

FACTORS INFLUENCING SMEs PERFORMANCE WITH THE MEDIATOR OF RISK MANAGEMENT IN SUDAN

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Abstract

Small and Medium-sized Enterprises (SME) performance in Sudan is in downturn and calls for research-based solution. This research is theorized based on extensive literature survey through which a conceptual model is developed and discussed. Among the targeted population of 600 respondents from the SMEs manufacturing sector, a total of 398 questionnaires were valid to use. In this study, the SPSS software was used to analyse the collected data. The finding shows that the six perceived factors, operational, environmental, organizational committed, technology, staff capacity and decision maker, positively impact SME performance. The proposed conceptual framework is an exceptional and all-inclusive model that will expectantly improve the relevant body of literature and serve as useful guide for stakeholders on how the performances of SMEs can be boosted to enable them catch up with the SMEs' performance level of the developed countries in order to boost the economy of Sudan as a nation. The government should create appropriate education and training programs to help SMEs have not been successful. Lastly, the limitations of the current study and avenues for future research are discussed.

Keywords: Small and Medium-Sized Enterprises (SME), Risk Management, Organizational Performance

1. INTRODUCTION

The Republic of Sudan was the largest country in Africa and the Arab world by area before the secession of South Sudan in 2011. It is bordered by Egypt to the north, Libya to the northwest, Chad to the west, the Central African Republic to the southwest, South Sudan to the south and Ethiopia to the southeast and Eritrea to the east, and the Red Sea to the northeast. The Nile River divides the territory of Sudan into eastern and western halves. The capital, Khartoum, is located at the confluence of the Blue and White Niles, the two main tributaries of the Nile. Sudan is in the middle of the Nile Valley Basin. Sudan has a population of about 41,801,533 (2018 estimate) and an area of 1,886,068 square kilometers (728,215 square miles), making it the third largest country by area in Africa and the Arab world.

Sudan is characterized by the great diversity of natural and human resources represented in the abundance of the most fertile agricultural lands in the world, the diversity of water sources and the abundance of primary raw materials, in 2010 the imports in Sudan reach 9,176 billion US dollars (Rania Ezaldeen, 2019). The imported commodities consist of foodstuffs, medicines, manufactured goods, oil devices, equipment, chemicals, clothing and wheat. And the export revenues reach 10.29 billion US dollars (Rania Ezaldeen, 2019). The country acquired a prominent place in the socio-economic development of the macro and small-scale segment in last 5 decades. The primary sector to productive non-farm employment, manufacturing and service business activities plays a vital role in spreading the benefits of economic growth

among the masses by drawing surplus work.

Even though the amount of literature on managing risk in manufacturing SMEs had increased in recent years, its practise is still disorganised (Falkner and Hiebl 2015). Not many systematic reviews have been carried out on this subject. Regardless of the growing significance of Risk Management (RM) among safety practitioners, there is still insufficient evidence to prove the effective implementation of RM practice in the manufacturing sector, predominantly in Sudan. Dabari and Saidin (2018) expressed concerns that very few organisations in Sudan have implemented government-led safety policies. Moreover, there are scarce studies on the effectiveness of RM practice in Sudan manufacturing sector (Umeokafor, 2018). Dabari and Saidin, (2018) commend the Bank of Sudan for asserting that in a holistic assessment, RM is still in a developing phase in Sudan and some challenges overpower it. These challenges include lack of RM professionals, meagre understanding of RM, inconsistencies in RM trainings, and lack of a systematic framework that supports the development of trained and skilful workers in the various industries (Dabari and Saidin, 2018).

Furthermore, it is essential to differentiate between managing business risks and production risks. Ugwuanyi and Ibe (2015) reiterated that most literature reviews concentrate on business risks rather than production or operational risks while Fadun, (2017) emphasised that Sudan SMEs have been hindered by drawbacks in RM traditional approaches, as RM is rarely embarked on in a systematic and integrated manner. Also, the literature surrounding the phenomenon of risk in research papers suggests the importance of RM in manufacturing industries internationally. However, critically evaluating these literature shows significant gap(s) in the textile manufacturing sector that needs filling. The SMEs involved in manufacturing encounter both internal and external challenges in carrying out their daily tasks. This creates risks and reduces industry performance regarding production output, production capacity, human resources, market share and financial losses (Verbano, and Venturini, 2013). Thus, it is crucial for SMEs to sufficiently prevent and mitigate these potential risks to ensure their continued existence in the manufacturing sector. The research gaps identified, based on the literature review during the preliminary study for this research, though more research gap (s) has been identified and discussed continuously throughout this study. These research gaps helped in establishing the Research Aim, Research Objectives and Research Questions (RQ). Furthermore, the researcher will address the research gaps by providing answers to the RQ and using research methodology.

2. LITERATURE REVIEW

The resource-based view (RBV) has become one of the most influential and cited theories in the history of management theorizing. It aspires to explain the internal sources of a firm's sustained competitive advantage (SCA). Its central proposition is that if a firm is to achieve a state of SCA it must acquire and control valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities, plus have the organization (O) in place that can absorb and apply them (Barney, 1991a, 1994, 2002). This proposition is shared by several related analyses; core competences (Hamel & Prahalad, 1994), dynamic capabilities (Helfat & Peteraf, 2003;

Teece, Pisano, & Shuen, 1997) and the knowledge-based view (KBV) (Grant, 1996b). Given its elegant simplicity and its immediate face validity, the RBV's core message is appealing, easily grasped and easily taught. Yet the RBV has also been extensively criticized for many weaknesses. Critiques are valuable for advancing the RBV, for by exploring its limitations they imply where improvements might be made. Along these lines we categorize and assess the eight categories of critiques available so far, adding comments about their severity and impact. Our analysis suggests the RBV's core message can withstand five of these critiques quite well, especially when the RBV's variables, boundaries, and applicability are more clearly specified. However, three threaten the RBV's status as a core theory. These concern the indeterminate nature of two concepts fundamental to the RBV – resource and value – plus there are problems with the RBV's narrow explanation of a firm's competitive advantage. As we shall argue, the common theme underlying these critiques is that the RBV has clung to an inappropriately narrow neo-classical economic rationality and has thereby diminished its opportunities for making further progress. Leveraging from the critiques and the discussions they have provoked, we suggest directions for future theorizing and research. We shall argue the way forward, perhaps, is to move the RBV into an inherently dynamic and subjectivist framework such as Penrose's (1959).

The Penrosean and Barnean resource-based verdicts contribute to the most popular and widely applied theoretical approach to understanding firm growth. While Penrose's theory considers recombining resources to ensure firm growth, based on the Penrosean legacy, Barney (1991) emphasizes exploiting resources that meet VRIN (valuable, rare, inimitable and non-substitutable) criteria to achieve competitive advantage and coined this strategy as 'resource-based theory' (RBT; Wach, 2020). According to RBT, firm-specific resources can be categorized as resources that serve as the foundation of a firm's competencies (Grant, 1996; Learned et al., 1969) and competitive advantage (Hall, 1993). The resources can be classified as tangible and intangible. The intangible resources being inaccessible in the factor markets and relatively inimitable due to their uniqueness, causal ambiguity and social complexity significantly influence the firm's success (Kamasak, 2017) and (Samuel & Mole, 2018); and as a competitive advantage will ensure superior profits for the firms (Coynes, 1986).

The RBT helps identify the basis by which the resources and capabilities of a firm serve as sources of sustained competitive advantage (Barney, 1991; Wernerfelt, 1984). RBT deals with the business environment through the lens of the firm's internal environment. Hence the theory often substitutes Porter's five force model. When a firm's abilities yield a competitive advantage, it will add value to customers, introduce new products, or expand market share. RBT also confirms that not all internal resources will be considered as strategic and cause competitive advantage. This advantage is achieved only when there is a condition of heterogeneity and immobility of resources (Madhani, 2010). The VRIN resources cannot be transferred or purchased easily, and thereby ownership of such resources helps small firms to outperform rivals (Adnan et al., 2018). In this fast-paced globalized world, a firm with VRIN or VRIO ('O' denoting organized) resources would be more agile and flexible to sustain a competitive advantage.

The Resource-Based View (RBV) is a widely used framework in strategic management that suggests that a firm's resources and capabilities are key drivers of competitive advantage and long-term profitability. However, the RBV has been subject to criticism for its theoretical gaps and limitations. One of the primary criticisms of the RBV is that it tends to focus too much on internal factors and overlooks the importance of external factors, such as market dynamics, customer needs, and industry trends. This criticism suggests that the RBV framework may not fully capture the complexity and unpredictability of the business environment.

Another limitation of the RBV is its lack of a clear and systematic approach to identifying and measuring resources and capabilities. Some researchers argue that the RBV relies too heavily on subjective judgments and lacks a rigorous methodology for assessing the true value and potential of a firm's resources and capabilities. Additionally, the RBV does not provide clear guidance on how to manage and develop resources and capabilities over time. While the framework emphasizes the importance of leveraging resources and capabilities to achieve sustained competitive advantage, it does not offer practical recommendations for how firms can systematically build and strengthen their resource bases. Overall, while the RBV has been a valuable framework for understanding the sources of competitive advantage, it is important to recognize its limitations and use it in conjunction with other theoretical perspectives and management tools.

The Technology, Organization, and Environment (TOE) Framework was developed by Tornatzky & Fleischer (1990), and is consistent with the Diffusion of Innovations Theory (Rogers, 1983). The TOE Framework proves to be useful for studying the adoption and assimilation of different types of information technology innovation (Oliveira & Martins, 2010). The TOE is a useful and adaptive framework to explain adoption behavior in relation to three types of technological innovations, namely applied innovations for technical tasks, innovations for business administration, and innovations embedded in the core business processes of an organization (Ramdani & Kawalek, 2007; Swanson, 1994). The TOE Framework identifies three aspects of an organization's context that influence the process of adopting and implementing a technological innovation, namely, technological context, organizational context and external environmental context.

Conceptual Framework

Enterprise risk management practices among SMEs in Sudan can be seen through the adoption and extended use of enterprise risk management (ERM) in the organizations. From the review of literature, a conceptual framework using Thong's DTOE model will explain clear determining factors of ERM adoption by SMEs.

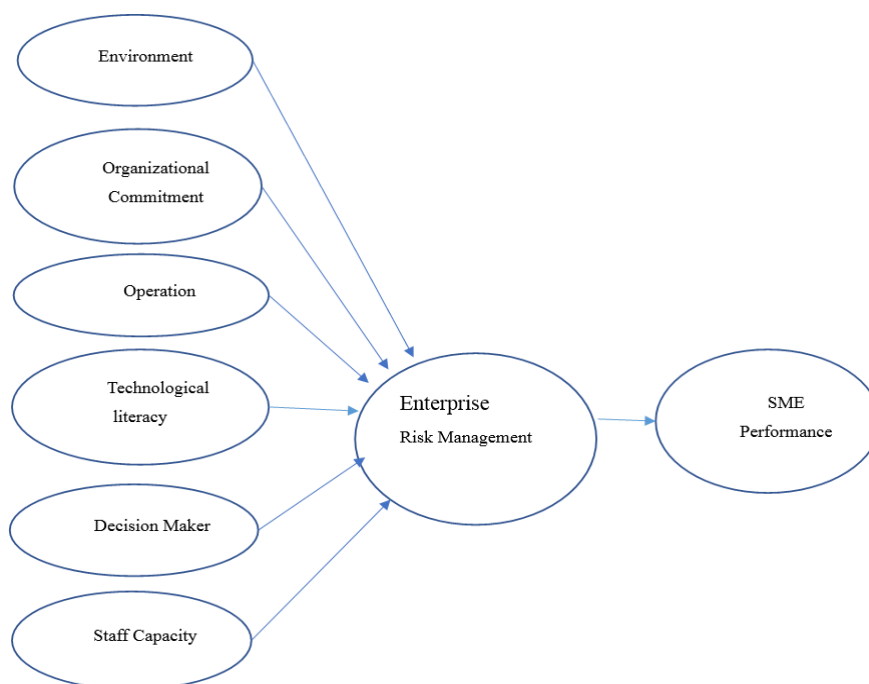


Figure1: Research framework

Hypotheses

This section of the paper highlights the linkage and the influence of the independent variables could have on risk management implementation in the Sudan industry. In the section also, the mediating effect of risk management in the firm on the postulated variables of the study was also discussed.

SMEs have highly centralized structure (Thong, 1999) and as a decision maker, top management usually refer to the chief executive officers (CEO's) or owner managers of the firm (Wan Nur Syahida & Azwadi, 2013) has made most of the critical decisions. The decisions made including the daily functions or activities to future investments. The most crucial factor for small firms seems to be a very strong relationship between the company and its owner, which entails the consequences in all areas of the company, especially in the early stages of development (Ropega, 2011). Commitment of decision maker towards implementation of SMEs is crucial (Grant et al., 2011). At the level of SMEs, decision maker will be the owner of the firm. SME owners are very knowledgeable about risks and the growth strategies (Vadiveloo & Aguirre, 2013). Although some firm will establish a risk management team, the mandate from the owner-manager is needed to make sure the organizational goal is achieved (Burnaby & Hass, 2009). The risk either managed by the owner themselves in case of micro enterprise or the risk owner if there is a risk management team. Within the limits of the risk owner's accountability, the risk owner decides either to accept the risk as is or to take further steps to mitigate it. If the risk owner accepts the risks as is, the risk is monitored and reviewed in the normal future course of risk management processes. If the risk owner decides to mitigate the

risk, the process of risk mitigation is defined (Aabo et al., 2001).

Furthermore, risk management enables SME owner-managers to objectively evaluate their actions (Yolande Smit, 2012). Committee for Sponsoring Organization of the Treadway Commission (COSO) notes that value is created and performance is enhanced by management decision. Examples of the decisions made by management include considering the risk appetite, setting objectives, identifying risks, identifying risk responses, considering risk alternatives, and assessing capital needs for the risks (Gates, Nicolas, & Walker, 2012).

Technological context describes both the internal and external technologies relevant to the firm (Oliveira & Martins, 2011) It includes current practices and equipment internal to the firm, as well as the pool of available technologies external to the firm (Tornatzky and Fleischer, 1990). System integration in technology enhance firms with enterprise-level data management, robust business and data analytic, straight-through transaction processing and more effective reporting and information sharing (Lam, 2014). Technology provides relative advantages to SMEs. Technology change leads to the introduction of new products, changes in methods and organization of production, changes in the quality of resources and products, new ways of distributing the products and new way of storing and disseminating information. Nowadays, one of the important technologies that possess by SMEs is information communication technology (ICT). The use of ICT has grown and changed with increasing rapidity, its adoption can be related to not only multinational corporation but also SMEs (Maguire, Koh, & Magrys, 2007). However, the decision on the choice and the implementation of technology in SMEs are different from those in larger firms. Without knowing the important of adopting technology, SMEs may be expending their limited resources and energy on less important factors (Grant et al., 2011).

In risk management, information and database of risks is important and part of the need to top management makes sound decision associated with risks. For a database of risks to be useful, the information possessed by people within the organization must be collected, made comparable, and continuously updated. SMEs must be able to communicate common risk across all of their businesses to analyse and manage those risks effectively (Nocco & Stulz, 2006). Technology has a very big impact upon SMEs and has an important effect on the level and type of investment that takes place in an economy and contribute to economic growth (Philip, 2011). Competitive advantages from the use of technology will help SMEs to outperform larger firms (Chong & Pervan, 2007). Information technology is normally applied in places of work such as banks, train station, hospitals, schools and business offices. It is used to improve efficiency of tasks and to keep records for future use. Information technology facilitates merging of risk management requirements and data integration from different business units within an organisation (Althonayan, Keith & Misiura, 2011). Additionally, the use of cutting-edge information technology (IT) was perceived as a main external driver (Liebenberg and Hoyt, 2003) as risk management needs much computing power (Segal, 2011). This discovery has aided firms to collect better-quality records for definite risks, model compound risks, measures risk more accurately, and improved understanding of the interdependencies across a firm operating unit (Jablonowski, 2001). The enhanced user-

friendliness of outsourcing opportunities for innovative IT modelling activities has made risk management available to firms that are in need of specialized risk related knowledge. Nonetheless, new research evidence proposes that the implementation of risk management is slowed down by organizations' apparent lack of technological gears (Liebenberg & Hoyt, 2003). Information technology simplifies and reduces manual task skills and therefore strengthened all forms of production and explorations Lucey (2005), especially in the oil and gas industry. Some of the benefits of IT include provision of regular and consistent risk information, boost the capabilities of technology infrastructure to aid new functional requirements wanted by a business and enable a firm to carry out stress testing and enhanced risk reporting. This could facilitate in risk management implementation.

The relationship between technological literacy and SME performance via risk management practices can be explained with the evolutionary theory of economic changes. This theory emphasized the requirement of searching for innovative solutions to enhance the performance of business organizations (Nelson, 2009). Furthermore, the evolutionary theory of economic changes underlines the requirement of identifying new variables, which contributes to successfully dealing with this competitive business climate. In this digitalized business environment, technological literacy empowers managers to navigate the global economy and to identify innovative solutions to financial and business matters (Limsarun, 2015 and Gutiérrez, 2016). Accordingly, technological literacy expands the scope of knowledge, as well as promotes the acquisition of skills and innovativeness of top management and, thus, enhances SME performance. Moreover, improved knowledge and skill with regard to technology will contribute to the implementation of a strong internal control system, particularly risk management practices that will promote the performance of SMEs.

Technological literacy can contribute to SME performance in different manners. Generally, SMEs respond to technological changes in different ways. For instance, SMEs having low technological literacy rely on traditional strategies, while SMEs with high technological literacy put in use that knowledge to deal with the technological changes (Ramsey, 2008). Furthermore, technological literacy also influences SME policy decisions that, in turn, could affect their risk management practices (Kapurubandara, 2007). From this viewpoint, we suggest that the relationship between technological literacy and SME performance can be mediated by some internal factors like risk management practices. Sound risk management practices would be vital in organizational decision-making especially in long-term planning and strategy implementation. Higher technological literacy enables managers to develop and implement sophisticated organizational ERM systems and has a positive influence on strategic decision-making, cost reduction, and operations of organizations, thereby contributing to SME performance (Meidell, 2017). Accordingly, we hypothesize that ERM practices represent a significant mediator between technological literacy and SME performance. Organizational context refers to descriptive measures about the organization such as scope, size and managerial structure (Oliveira & Martins, 2011). This context also refers to the characteristic and resources of the firm including linking structures between employees, intrafirm communication process, firm size, and the number of slack resources (Baker, 2011).

Organizational commitment is a requisite to make sure ERM can be implemented and practices efficiently. As an organization's size increases, the scope of events threatening it is likely to differ in nature, timing, and extent. In addition to having a greater need for more effective enterprise-wide risk management techniques, larger entities may have greater ability to implement ERM due to greater resources (Beasley et al., 2005). Employees' knowledge of ERM is important, as they are part of the organizations. As one of distinctive features of ERM is its integrated approach, adequate organization choices are fundamental to spread the risk culture, to gain commitment to the program from the personnel, and to guarantee that the ERM process is affected in the correct way and policies and procedures are respected (Monda & Giorgino, 2013). Characteristics of the firm are seen as internal environment to a business and are demonstrated in terms of; organizational structure, size, ownership and management (Anderson et al., 2004).

In this study, these characteristics would be analysed using firm size, ownership structure, complexities, influence of key stakeholders, role of shareholders and directors in management decisions. In this situation, the hiring or forming of risk management function and the implementation of ERM as a cohesive method can also come directly from firm's board of directors (Yazid, Razali & Hussin, 2012). Equally institutional ownership with majority shares could influence decisions to adopt and implement risk management (Tahir & Razali, 2011). The complexity here means nature of the business, lines of business, products lines and partnerships with other companies. This could influence ERM implementation intensity, as businesses are frequently associated with hazards and incidences. According to Waweru & Kisaka (2012) the size of a firm is often mirrored in the number and form of assets it owned. So, as companies own large number of assets, the larger the organization is; the more complex its operations will grow into and consequently its exposure to hostile events increases. This exposure could influence ERM effectiveness and intensity.

The environment context is the arena which the firm does business (Tornatzky and Fleischer, 1990). This arena includes industry, competitors and dealings with the government (Oliveira & Martins, 2011). In addition, the presence or absence of technology services provider and the regulatory environment are also included in the environment context (Baker, 2011) Uncertainty about environmental and organizational variables reduces the predictability of corporate performance, that is, increases risk. The general environmental uncertainties correspond to factors that affect the business context across industries. General environment uncertainties include political instability, government policy instability, macroeconomic uncertainties, social uncertainties, and natural uncertainties (Miller, 2013). The environment is what gives SMEs their means of survival; satisfied customers are what keep an organization in business. However, the environment is also the resource of threat. For example, hostile shifts in market demand new regulatory requirements, revolutionary technologies or the entry of new competitors (Philip, 2011).

Staff capacity is the ability of staff to understand the various risks in their places of work and their effect on the operation and performance of the organisation. If the employees are aware of all the risks they would try to identify and report potential incidence. Staff capacity on ERM

is mostly attained through learning and training. According to Mullins (2010), learning is a continuous process that is inevitable, acquiring skills on the business operations and environment turbulence emanating from continued changes facing business today. Once staffs have the skills, compliance to risk management culture of the firm will be smooth. Consequently, it would influence ERM implementation intensity in a firm. All the relationships and perceived effects or influence of the independent variables on the effective implementation of ERM and the intensity of such implementation could, as an end result, reduce wastage, cost, lead-time, improve productivity, quality, safety of people and the environment that lead to an improved operational excellence and by extension a gateway to firm performance (operational and financial) and ultimately, increase firm value.

There are risks related to key people and their career planning, the composition and the orientation of the Board of Directors, the orientation of the human resources and employment, information technology systems, accounting, auditing and control systems, regulatory compliance, design errors, productivity and disruptions in operations and supply chain. The operational risks are more subtle spread throughout all areas of daily activities of a company and it is therefore more difficult to be addressed as it is required wider and more complex mitigation strategies. When implementing the operational streamline processes, adopting IT tools (e.g. ERP) and defining policies for purchasing, SMEs have been found to reach far more beneficial outcomes than their naïve counterparts. While this effect has been often studied in financial institutions the evidence in the SME sector is lacking. In this dissertation research methodology refers to a set of plans and procedures to be followed to investigate if risk management is a critical success factor for SME in Sudan Industrial area. To investigate if ORM was a determining factor in the success of the SME's in the owners and managers' opinions and perspectives. Creswell (2009) states that "individuals seek understanding of the world in which they live and work".

In adopting ERM there are various finding that indicate the relation between ERM and firm performance. ERM is presumed to lower a firm's overall risk of failure and thus increase the performance by adopting a systematic and consistent approach to managing the risk holistically (Gordon, Loeb, & Tseng, 2009). In general companies that adopt an ERM approach have experienced significant improvements in business performance (Lam, 2014). However, these companies mostly are financial companies since ERM at beginning is practiced by financial industry. Financial companies are found to adopt ERM not only because of the compliance to corporate governance but also good business practices and improved decision making. This contributes to their business survival and value creation. In contrast the non-financial public listed companies in Malaysia are found to adopt ERM because of corporate governance (Manab, Kassim, & Hussin., 2010). Despite of the finding, there is still non-financial aspect such as high morale among staffs and fellow employees, motivation and continuous desire to excel at workplace are elements of EWRM program as a value-added tool (Hussin, Yazid, & Razali, 2012). In addition, ERM can enhance and improve performance of audit and risk management executives in identifying risks events and manage related risks from other agencies and regulating bodies (Hudson, Smart, & Bourne, 2001). As companies implement an ERM process, the new knowledge it offers them such as objectives, risks, oversight,

information and communication, and the internal environment leads to enhanced management, as evidenced by increased management consensus, better informed decisions, better communication with management regarding risk taking, and increased management accountability. This enhancement leads to improved performance (Gates et al., 2012; Heneghan, 2008).

The importance of enterprise risk management as a link between company strategy and SME performance was studied by Rehman and Anwar (2019). The researcher sent out a structured questionnaire to 327 Pakistani SMEs. Structural Equation Modelling was used to analyse the data in Amos (SEM). Business management has been found to have an impact on SME performance, with enterprise risk management functioning as a moderator. Furthermore, corporate risk management has a minor impact on SME performance, according to this study. As a result, senior management strategic action is necessary for proper and successful business risk management procedures, which can lead to higher profitability (Rehman & Anwar, 2019).

Another research paper that studied on enterprise risk management done by Ade et al. (2020). The purpose of this study is to see how enterprise risk management practises affect the survival of SMEs in Lagos State. A cross-sectional survey was used to collect data from 400 SMEs in Lagos State, which was then analysed using descriptive and inferential statistical tools. Enterprise risk management has been proven to have an impact on the survival of SMEs in Lagos State. As a result, the researcher urged SMEs to use enterprise risk management as a vital business function that can help them survive. Furthermore, the government should continue to educate SMEs about the benefits of ERM and impose required enterprise risk management rules to compel them to use it (Ade et al., 2020).

Yakob et al. (2019) have also researched the impact of enterprise risk management practices on SME performance. Multiple regression analysis methodologies were used to analyse the data in this study. The researcher argues that organisational resources are the most important factor impacting organisational success, according to the Resources Based View Theory (RBV). The paper argued that effective enterprise risk management in SMEs can reduce the firm's risks and lead SME managers and owners to achieve their business objectives. The researchers recommended SMEs to use enterprise risk management strategies in order to boost their firm's value, optimise profits, and improve their overall performance (Yakob et al., 2019). These previous studies in line with research done by Kulathunga et al. (2020) who found that enterprise risk management practises positively impacted the SME performance. Enterprise risk management is used as a mediator between financial literacy and SME performance in this study (Kulathunga et al., 2020). Effective enterprise risk management allows managers to predict the possibilities and challenges that may arise as a result of global economic shifts, allowing them to establish appropriate long-term plans and strategies to boost organisational performance (Yilmaz A.K. and Flouris T., 2017). A previous study by Sutan Maruhan et al. (2018) also proved that ERM was widely studied by earlier researchers in several industries. However, the researcher found limited number of empirical researches that examines the relationship between enterprise risk management and firm value (Sutan Maruhan et al., 2018). Thus, Sutan Maruhan et al. (2018) developed an effective measurement for enterprise risk

management called the enterprise risk management index to fulfil the gap found in enterprise risk management. According to Sutan Maruhan et al. (2018), there is a lack of suitable and comprehensive dimensions available to measure enterprise risk management. Therefore, the researcher constructed an enterprise risk management index based on data gathered from a literature review. This enterprise risk management index can assist practitioners in determining the maturity level of their organization's enterprise risk management programme and academics in conducting empirical research (Sutan Maruhan et al., 2018).

3. METHOD

There are two research approaches in research. The first approach is called deductive approach, and the second is called the inductive approach. The deductive approach means by utilizing the theory to test the hypothesis, and inductive approach was utilized to build the theory (Creswell and Creswell, 2017). This current study utilized the deductive approach, which utilized the underpinning theory to test the hypothesis. The deductive approach is employing in quantitative study. In quantitative approach researchers are trying to test or verify the already existing theory, scholars are testing the hypothesis or the research question which based on the theory. By using the deductive approach scholars operationalize the variables which is derived from the theory. Contrarily, in the inductive approach researchers looks in the bigger context. Researchers are used themes for analyzing the data. Inductive approach is basically using the for the producing the new theory based on research problem.

Aliaga and Gunderson (2002), defined a quantitative study in which numerical data collected and analyses to explaining the specific phenomena. In quantitative study researcher and scholar testing the hypothesis based on the theories. Quantitative study also utilized to find out the relationship between the exogenous variables and the endogenous variables. The quantitative study utilized to ensure reliability, objectivity, and generalizability. This current study utilized a quantitative study to examine the performance of SMEs by evaluating the factors namely organizational commitment, operations, technology, decision maker, staff capacity and environmental factors.

Population

The population of the study is the group of peoples which possess similar characteristics (Castillo, 2009). Population is the group of people, things, events connected with the same interest in which scholars are interested in investigating (Sekaran, 2006). The target population of this current study is the staff of SMEs in the textile sector in Sudan. There are various sampling techniques that can be employed, all of which can be divided into two groups; namely probability sampling and non-probability sampling (Saunders, 2011). Owners and top managers of businesses served as important informants for the study since they are more concerned with strategic planning and are responsible for the firm's performance (Anwar, 2018). The population of this study is the management team (managers and unit head). As of 2021, there were an estimated 350,000 SMEs in Sudan, according to the International Finance Corporation. However, it's important to note that this number may have changed since then, and it may be difficult to obtain precise figures due to the informal nature of many SMEs in

the country. Thus, the population of current study was estimated to be about 200,000 within the textile sector. So, the non-probability sampling is best choice for this study.

4. RESULT

The data analysis in this study comprises the quantitative analysis which has two parts. The first is the part about the demographics of the respondents as well as the descriptive statistics and the second part is about structural equation modelling. Microsoft Excel was used for initial data entry and data re-alignment. Statistical Package for Social Sciences (SPSS) (Nie, Hull and Bent, 1968) was utilized for demographics and descriptive statistics. Structural Equation Modelling (SEM) (Kline, 2016) was used for inferential analysis by using Smart PLS software (Ringle, Wende and Becke, 2005).

The gender distribution in this study is leaned towards the male population. Out of 398 respondents, 221 are male which is 55.5 percent of the respondents, and 148 are females which are 37.2 percent of the respondents. Out of 398 respondents, 29 respondents did not provide their gender data which made of 7.3 percent of total respondents. The greater number of male respondents is because of the issue that it is relatively hard to reach out to the female respondents because of the cultural values of the Sudan society. Third-party services were acquired for collecting the data from females. The age group of the respondents is categorized into five categories: 18 to 25 years, 26 to 35 years, 36 to 45 years, 46 to 55 years, and above 55 years. 29 respondents are from the 18 to 25 years bracket which is 7.3 percent of the total respondents. One fifty-two respondents are from the 26 to 35 years bracket which is 38.2 percent of the total respondents. 172 respondents are from the 36 to 45 years bracket which is 43.2 percent of total respondents. 36 respondents are from 46 to 55 years bracket which is 9.0 percent of total respondents. Only one respondent was aged above 55 years which is 0.3 percent of all the respondents.

The education data has been distributed into 6 categories. The first category consisted of the people who do not have any education who are 11 respondents which are 2.8 percent of the total respondents. The second category is of the respondents who have under matriculation education which is ten years of education. Out of 398 respondents, 72 are from this category which means 72 respondents' education level is below 10 years' education which is 18.1 percent of total respondents. Sixty-seven respondents have the intermediate education level which is 16.8 percent of the total data. One hundred and thirty-three have bachelor's level education which is 33.4 percent of the total respondents. 71 respondents have the masters level education which is 17.8 percent of the total respondents and 3 respondents have the education above masters which is 0.8 percent of total respondents. Out of 398 respondents, 41 respondents did not provide the data regarding education level.

Table 1: Demographics

| Variable | | Frequency | Percentage |
|--------------------|---------------------|-----------|------------|
| Gender | Male | 250 | 62.8 |
| | Female | 148 | 37.2 |
| | Total Valid Values | 398 | 92.7 |
| | Total | 398 | 100 |
| Age (years) | 18 – 25 | 37 | 5.3 |
| | 26 – 35 | 152 | 38.2 |
| | 36 – 45 | 172 | 43.2 |
| | 46 – 55 | 36 | 9.0 |
| | Above 55 | 1 | 0.3 |
| | Total Valid Values | 398 | 100 |
| | Total | 398 | 100 |
| Education | No Education | 11 | 2.8 |
| | Under Matriculation | 72 | 18.1 |
| | Intermediate | 67 | 16.8 |
| | Bachelor’s Degree | 133 | 33.4 |
| | Masters | 71 | 17.8 |
| | Above Masters | 44 | 11. |
| | Total Valid Values | 398 | 89.7 |
| | Total | 398 | 100 |

Pie Charts

The demographics data has been presented below in the shape of pie charts to make it clearer to understand all the dimensions of the demographics.

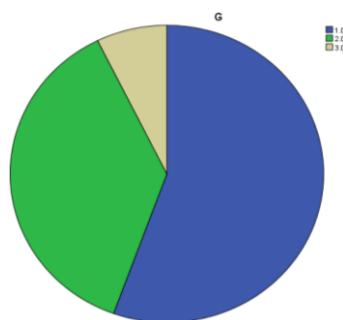


Figure 1: Pie Chart for Gender Groups

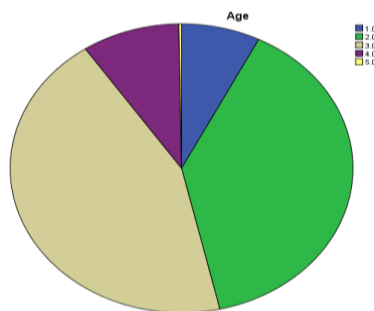


Figure 2: Pie Chart for Age Groups

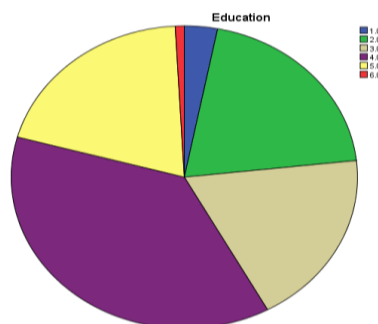


Figure 3: Pie Chart for Education Levels

Descriptive Statistics

The descriptive statistics provide information about the distribution of the variables data. In descriptive statistics, the central tendency, the variance from the mean, and the data normality are measured (George and Mallery, 2019). In this study, the mean, median, and mode are calculated as measures of central tendency, the standard deviation is calculated as a measure of variability around mean and skewness and kurtosis are calculated as measures of normality.

Table 2: Descriptive Statistics

| | ENV | OC | OP | TEC | DM | SC | RM | PERF |
|----------------|--------|-------|-------|-------|-------|-------|-------|--------|
| N | 398 | 398 | 398 | 398 | 398 | 398 | 398 | 398 |
| Mean | 3.84 | 3.52 | 3.51 | 3.06 | 3.24 | 3.48 | 3.64 | 4.37 |
| Median | 4.00 | 3.60 | 3.60 | 3.00 | 3.25 | 3.50 | 4.00 | 4.40 |
| Mode | 4.00 | 3.80 | 4.00 | 3.00 | 3.00 | 3.38 | 4.00 | 5.00 |
| Std. Deviation | .748 | .759 | .864 | .831 | .770 | .665 | .837 | .563 |
| Skewness | -1.210 | -.548 | -.604 | -.033 | -.407 | -.430 | -.791 | -1.213 |
| Kurtosis | 2.063 | .013 | -.163 | -.232 | .288 | .642 | .598 | 1.731 |
| Minimum | 1.00 | 1.20 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |

Hypothesis Testing

The bootstrap approach was utilized to test the significance of path/hypotheses in the path model to test the relationships between exogenous, endogenous and mediating variables. Bootstrap is defined as a general statistical technique for evaluating uncertainty through re-sampling data with data replacement. It is one of the foremost approaches to testing the significance of the PLS path (Chin, 1998) and it is often utilized to conduct hypothesis testing. An attractive strength of bootstrap is that it does not rely on a theoretical sampling distribution such as central limits or normal distribution in statistical significance testing. The principle of bootstrap is very simple. The bootstrap computation uses a data sample (observed data set) as a proxy for the population and draws a sub-sample with replacement from the data sample, for example, randomly drawing 250 sub-samples (sub-sample size) out of 288 complete data samples (observed data set). The bootstrap method repeats this process a desired number of times, for example, 500 times. This method then calculates and stores the statistic parameter (for example, mean of the path coefficients in the study) and their standard deviation from 500

repetitions. The t-value is calculated and used to test the significance of the path/hypothesis (Chen, 2009). The hypotheses are tested on the basis of t value and p-value. Where the t value is equal to or greater than 1.96, and that the p-value is equal to or lesser than 0.05, the hypothesis is supported. In this study, 13 hypotheses were tested accepted, and among them 6 hypotheses are unsupported while 7 are supported. A supported hypothesis means that there exists a relationship between exogenous and endogenous variables. The unsupported hypothesis means that the relationship does not exist between exogenous and endogenous variables.

Table 3: Hypothesis Testing without Mediation Analysis

| Relationships | Beta | Standard Error | T Value | P Value | Decision (p ≤ 0.05) |
|-----------------------------------|--------|----------------|---------|---------|---------------------|
| Environment -> Risk Management | 0.121 | 0.044 | 2.768 | 0.006 | Supported |
| Environment -> Performance | 0.114 | 0.035 | 3.285 | 0.001 | Supported |
| Technology-> Risk Management | -0.037 | 0.059 | 0.631 | 0.528 | Unsupported |
| Technology -> Performance | 0.033 | 0.056 | 0.584 | 0.559 | Unsupported |
| Staff Capacity-> Risk Management | -0.007 | 0.045 | 0.159 | 0.873 | Unsupported |
| Staff Capacity -> Performance | -0.022 | 0.039 | 0.576 | 0.564 | Unsupported |
| Org Commitment -> Risk Management | 0.181 | 0.056 | 3.266 | 0.001 | Supported |
| Org Commitment -> Performance | 0.098 | 0.045 | 2.146 | 0.032 | Supported |
| Operation -> Risk Management | 0.175 | 0.051 | 3.413 | 0.001 | Supported |
| Operation -> Performance | 0.128 | 0.056 | 2.278 | 0.023 | Supported |
| Decision Maker-> Risk Management | 0.428 | 0.047 | 9.190 | 0.000 | Supported |
| Decision Maker -> Performance | 0.159 | 0.048 | 3.315 | 0.001 | Supported |
| Risk Management -> Performance | 0.504 | 0.044 | 11.367 | 0.000 | Supported |

Hypothesis Testing with Mediation Analysis

| Relationships | Beta | Standard Error | T Value | P Value | Decision (p ≤ 0.05) |
|--|--------|----------------|---------|---------|---------------------|
| Environment -> Risk Management | 0.121 | 0.044 | 2.768 | 0.006 | Supported |
| Environment -> Performance | 0.114 | 0.035 | 3.285 | 0.001 | Supported |
| Environment -> Risk Management -> Performance | 0.061 | 0.023 | 2.694 | 0.007 | Supported |
| Technology-> Risk Management | -0.037 | 0.059 | 0.631 | 0.528 | Unsupported |
| Technology -> Performance | 0.033 | 0.056 | 0.584 | 0.559 | Unsupported |
| Technology -> Risk Management -> Performance | -0.019 | 0.030 | 0.627 | 0.531 | Unsupported |
| Staff Capacity-> Risk Management | -0.007 | 0.045 | 0.159 | 0.873 | Unsupported |
| Staff Capacity -> Performance | -0.022 | 0.039 | 0.576 | 0.564 | Unsupported |
| Staff Capacity -> Risk Management -> Performance | -0.004 | 0.022 | 0.160 | 0.873 | Unsupported |
| Org Commitment -> Risk Management | 0.181 | 0.056 | 3.266 | 0.001 | Supported |
| Org Commitment -> Performance | 0.098 | 0.045 | 2.146 | 0.032 | Supported |
| Org Commitment -> Risk Management -> Performance | 0.091 | 0.029 | 3.175 | 0.002 | Supported |
| Operation -> Risk Management | 0.175 | 0.051 | 3.413 | 0.001 | Supported |
| Operation -> Performance | 0.128 | 0.056 | 2.278 | 0.023 | Supported |
| Operation -> Risk Management -> Performance | 0.088 | 0.028 | 3.171 | 0.002 | Supported |
| Decision Maker-> Risk Management | 0.428 | 0.047 | 9.190 | 0.000 | Supported |
| Decision Maker -> Performance | 0.159 | 0.048 | 3.315 | 0.001 | Supported |
| Decision Maker -> Risk Management -> Performance | 0.216 | 0.031 | 6.948 | 0.000 | Supported |
| Risk Management -> Performance | 0.504 | 0.044 | 11.367 | 0.000 | Supported |

5. DISCUSSION

Based on the statistical results of this study, findings were deducted. Based on the findings of this research study, it is found out that there is a non-significant relationship between technology and performance of SMEs in the textile industry in Sudan. This study found out that technology and its application is not strong in Sudan textile industry SMEs. Therefore, it can be said that IT skills, applications and experiences will not lead to a high business performance of SME in Sudan. This is in contrast with previous researches like as Fairouz et al., (2010) and Talaia et al, (2011). This is contrast with the finding of Cacciolatti et al., (2011) where they said application of technology have a significant positive relationship with increased performance of SMEs. Furthermore, the finding is in contrast with the findings of Levy and Powell, (2000) where an application of information technology would enhance the overall performance of SMEs. In general, the adoption of technology will assist an organization in storing information as well as communicating with customer, suppliers and business partner who will facilitate business transaction, thus enhancing general performance. Thus, it would lead to a better performance in reducing the general operating expenses. However, in Sudan SMEs, technology was found to have no positive relationship with performance, thus it does not improve their general performance.

The findings of this study further shows that there is a significant positive relationship between environment and performance of SMEs. The implication of such findings is that business environment leads to high performance of SMEs in Sudan. This means that when there is a conducive business environment, the SMEs in the textile industry of Sudan would have better performance. This is consistent with the findings of past researches in the context that affect the performance of SMEs such as Adnan et al., (2011) and Islamet al., (2010). Furthermore, the findings in relation to environment with Risk Management as the mediator reveals that there is a significant relationship. This implies that risk management mediates the relationship between SME performance and environment in Sudan. For the organizational commitment and SME performance relationship, the results of this study found that there is a significant relationship. Furthermore, the mediation effect of risk management in the relationship of SME performance and organizational commitment, the findings showed that there is a significant relationship. This implies that organizational commitment leads to positive SME performance in Sudan through the risk management as a mediating variable. Commitment to the organization also discussed the proximity of employees to the organization where they are and at the same time reflect the strength of commitment to employee engagement and loyalty to the organization. Engagement and loyalty is greatly affected by how much work is charged to employees in accordance with their expectations (Babakus, 1996).

The results are consistent with research Porter and Steers (1992) The role of the organization's commitment to the company and trade unions, these results indicate union membership period is a significant characteristic to predict employee commitment to the organization and trade unions. The power of employee engagement and loyalty to the organization, if the employee commitment to the organization's high, it will affect the performance, while that employee commitment is low, the impact on performance is also low even can lead to the emergence of

the desire to quit (Mac Kenzie, 1998). The results are also in line with research conducted by Benkhoff (1997) where the author studied and found that the relationship between employee commitment to the organization and the performance showed significant results between them. However, there are also scholars who opines that the commitment to the organization may be consequent or antecedent of performance. Research conducted Porter and Steer (1992) elucidated that the employee who is committed to the organization is the person who is willing to give something of him as a contribution to the good of the organization. Furthermore, the finding is also in tandem with the study of Purnama (2013) who studied the influence analysis of Organizational Culture, Organizational Commitment, Job and Satisfaction Organizational Citizenship Behavior (OCB) toward improved organizational performance. His findings highlighted that organizational commitment is an antecedent of performance in organizations.

For the findings of the relationship between operation and SME performance in Sudan, this study found that there is a positive significant relationship between the relationships. While it is widely accepted that operations capability positively affects firm performance, this study further provides empirical support for the relationship. As a firm improves its operations capability, it enhances its overall competitive position and ability to achieve customer satisfaction. This deciphers into pricing flexibility as well as faster diffusion of new products, permitting the firm or company to increase market share and improve financial and market performance. The implication of such is that the development of operations capability is a key to improving not only manufacturing-related performance but broader measures of financial and market-based performance. However, the standardized structural parameter suggests that operations capability as defined does not fully explain all variation in performance. This is again consistent with other factors such as managing the supply chain and developing and implementing integrated information systems, being related dimensions of capability. However, it should be noted that the results imply judgements to be made about the relative contribution of individual dimensions of capability to performance. This would, for example, provide insight into how organizations should deploy scarce resources across the three dimensions of capability and whether in fact it is necessary to do so to enhance business performance. The results moreover are in tandem with previous studies of Flynn et al. (1995), Nakamura et al. (1997) and Tan et al. (2007).

For the results of the relationship between decision making and performance, the results showed that it was significant. Thus, this highlights that rationale decision making leads to improved firm performance in the textile SMEs in Sudan. The result is in line with the findings of Bag et al (2020). Rational decision making criteria are established to explore a full set of choices. Hence, it is vital for relevant and reliable information to be available in order to make the rational decisions. Rational decision making is free from assumptions and biases and thus leads to quality decisions and improved organizational performance as found by the study of Smolka et al., (2016). Organizational performance involves the overall health of the organization. Performance can be measured by comparing targets with actual performance. The results are further in line with Kunc and Morecroft (2010). The results of the relationship between risk management and performance showed that the it is significant. This implies that the risk management leads to SME performance in the textile sector of Sudan. Such result is

similar to the one found by Yaakub and Mustafa (2015) in their study where they claimed that risk is a barrier in improving SME performance. It is also in line with the findings of Yakob, Ramli & Bakar, (2016) in their study. SMEs are exposed to risks related to cash flow, customer loss, marketing, physical (including natural disasters), competitors and finance matters as affirmed by (Azende, 2012). More so, SMEs are considered as inefficient to encounter its potential risks and uncertainties (Yusuf & Dansu, 2013). Therefore, the ability of SME managers in identifying the risks adequately and taking the appropriate steps to manage risk is very critical to ensure its sustainability in the industry.

Accordingly, Tahir and Razali (2011) highlighted that risk needs to be fully integrated as it is a key emergence factor for holistic approach of managing risk, which some scholars call the Enterprise Risk Management (ERM). This is further in line with the study of Monda and Giorgino (2013) who stated that ERM involves a comprehensive view of risk, which consider the interrelation between one risk to another. Furthermore, the ERM is a systematic approach in managing diverse risks. Consequently, effective risk management strategies allow firms to achieve its objectives and increase stakeholder's value. An efficient risk management implementation enables firms efficiently and subsequently utilize their resources to maximize firm's returns as found by Yakob, Ramli & Bakar, (2016). Past research studies have shown the positive relationship between the implementation of ERM and firm performance. For instance, Arpita (2013) finds that risk management practicing firms listed in the Indian Stock Exchange have successfully increased their firm's value. Furthermore, such finding is consistent with other empirical researcher on the valuation as well as the effect of the enterprise risk management and they are (Hoyt & Liebenberg, 2008; Gordon, Loeb & Tseng 2009; Hoyt & Liebenberg, 2011; Baxter, Bedard, Hoitosh & Yezegel, 2012; Li, Wu, Ojiako, Marshall & Chipulu 2013; Acharyya & Mutenga, 2013; Grace, Leverty, Phillips, & Shimpi, 2014; Sanjaya & Linawati, 2015).

Yusuf and Dansu (2013) further highlighted that an efficient risk management would improve SME performance and subsequently position itself stronger in the market. On the other hand, poor management have the potential to jeopardize performance and as well as threaten the firm (Kagwathi et al., 2014). Even though risk is often viewed as a threat to a firm, an efficient and effective risk management could turn into a positive opportunity (Zohoori, 2013). Accordingly, Afipudin (2005) suggests that risk is usually regarded as a negative matter, but risk is not inevitably dreadful. Therefore, risks need to be managed in effective manner to bring value to the firms. Effective risk management also allows SMEs to achieve their objectives and ultimately enhance the stakeholder value (Shima, Mahmood, Happy & Akbar, 2013). As poor risk management may encourage unethical practices and increase probability of business failure, SME entrepreneurs should be aware of the positive outcomes from effective risk management practices. Manab & Ghazali (2013) reiterate the need for each firm to implement risk management program to harness its benefits. In the SME context, previous literature review has proved the existence of relationship between risk management and performance. Therefore, the findings of this study is consistent with studies by Nyakang and Kalio (2013), Yaakub and Mustafa (2015), Angeline and Teng (2015), Mwangi (2014), and Yusuf and Dansu (2013). In a conceptual study, Ansong (2013) has strongly recommended to implement risk

management due to its positive impact on SMEs financial performance. A research study conducted in Ghana suggests that risk management improves SMEs access to credit and subsequently improves financial performance (Ansong, 2013) and can also be used as a mediating variable. Meanwhile, Alrashidi and Baakeel (2012) found that operational risk management has positively affected SME financial growth and development in Saudi Arabia. For the findings of staff capacity, the statistical result of this study showed that there is no positive relationship between staff capacity and SME performance. Furthermore, the result of the mediating impact of risk management in the relationship between SME performance and staff capacity was found to be non-significant, meaning there is not positive relationship. This is in line with the findings of Khan et al. (2019), Lengnick-Hall et al. (2011) and Santoro et al. (2020).

6. CONCLUSION

The research has contributed in different aspects across managerial and theoretical level. In addition, the researcher's contribution is within the factors that affect SME performance among textile sector in Sudan. As earlier discussed in Chapter 2 of the study, the research framework of this study is based on the Technology, Organization, and Environment (TOE) Framework theory and resource-based view theory. Even though the mentioned theories have been established and used in different contexts, they were not utilized in the SME industry in Sudan especially in the fashion it was used in this study. This study offers a robust framework from the theories to fill the knowledge gap in the field. The contributions of this study have been categorized into theoretical and practical contributions. This study has also provided contributions to the existing body of knowledge especially in the management field of study.

One major implication from this research is that the findings will give the existing, new or potential entrepreneurs of SMEs in the textile industry in Sudan an optimal understanding about the factors that will affect their business performance. This is to ensure that their business continue to grow and ultimately help to support the development of the economy of Sudan. The results of this study offer clues for recommending strategic behavior of SMEs to be utilized as a basis for benchmarking as well as improvement for SMEs in Sudan, especially in the textile manufacturing industry. Primarily, entrepreneurs should have adequate previous work experience as well as education on the general well-being of SMEs to search for the most favorable growth opportunities within the market. SMEs should react proactively in the application of the latest technologies and programs since the application of technology especially the Information Technology is significant in the contemporary era. Furthermore, the utilization of integrated marketing information and appropriate human resource to enhance staff capacity could also have a far-reaching impact on SMEs growth capabilities in Sudan. Furthermore, firms should also be aware of the threats which might harmfully affect the business and try to safeguard against them proactively. Each firm should pay attention to customer and supplier relations, personnel, quality, flexibility, and planning. The findings of this study would also be very important for the SMEs that are doing well to optimally maintain their standards. Awareness of the business environment, organizational commitment, operations, decision making as well as risk management were all found to be important factors

that lead to SME performance in Sudan. Therefore, SMEs whether in Sudan or in countries with similar economy could utilize the findings of this study for implementation.

This study utilized the Technology, Organization, and Environment (TOE) Framework theory and resource-based view theory. This study integrated these two theories to formulate the research conceptual model. This study considered technology, organization as well as environment from the TOE as part of the constructs for the research conceptual framework. Moreover, ERM practices and managerial expertise were adapted from the theory of resource-based view theory. The futures studies may wish to utilize Miles and Snow theory in this context. This study has implications for the researchers, scholars, policy makers that when they used porter's generic strategy than also keep focusing on resources of the organization. This study added the risk management construct as the mediating variable, hence enriching the theories as well as creating a new conceptual framework in the field of study. Furthermore, among the major theoretical implication is the integration of two theories logically. The results of this study revealed the importance of resource building decision patterns on firm performance. Resource-based theory suggests that unique resources are the source of superior performance. In other words, resources that are not highly contested at the industry level because they are either rare or managers have different expectations of their value can generate positive performance (Barney, 1986, 1991). Therefore, positive and high performance is associated with creating heterogeneity in accumulated resource positions relative to rivals. Since firms compete mostly in finite environments, an excess of players in an industry segment may imply low performance due to strong rivalry for finite resources. Firms can avoid such finite environments through differentiation: by entering new segments and exploiting similar resources or by renewing the existing resources through innovation. When differentiation is difficult, firms will be better off cooperating and simply recognizing that all rivals are using the same resources or firms can identify idiosyncratic resources to sustain their competitive position as the VRIO (value, rarity, imitability, and organization) criteria (Barney, 2001) suggest. However, it is quite challenging for the situation to occur when there are incentives to maximize market dominance, when limitations on understanding competitors' actions may imply erroneous assumptions about their behavior, or when confounding effects such as asset interconnectedness make it exceedingly difficult for managers to establish a clear relationship between the investment in certain resources and the resulting firm performance.

Understanding the causal linkages between the management of resources and performance outcomes is at the core of the development of dynamic capabilities; especially when there may be nonlinear relationships between the amounts of resources accumulated at firm and industry levels and their effect on performance. Hence, management decisions to control the system of resources are a fundamental variable to achieve competitive advantage since they determine the configuration of the strategically relevant resources in dynamically complex environments.

The newly updated ERM framework by COSO (2017) further highlighted that the integration of ERM across entities will allow to realize numerous benefits including increasing opportunities, identifying and managing risks across entities, enhancing positive outcomes and benefits, reducing negative shocks, decreasing performance variability, increasing resource

utilization, and increasing firm durability. Therefore, firm's risk exposure can be managed and controlled effectively through the implementation of risk management under the ERM framework and supports the firms to achieve their objectives. From a financial perspective, risk management is an essential part of any business (Anton, 2011). Specifically, risk management provides tax incentives and helps in minimizing bankruptcy as well as financial distress cost. Additionally, risk management reduces earnings volatility, promotes cost savings and creating good reputation for the firms. Thus, SMEs with good management would be able to overcome any potential risks through appropriate actions as stated by Smit and Watkins, (2012) and contribute to the success of the SMEs in long term.

Resources are an essential input for managers, entrepreneurs, scientists, financial analysts, or even accountants in carrying out their daily activities. Basically, resources can be in the different forms such as financial, human capital, expertise, strategy, information that derive from internal or external resources. In fact, internal resources and capabilities influence the strategic decisions made by firms to remain competitive in the industry. Furthermore, firm's internal capabilities could add value to the customer value chain, product diversity, and new market development. Generally, each firm or organization has performance differently. According to the RBV theory, the different performance across firms is due to the different possession of internal resources. Furthermore, RBV also stated that competitive advantages are derived from internal sources. This argument is however contrast with industrial organization theory which highlighted that the competitive advantage of firms or organization is determined by external business factors (Purnomo, 2013). Moreover, RBV perceives that firms are competing with each other using their own resources and capabilities (Peteraf & Bergen, 2003). Khotimah (2014) further highlighted that RBV views firms as a group of resources and capabilities owned by the firms.

Specifically, RBV theory focuses on the firm's ability to maintain a combination of resources that are not owned or built in the same way by other competitors. Thus, the differences in the firm's resources and capabilities as compared to other competitors would create competitive advantage for firm. It then gradually improves firm performance. Therefore, the emphasis of RBV theory is creating competitive advantages by utilizing all its available internal resources to drive better firm performance than other firms. One of the internal resources that been a focal discussion in recent years is ERM.

ERM is a corporate strategy that been used to manage risks in comprehensive manners. Different businesses are facing different risks that firms need to face. Firms have their own strategies developed to manage these risks. The risk management strategy is the firm's ability to integrate existing firm resources. Risk management strategies carried out by a firm cannot be owned or developed in the same way by other firms. This is in line with the concept of RBV theory. RBV theory views firms as a group of resources and capabilities owned by firms. This theory focuses on the firm's ability to maintain a combination of resources that are not owned by or built in the same way by competitors (Khotimah, 2014). Furthermore, firms might operate in different industries, which then lead to different risk exposure across industries. Therefore, ERM as an internal resource of a firm is able to manage these risks in effective manners and

subsequently contribute to better firm performance. This is consistent with the findings of Elahi (2013) who argued that firm's ability to manage risk could be utilized to create firm competitive advantage. This study examined the relationship between risk management and SME performance. In contrast to existing literature which mainly focus on the effect of Enterprise Risk Management as a whole, this study provides different mechanism in explaining the effect of the risk management prescribed under the Committee of Sponsoring Organizations of the Treadway Commissions (COSO) towards SMEs performance.

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