SMEs stay competitive as supported by Dibrell et al. (2008), where they point out that IT offers firms a competitive competency, through innovation by differentiating them in the market.
5.3 Innovation strategy

According to Sundbo (1997), innovation refers to the application of any new problem-solving ideas. And to Schumpeter (2017), innovation is the industrial or commercial application of something new, such as a new product, process or production method, a new supply source or market, a new form of commercial, business, or financial organization. Our respondents have several definitions of innovations, however, they are all enshrined in the above definitions. Some definitions are as follows; “thinking new or ability to actually set up time to think in new ways” “building something new, something not in the market or to make things better through R&D”, “to make something better, new and unique”, “a way in which we are able to harness new ideas in improving what we do”, “trying out bolder ideas”

While Katz et al. (2010), state that innovation strategy is the strategy governing innovation in business, they point out the lack of existing literature defining innovation strategy, due to the fact that only a few firms have an explicit, documented innovation strategy and numerous definitions of innovation and strategy. Our respondents gave several definitions of what an innovation strategy is, “it’s finding the time to think in an innovative way”, “a way or plan to innovate”, “a plan to improve”, “a plan to grow market share/profits through product and service innovation”, and “a transformation strategy to outwit competition or satisfy customers more”. “A crucial part of an innovation strategy should also be trend spotting”.

We have also discovered that some SMEs have an innovation strategy, while others have not and this is dependent on several factors, although they all operate in a competitive business environment. There are different standpoints revealed, where some of our respondents do not think all SMEs have an innovation strategy and think that it depends on the size, others differ noting that, it totally depends on the company and that size does not matter but that the innovation strategy depends upon the vision and mission of the SME. While some insist that even start-ups, need to transform and innovate to achieve growth, while highlighting that innovation is core to business transformation.

Our study further reveals how digitalization influences the innovation strategy of SMEs, which answers our research question. All respondents stressed the importance of digitalization and its influence on the development of the innovation strategy of SMEs. They revealed that, SMEs are
all aware now of the need to catch up with the digital world for survival and presently digitalization is the main focus for many SMEs, a tool that can develop innovation, aids higher efficiency and quality strategy. It helps in estimating opportunities and future challenges which assists SMEs in innovation. SMEs can compete globally and get things done faster through digitalization, which also enables data mining and analysis, and that is all about business intelligence. These statements are buttressed by Tavassoli & Karlsson (2015), who asserts that innovations are highly dependent on a varied set of specific innovation inputs (ideas, resources, information, knowledge, technology) and capabilities, to maintain a competitive advantage, and form a key part of a firm’s strategies. And is supported by Demirkan et al. (2016), who explains that digital transformation will enable firms to address market needs faster than before, resulting in greater innovation.
6.0 CONCLUSION

The concluding chapter discusses our research aim, question, and theoretical model. It also highlights the contributions of this study, its limitations, and suggestions for further research.

6.1 Discussion of Aim and Answering Research Question

Our research aim is to increase the understanding of the influence of digitalization in the development of the innovation strategy of SMEs. The findings from the study reveal that an innovation strategy is a plan to innovate/improve, which includes creating the time to think in an innovative way in order to grow market share and profits, through product and service innovation to outwit the competition, and to satisfy customers more. In essence, through an innovation strategy, value is added both to the firms and customers.

Our findings reveal that not all SMEs have an innovation strategy, bigger firms tend to have more capacity to be strategic and innovative. However, the study also shows that formulating an innovation strategy for SMEs does not wholly depend on the size, but on the firm, determined by its mission and vision. The study further emphasizes that innovation is core to business transformation, and crucial for survival, hence all SMEs irrespective of size or industry should have an innovation strategy.

Moreover, to determine the influence of digitalization in the development of the innovation strategy of SMEs, we formulated a research question. How does digitalization influence the innovation strategy of SMEs? The study shows that digitalization is an opportunity and a tool that can develop innovation, increase higher efficiency, create new revenue sources, helps SMEs compete globally, and aid quality strategy. Digitalization also helps in tracking business processes, monitoring production, eases logistics, helps in estimating opportunities and future challenges, through data and business intelligence, which assists SMEs in innovation, thus becoming strategic.
6.2 CONTRIBUTION OF THE THESIS

6.2.1 Theoretical contribution

This study attempts to examine the influence of digitalization on the development of the innovation strategy of SMEs, a concept that is currently under-researched, because the current literature tends to focus on large corporations rather than on SMEs. This study also adds new insights to the literature on international business by conducting a multiple case study on SMEs and organizations supporting SMEs from three different countries with different economies and levels of advancement. While we set out to find the similarities across the regions from a global perspective, there were also some observed differences.

Our theoretical model was reviewed, showing confirmation of our theories but with some new perceptions from our findings captured in figure 9. Our study revealed that for SMEs, there is a certain level of awareness for digitalization, but there are challenges with the knowledge of digitalization and adopting digitalization such as understanding what, how, and when to digitalize, choosing the right technology and platform, as well as coping with the changes, and the human factor. The findings suggest some ways through which the identified challenges can be overcome, such as taking small steps, developing leadership skills, training, communication, hiring the right competence, and sharing the firm’s vision.

The study illustrates that digitalization is an opportunity and a tool that aids the development of the innovation strategy of SMEs, but also reveals that crafting an innovation strategy is determined by the size, budget, vision and mission of the SME. Other factors influencing the development of the innovation strategy of SMEs could also be suggested for further studies. In addition, our findings show that not all SMEs have received support from cluster organizations, and although there are public policies to support SME growth and development in place for the regions covered in the study, the means of implementation of such policies are different and the implementations are at different levels. The reason for the observed differences is not clear, we thus suggest for future research, factors for the implementation of public policies for SMEs. We also proposed a definition of digitalization in the study.
The reviewed model in figure 9 below confirms the theories from our literature review but also incorporates the new insights from our findings.

Figure 9: Reviewed theoretical model on the influence of digitalization on the innovation strategy of SMEs.

Source: Own, 2019.
6.2.2 Managerial contribution

This study reveals that SMEs can overcome some of their resource constraints by cooperating more, learning together and responding to customer changing needs quickly. Managers who have taken leadership courses are better equipped to motivate and inspire employees. The managers must also have the ability to convince everyone of the benefits through patience and communication because the human factor is necessary for efficiency in inputs/outputs. Also, because the business environment is dynamic and constantly evolving, SMEs must build capacity to accommodate changes, because change hurts and is worse if they are unprepared.

6.2.3 Societal contribution

Our findings show that digitalization is the application of digital technologies to everyday life, and its influence is widespread. Also in this current digital age, customers have more digital awareness and access to information through the internet, on computers and other mobile devices, hence the demand for more digital offerings is on the rise. Thus, SMEs with their limited resources can take advantage of the opportunities that digitalization offers, and drive sales and market penetration through digital tools and social media forums.

6.3 LIMITATIONS OF THE RESEARCH

The study examined the phenomena in three different countries, the business environment, and economic factors for the implementation of government policies encouraging SME growth and development in the regions/country were not covered as we could only give a brief overview of the selected countries. Also, since the study involved more than one country, physical interviews could not be conducted for all respondents, which made us use telephone/Skype calls, and even so, the cultural background, accents, and understanding of the English language varied for some of the respondents. So we used emails for follow up to get better clarification, where necessary. This would probably have been different if we had a physical meeting.
6.4 RECOMMENDATIONS FOR FURTHER RESEARCH

While the study examined SMEs in general, more SMEs and clusters within a specific industry or sector, and region could be considered for further study. This is because our multi-case study spanning three countries and organizations from various industries gives a broad and global perspective of the phenomenon being studied, a narrow and more specific conclusion can be drawn from a specific case study.

Also, other factors that can influence the innovation strategy of SMEs (such as the business/operating environment, organizational structure, and management) should be examined. Furthermore, more research is needed to focus on the implementation of public policies to boost SME development in the area of innovation and the application of digital technologies, as SMEs are crucial to the growth of any economy. This is suggested because not all SMEs have received assistance from cluster organizations, and there are also observed differences in the means and level of implementation of the public policies supporting SMEs in the regions.
APPENDIX

FIRST INTERVIEW GUIDE (CLUSTER/AGENCY/IT ORGANIZATIONS)

Introduction

- Date of interview
- Name
- Title
- Position
- Years of Professional experience
- When did you begin working with this organization?
- What is your role in this organization?
- What is your professional background/qualification?

Main Functions of the organization

- What products or services does your organization offer?
- How does your organization support SMEs in the region? E.g. activities, finance, competence, knowledge, information, networks, programs, etc.
- Do you select and support SMEs from specific industries?
- Are there government policies encouraging the growth and development of SMEs in your country/region?
- If yes, how are they being implemented?

Innovation Strategy

- What does the concept of innovation mean to you?
- What is an innovation strategy?
- Do all SMEs have an innovation strategy?
- Does it depend on the industry and/or size?
- How does an innovation strategy affect the business of SMEs?
How can SMEs take advantage of the opportunities in their business environment?

What are some of the challenges encountered by SMEs in their business environment?

What unique strengths and capabilities do SMEs have?

**Digitalization**

What is digitalization?

What does digitalization mean for SMEs?

How can SMEs use digitalization to develop innovation?

How can digitalization change the business model/processes of the SMEs?

How does digitalization influence the innovation strategy of SMEs?

What challenges can be identified with SMEs implementing digitalization?

How were the identified challenges overcome?

Has digitalization helped the SMEs stay competitive?

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**SECOND INTERVIEW GUIDE (SMEs)**

**Introduction**

- Date of interview
- Name
- Title
- Position
- Years of Professional experience
- When did you begin working with this organization?
- What is your role in this organization?
- What is your professional background/qualification?
Main Functions of the company

- What products or services does your organization offer?
- Can you please describe some of the primary procedures/processes of your firm? E.g. purchasing, production, service delivery, marketing, distribution, and sales, etc.
- Does your firm as an SME receive support from other organizations/cluster/agencies?
- If yes, is such support industry-specific?
- Are there government policies encouraging the growth and development of SMEs in your country/region?
- If yes, how are they being implemented?

Innovation Strategy

- What does the concept of innovation mean to you?
- What is an innovation strategy?
- Do all SMEs have an innovation strategy?
- Does it depend on the industry and/or size?
- How does an innovation strategy affect the business of SMEs?
- As an SME, how can your firm take advantage of the opportunities in your business environment?
- What are some of the challenges encountered in your business environment?
- What unique strengths and capabilities do SMEs have?
- What innovative strategies have you engaged in for your firm’s business?
- How often do you innovate your business model?

Digitalization

- What is digitalization?
- What does digitalization mean for SMEs?
o How can SMEs use digitalization to develop innovation?

o How can digitalization change the business model/processes of the SMEs?

o Has your company adopted digitalization?

o If yes, did it change the business model of your company?

o How does digitalization influence the innovation strategy of SMEs?

o What challenges did your firm encounter with implementing digitalization?

o How were the identified challenges overcome?

o Has the implementation of digitalization facilitated the procedures/processes of marketing/purchasing/supply chain/sales/service delivery/production/logistics ...?

o If yes, can you please explain?

o Has digitalization helped your firm stay competitive
REFERENCES


