



Fostering Innovation in Nigerian Manufacturing Industry from the Perspectives of Organizational Learning and Ambidexterity

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ABSTRACT: *This paper drew on strategic ambidexterity literature to propose that manufacturing SMEs that have the ability to pursue paradoxical pairs of strategies of exploitation and exploratory also known as the capability of strategic ambidexterity can achieve superior Innovation. These paradoxical strategies enable firms to engage in alignment and adaptation in their innovation derive and help them pursue both pro-profit and pro-growth objectives. This is among the first that attempts to theoretically and conceptually link strategic ambidexterity and Innovation in manufacturing SMEs. The paper suggests that manufacturing small and medium-sized enterprises (SMEs) with the capacity to pursue and implement conflicting strategies tend to achieve higher levels of innovation than those without it, with organizational learning significantly influencing how strongly this association holds true.*

KEYWORDS: *Ambidexterity, Innovation, Organizational learning, Manufacturing SMEs, Nigeria.*

INTRODUCTION

In 'Small and Medium-Sized Enterprises' (SMEs) which [1] the fusion of innovation and strategy is generally acknowledged as a critical accelerator for increased economic development in both developed and developing countries. However, due to their constrained resources and competencies in areas like manufacturing, finance, and management, which are a result of their smaller size, small and medium-sized firms (SMEs) often face considerable barriers to their innovative potential [2]. The postmodern era of business which comes with many new technologies and challenges, getting the right kind of strategy for both product and process innovation has become a key for achieving competitive advantage in any organisation [3]. Furthermore, noted that rather than being a well-defined and cogent notion, innovation might be seen as a hazy or imprecise idea.

Small and medium-sized businesses (SMEs) must strike a delicate balance between the need to innovate and the barriers that may stand in the way, such as resource limitations, skills and knowledge gaps, the requirement for adaptability, and the lack of a formal innovation assessment process. Innovation is now crucial for manufacturing SMEs, especially in the present environment of an unprecedented global economic crisis that has seriously affected

global supply networks. The increased importance of agility and adaptability, both of which are products of organizational learning and adjustment, is highlighted by this.

The extant literature showed that, scholars in the field of strategic management and organisational theory have differ as to what actually contribute to improvement in Innovation. While some scholars such as [4] are of opinion that intellectual capital such as experience, skills, knowledge capabilities are the major drivers of Innovation, others argued that it is higher performance system and absorptive capability that actually improve Innovation [5, 64]. Again, there some that looked at Innovation in the perspective of organisational learning [6] However, recent studies showed that scholars consider organisational strategy as the main driver of Innovation especially in emerging markets. For example, [7] conducted a study on the relationship between open innovation strategy and Novelty. A study was also carried out on the role of decision-making capabilities on strategic ambidexterity-Innovation relationship which is the focus of this study.

According to the main thesis of ambidexterity research, businesses that adopt a mixed or well-balanced approach to ambidexterity are more likely to produce better innovation results than those that prioritize one activity over the other. This statement suggests that there are still conflicting results about how ambidexterity affects performance. Although one team of management academics has shown a favourable association [8, 9, 10], others have found a negative relationship [11], or no relationship at all [12].

Firms that have capability to simultaneously engage in both exploration and exploitation are regarded as ambidextrous and research has shown that both have positive affect on organisational performance [13, 14]. In light of this, it is envisaged that a business that actively pursues both exploration and exploitation would maintain innovation, guarantee dependability, encourage organizational rejuvenation, and as a result, enjoy enhanced performance [15]. However, there are differing viewpoints held by academics on this subject. Some claim that exploitation and exploration are naturally at odds with one another, indicating a bad relationship between the two. On the other hand, according to [16], this is not always the case and that there might be a beneficial link between exploration and exploitation.

This research argues that both exploration and exploitation, albeit in different ways, are connected to learning and creativity to some level [16]. The viewpoint of complementarity seems to be a more appropriate paradigm when seeing them as distinct sets of activities dependent on certain knowledge and skills [14]. More specifically, the paper js aim at answering the question: What is the effect of strategic ambidexterity on Innovation of manufacturing SMEs, and how does organisational learning moderate this relationship?

The introduction of a paradigm targeted at analysing the influence of strategic ambidexterity on the innovative capacities of manufacturing SMEs located in a developing country provides value to the domains of ambidexterity, innovation, and organizational learning in this research. In the framework of the connection between strategic ambidexterity and innovation, it also looks at the possible moderating impact of organizational learning. This study supports previous demands for more thorough research to improve our understanding of ambidexterity in developing markets [17. As most of these studies were conducted in America, Europe and Asia [18, 19, 20] paying less attention to Sub-Saharan African countries.

THEORETICAL AND LITERATURE REVIEW

Within the context of strategic ambidexterity and organizational learning, this research focuses on both product and process innovation. Product innovation includes a company's attempts to improve all aspects of its goods, including quality [21, 22]. On the other side, process innovation refers to initiatives designed to change manufacturing processes in order to save costs and achieve a competitive advantage by providing cheaper pricing [23]. Since the beginning of the industrial revolution, innovation has been acknowledged as playing a crucial role in generating competitive advantage [24]. Heffner. Innovation is described as a company's power to produce novel items quickly and be able to quickly launch such products on the market [25].

Exploratory and exploitative innovation activities are two different types of innovation activities, as explained by [14]. This suggests that innovation may be accomplished via the use of both new knowledge and procedures and current knowledge and processes. Exploratory and exploitative strategies both provide businesses the tools and resources required for effective innovation. This research is based on the theories of dynamic capability and organizational learning to clarify the relationships between innovation, ambidexterity, and organizational learning within the context of manufacturing SMEs, which is in line with several related studies [26, 27]. The deployment of a firm's distinctive strengths results in better innovation [28] from a dynamic capability viewpoint. Companies seeking to innovate better than their rivals need to have both physical and intangible qualities that are difficult for rivals to imitate [29]. These flexible capabilities provide businesses tactics that are very difficult for competitors in the same sector to copy.

In this research, the organizational learning theory is also significant. The essential resources necessary for fostering innovation are ingrained within the organization's knowledge capacities when seen through the perspective of organizational learning. Companies require learning skills that cover both the exploitation of current knowledge and processes and the investigation of new knowledge and processes in order to increase innovation. There is a word for this kind of reliance called "multiplexity" that refers to the overlapping needs for knowledge across several disciplines. In order to get access to resources they are unable to create internally, businesses must have the abilities to interact with other organizations [30]. Usually, businesses do this via joint ventures, strategic partnerships, and industry networks. As a result, organizational learning has been widely used in this work to clarify a firm's ability to learn from and adapt to changing external situations.

Concept of Ambidexterity

According to existing organizational theory and strategic management literature [31, 33], exploitation refers to the continuing selection and usage of what an organization is already accustomed to and experienced. Organizations have the benefit of using the benefits of learning to create routines and processes that improve performance [32]. Businesses tend to increase their efficiency and consistently improve the quality of their products or services as they get more expertise in a certain activity [14]. Exploitation has therefore been linked to improved performance and creativity. But when corporate conditions are stable, an excessively biased pursuit of exploitation is more likely to succeed [31]. For instance, a business that uses exploitation in its goods will only function better if the market for those things doesn't change. However, any significant changes in the market that affect the demand for these items would prevent the company from continuing to profit from the same exploitative practices. Such a significant transition might result from new inventions replacing legacy products or from large-scale external changes changing the nature of industry demand for goods and services.

The search of novel prospects and participating in experimentation, on the other hand, are the hallmarks of exploration [14, 33]. Organizations participating in exploration participate in a variety of activities and circumstances, building up a variety of knowledge reservoirs [34]. Exploratory activities provide information that is less uniform than exploitation [35], but they also produce a certain kind of effective performance. In particular, exploration gives businesses the chance to perhaps find new markets, income streams, or competitive advantages [35, 14, 34].

However, focusing only on exploration might have a negative impact on performance [14]. It may be difficult to obtain financial rewards from these opportunities if firms continually look for new ones without using them to improve efficiency, profitability, and quality [14, 36]. Therefore, as opposed to efficiency-related performance measurements like return on assets and cost reduction, the immediate performance benefits of exploration are more likely to be linked to effectiveness-related performance indicators, including sales growth and market share.

Both learning behaviors have the potential to improve performance, according to the descriptions of exploitation and exploration in the context of organizational learning, but focusing just on one of them might have a negative impact on performance. As a result, researchers have repeatedly come to the conclusion that pursuing both exploitation and exploration inside companies has benefits [37, 14, 36]. Organizational ambidexterity is the simultaneous pursuit of both exploitation and exploration [37, 36]. The simultaneous pursuit of exploration and exploitation is likely to cause some conflict inside organizations, according to observation in Thus, the ability to strike an acceptable balance between practices of exploration and exploitation is referred to as ambidexterity [14, 39]. Research and discovery are involved in exploration, while refining and application are involved in exploitation [14, 40, 39].

Empirical Review

Table 1 contains the summary of previously conducted empirical studies on ambidexterity. Most of the studies were conducted on multi-national corporations [19], with only a few studies carried out on (SMEs) [51]. Again, a vast number of studies focus on the effect of ambidexterity on innovation [18] and their findings revealed significant positive relation between the two variables except findings of [63] that revealed a negative relationship between ambidexterity and innovation outcomes among local Chinese multinational enterprises but positive relationship among Chinese foreign multinational enterprises.

Similarly, these studies were mostly conducted in America [64] Europe [65] and Asia [19, 63, 26, 66, 51]. The studies in the table mostly uses theories such as organizational learning theory [54], resource-based view and upper-echelon perspective [19], knowledge-based view, and dynamic capability theory [26, 66].

Table 1: Summary of Ambidexterity Literature

Article	Research Focus /Aim	Theory(ies)	Major Findings
Choi, Cui, Li, & Tian, 2020	The study focused on strategic ambidexterity and MNE' internationalisation. The goal is to determine how ambidextrous catch-up methods affect multinational enterprises' (MNEs') rapid worldwide development and to examine the	Industry-based view & upper-echelon perspective	Industry generosity discourages the development of ambidextrous techniques while encouraging the adoption of a focused exploratory catch-up approach. The management teams of emerging market multinational firms

	moderating effect of functional diversity on the management team.		(EMNEs) have functional variety, which amplifies these divergent consequences.
Wu, Wood, Chen, Meyer & Liu (2020)	The interaction between ambidexterity and innovative performance is the main focus of this research. Its main objective is to evaluate the link between ambidexterity and innovation success and to investigate the potential moderating effects of management skill.		Ambidexterity and management skills are crucial for enhancing the innovation and performance of Chinese EMNEs, but ambidexterity has a negative link with local business innovation.
Shamim, Zeng, Choksy & Shariq (2020)	Examines the association of big data management capabilities with employee exploratory and exploitative activities The mediating role played by big data value creation	knowledge-based dynamic capabilities	Think of big data management as the capacity to make use of outside information (produced by worldwide users) in a resource-constrained setting, such as a growing economy.
Zhou, Xu, Xu & Barnes (2020)	Investigates the dynamics of product-market ambidexterity in the pursuit of international possibilities by developing market enterprises.	Dynamic capability, internationalization	It showed how enterprises experiencing progressive internationalization are defined by structural ambidexterity, integrating product exploitation and market discovery during the first phases. This highlighted the many tasks provided by strategic ambidexterity. Market ambidexterity, on the other hand, is a better explanation for businesses that are internationalizing quickly as they enter new markets.
Han, M., & Celly N. (2008)	Investigating the effect of strategic Ambidexterity of (few investments and many countries as well as standardization and innovation on performance of international new ventures in Canada.	Dynamic Capability theory	Finding showed that firm with structure Ambidexterity capability achieve superior performance over those without the capability.
Khan, H., Freeman, S. & Lee, R. (2018)	Emphasis is on balancing customer-driving versus customer-driven strategy in optimizing new product performance.	Behavioural and strategic adaptation theory	Finding showed that balancing the two strategies significantly affect new product performance as against the imbalanced strategy.
Oscar, B., Ferran, B. & Emmanuel G. (2019)	To test the Strategic ambidexterity improves product-service innovation outcome	338 MMNEs Across world regions Cross country manufacturing Multination Enterprise	Developing product service innovation through sequential exploitation – exploration pathways maximize performance of MMNEs across all regions.
Tsai, H. & Ren, 8. (2019)	The study investigated the antecedents and performance outcome of strategic ambidexterity in SMEs Taiwan.	Dynamic Capability theory	Result of the study indicates a position relationship between learning capability, top management heterogeneity as

well as SMEs performance while SMEs' network capability was found to have negative influence on their performance.

Ambidexterity and Innovation

Innovation, organizational design, and organizational learning are the three main disciplines that have been the subject of in-depth study in the past [41,42]. The capacity to "effectively manage current business demands while remaining adaptable to environmental changes" is how it is characterized [40]. The ability of a company to concurrently pursue two different organizational goals, exploitation and exploration, is intimately related to strategic ambidexterity [43]. 2018; Khan, Rao-Nicholson, & Tarba. Utilizing capacity helps businesses to maintain alignment with the changing nature of the business environment and maximize operational efficiency. On the other hand, exploration gives businesses the freedom to experiment with new concepts and adjust to changing environmental needs [41].

According to some academics, for businesses to function well, they must balance these two goals [44, 43] and have the flexibility to switch between exploration and exploitation over time. In order to successfully adjust to changes in the firm's operational environment, researchers contend that strategic ambidexterity necessitates the competent management of product, process, and market elements [45]. A company's ability to adapt to change is based on its capability to both exploit and explore [47], which is directly related to innovation and efficiency [46]. The capacity of a company to participate in both exploitation and exploration, in essence, depends largely on organizational learning and dynamic capacities [14], and this competence simultaneously fosters efficiency and innovation to improve overall performance [45].

But there is still disagreement over how strategic ambidexterity affects performance and if this influence is coherent [48]. Performance and strategic ambidexterity have a favorable relationship, according to empirical studies. According to some academics, performance is achieved by both exploitation and exploration, which are separate but equally important [49]. A corporation has to strike a balance between exploitation and exploration in order to achieve and maintain financial success, according to [45]. As opposed to this, [50] assert that combining exploitation and exploration capacities improves firm performance. This is because businesses that pursue exploitation without exploration run the danger of turning key capabilities into core rigidities. In a similar vein, conducting investigation without exploitation may lead to the cancellation of prospective company concepts. According to research by [49], integrated management of exploitation and exploratory operations improves a company's performance.

Other scholars however argue that pro-profit and pro-growth strategies simultaneously are mutually exclusive. For instance, [51] believed that prioritising one of these strategies enable firms to achieve improved Innovation. A third argument about strategic ambidexterity is that differences in how each of the ambidexterity capabilities is subjective largely depend on organisational and contextual perspectives. Authors like [18, 52, 20] opined that strategic ambidexterity should be regarded as a process. Their argument is that pro-profit and pro-growth strategies are interrelated and that there is a successive pathway that unveils superior Innovation. This latter argument is believed to be relevance in the context of SMEs' Innovation, as the extant literature suggests that the process of product innovation for products largely differ from that for process. Hence the following proposition:

P₁: Ambidexterity is positively related to manufacturing SMEs' innovation performance.

Moderating Role of Organisational Learning

Organisational learning is seen as an effective and efficient foe firm to achieve alignment and adaptation to innovate in other to improve its performance [53]. Theoretically, organisational learning is an approach used by organisations seeking to obtain skills and knowledge and capabilities needed to improve its innovation capability in order to compete favourably in especially in a highly competitive environment [54]. Organisational learning therefore has unescapable effects on firm's overall performance because it is not only explaining the reasons for certain strategies but it also describing how it will react to the new and strange circumstances. Despite its advantages, some academics believed that organizational learning may be harmful in particular circumstances [14].

By aligning and adapting to environmental changes, businesses with high organizational learning capacities have a competitive edge over those with poor organizational learning capabilities [31, 55]. Existing research that highlights the importance of the link between organizational learning and a firm's innovation strategy seems to support this claim. For example, [14] viewed organisational exploitative and exploratory learning strategies as mutually exclusive, or incompatible. According to scholars like [56, 57], these two learning strategies are mutually exclusive. Scholars that take a different perspective, such as [58, 59, 60], contend that exploitative and exploratory learning processes are in fact complimentary. Exploratory learning is seen to provide organizations with the technical capabilities needed to further exploit existing knowledge, while exploitative knowledge is thought to give firms the resources required for engaging in exploratory operations. Organizational learning and knowledge are included in the ambidexterity literature as well [61]. Ambidexterity and the organizational learning process have a considerable link [14]. Ambidexterity is the capacity to successfully balance the demands of being both inquisitive and exploitative. Businesses aim to achieve and maintain this equilibrium [62]. The existence of this skill is seen favorably since it shows that managers can manage such demands well. As a result, the following claim is made:

P₂: Organisational learning moderates the relationship between ambidexterity and manufacturing SMEs' Innovation (as shown in figure 1).

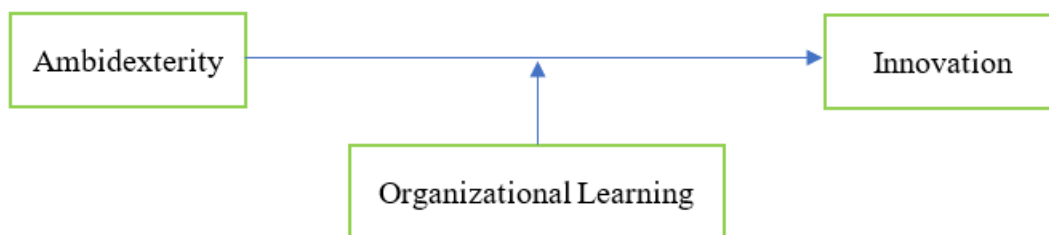


Figure 1: Illustrates relationship between ambidexterity and manufacturing SMEs' Innovation

DISCUSSION

This research work is aimed at investigating the relationship between ambidexterity and innovation performance and to determine whether organisational learning strengthen or weaken this relationship. Empirical studies were reviewed in order to formulate a conceptual framework depicting these relationships. Result from the empirical studies revealed that

ambidexterity which in this context means the concurrent pursuit of both exploration and exploitation strategies has the potential of leading to superior innovation in manufacturing SMEs [18, 67, 43, 31]. Ambidexterity, a dynamic skill, may help businesses surpass their competitors in terms of product and process innovation as well as adapt to both the severity and frequency of environmental changes [53]. However, a balance must be strike between too much exploitation and too much exploration as the imbalance may lead to either success or failure traps [31]. In order to prevent this possible loss of competitive advantage, a well-thought-out, well executed, and balanced strategic ambidexterity is needed, with a focus on the firm's innovation.

Similarly, studies on ambidexterity and firm innovation performance were focused on a variety of industries, theories and methodology, findings of some of these studies indicates high levels of inconsistencies and inconclusiveness [18, 26]. Because some studies have linked ambidexterity with organizational learning capabilities, this paper proposed that organizational learning play a moderating role in understanding how the combined effect of exploration and exploitation strategies affect firms' innovation performance [62, 14, 20] as well as organisational learning with innovation performance [54].

As each performance indicator individually adds to company performance without interacting with one another, empirical research has shown that splitting the innovation performance idea into product and process innovation performance delivers benefits. The negative interaction effect of product and process innovation on firm performance serves as evidence that diminishing returns appear when both measures are combined [11, 6]. Therefore, testing the hypotheses proposed in this paper with empirical data would provide more insight on how strategic ambidexterity relate separately with product as well as process innovation in the context of manufacturing SMEs in Nigeria. It would also unravel the moderating effect of organizational learning in this relationship.

CONCLUSION

This research work derived and discuss the conceptual rationale for a set of propositions about the effect of ambidexterity on Innovation of manufacturing SMEs and how organizational learning moderate this relationship. The aim is to add to the existing literature on organizational ambidexterity and Innovation with reference to manufacturing SMEs. This is based on the believe that ambidexterity researchers are ignoring significant portion of Ambidexterity-Innovation relationship especially in the context of Nigerian manufacturing industry. Specifically, the analysis developed concept of ambidexterity, whereby a firm strategy encourages it to make a choice in dividing its resources between alignment and adaptation to achieve both profitability and growth objectives. Another key concept that plays significant role in achieving Innovation through ambidexterity is organizational learning. This paper suggest that organizational learning capability can assume an interventionist role by way of stimulating the effect of ambidexterity on firm Innovation. In conclusion manufacturing SMEs have to be flexible in choosing strategy so as to allow for alignment and adaptation that can bring about achieving both radical and incremental innovations.

Another conclusion drawn from this work is that in every empirical study, evidence is sparse and riddled with limitation. This suggests a variety of interest opportunities for future research. First empirical study needs to be carried out to test the proposed conceptual framework. This will further explain the validity or otherwise of the propositions. Future research is also recommended in service SMEs to understand the relationship between ambidexterity and

service Innovation. Finally, a systematic examination of the moderating role of strategic flexibility on the relationship between ambidexterity and innovation is suggested.

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