

Technological Innovation and SMEs Sales Growth (A Case Study of Some Selected SMEs in Lagos State.

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Abstract- Technological innovation is an important source of growth and a key determination of competitive advantage for many organizations. The study examined the effect of technological innovations on sales growth in some SMEs in Lagos State. Out of two hundred and five questionnaires that were distributed to SME owners/managers only One hundred and seventy-eight were completed and returned. PPMCC was used to analyzed the hypothesis tested. The study revealed that the result of the study revealed that all the measurements of technological innovation measurement (I.e., marketing innovation, entrepreneur innovativeness and business environment) have a positive significant relationship with SME sales growth in Lagos state. It was therefore recommended that SMEs owners/managers should develop a management technological innovation culture and model that suits the organisation taking into cognizance the cost, benefits, customers need and the industry.

Indexed Terms- Business Environment, Entrepreneur Innovativeness, Marketing Innovation, Technological Innovation and SME Performance

I. INTRODUCTION

Small and medium scale enterprises (SMEs) constitute a large portion of various nations' economies. In view of the fact that SMEs contribute to more than 50% of Gross Domestic Product (GDP) in some economies, they are therefore considered as the backbone of their economy (ACCA, 2010). It account for the majority of businesses worldwide and are important contributors to job creation and global economic development. SMEs contribute up to 40% of national income (GDP)

in emerging economies (World bank 2022). According to Rafiki (2020), country's economic growth depends on its SMEs to a large extent. It is therefore crystal clear that SME plays a pivotal role in the promotion of economic growth in every country with particular reference to the developing countries.

The dynamics nature of business environment allows for frequent changes in business phenomena which come and go from time to time. The business world either in developed or developing nations of which SMEs are integral part is not immune to any of these business phenomenons or challenges that could positively or negatively impact on it. Entrepreneurship as a most powerful economic force to mankind is confronted with some challenges that have the potentials to make it to be relevant or irrelevant, they includes: lack of finance, economy problem, lack of skill labour, lack of technological innovations, marketing problems and others. There is no doubt that the absent of technological innovation is one of such phenomenons that impede on the growth of SME's. Therefore, rigorous pursuance or adoption of technological innovation by SMEs remains one of those strategies that can sustain it to meet up in the international business stage. For every business to survive the threat posed by the constant changes in business environment, technological innovation must not be relegated to the background, it must be in the forefront of the plans and strategy for survival. For several decades, technological innovation has been directly responsible for job loss. However, it increases service delivery; it further enables a faster and more efficient means of communication and increases the efficiency of delivery of products and services. There is no doubt that technological innovation has not only lead to superior performance and competitive advantage of SMEs but has further redeemed the threat of uncertainty confronting it which is occasioned by

the constant changes in production, marketing, operations, customer relations management and resource allocations.

The outbreak of COVID-19 has further reignite the need for SMEs to embrace technological innovation in providing new products and services and new customer services method. Those SMEs who adopted technological innovation that could transact during the lockdown, since innovation gives entrepreneurs a competitive advantage which results to increase in efficiency, business sustainability, decrease costs, increase consumer satisfaction, quality product, increase organizational capabilities and high profits. The concomitance results of these innovations which is a product of human knowledge and ideas manifest in product, markets and processes, it also lead to generate new or improved products or services. Technological innovation could also be perceived as an essential element in SMEs' sustainability and survival. According to Anjum (2013), successful adoption of innovation by the SMEs can be attributed towards several factors, such as technological factors, organizational factors and environmental factors.

Several studies such as Okpalaoka , Ogunnaike , Kalu *et al.*(2022), Bala Subrahmanya (2011), Azubuike (2013), Fayomi, Adalakun and Babaremu (2014), Mallinguh, Wasike, and Zoltan, (2020), YuYingmin and Peng (2013) and others have examined technological innovations and Firm Performance both in developed and the developing nations but no study done recently to the knowledge of researcher on sales growth hence, the gap exist. However, it has been mentioned by Afifi and Negm (2020) that many businesses are either temporarily or permanently closed due to the indirect or direct impacts of COVID-19. So also thus ozigi and umar (2021) opined that SMEs suffered and are still being affected by the emergence of the pandemic since year 2020. While Magdand McCoy (2014) admitted that SMEs need to improve in the arena of technological innovation if they are to flourish while, Abed (2021) also perceived that technology was an essential element in SMEs' survival. It will therefore be logical to examined the influence of technological innovation on SME sales growth with an attempt to broaden the understanding of technological innovation by exploring the

dimensionality of it and by testing its effects on SME sales growth.

II. OBJECTIVES OF THE STUDY

The primary objective of the study is to investigate the influence of technological innovation on SME sales growth, while other objectives are stated thus;

- i. assess the relationship between marketing innovation and SME sales growth;
- ii. Investigate the relationship between entrepreneurial innovativeness and SME sales growth, and;
- iii. Examine the relationship between business environment and SME sales growth

III. RESEARCH HYPOTHESES

The following null hypotheses were tested by the researcher in the study:

H₀₁: Marketing innovation does not have any relationship with SME sales growth.

H₀₂: There is no significant relationship between entrepreneurial innovativeness and SME sales growth.

H₀₃: There is no significant relationship between business environment and SME sales growth.

IV. LITERATURE REVIEW

• An Overview of Technological innovation

According to Afuah (2020), innovation is the application of modern technological, organizational information and skills in providing new products and services to clients. So also thus Wibawa, Widjanarko, Utomo, Suratna and Wahyurini (2020) state that innovation is defined as the development of a new or improved product, process or service for businesses. Innovation has remain the foundation upon which entrepreneurship is formed because of its comparative advantages and its contributions to the growth and promotion of SMEs and business generally. According to Azubuike (2013), technological innovation is a concept developed within the scientific field of innovation studies, which serves to explain the nature and rate of technological change. Guan, Yam, Mok and Ma (2006) also remark that technological innovation is the combination of knowledge, techniques and management skills from different

areas, the company can build its organizational competitiveness by strengthening those areas. Guo and Miller (2010) observed that technology innovations can contribute positively to organizational performance if the entrepreneur exploits available opportunities through entrepreneurial strategies, actions, and behaviors. It can be deduced from the above that technological innovation is not just a multidimensional concept, but it embrace the application of technology in order to enhances organisational efficiency and performance. Therefore, technological innovation is an important source of growth and a key determination of competitive advantage for many organizations.

- Marketing innovation

Sales improvement is important in SME in order to expand their sales growth, assets, profit and market size. Some strategies such as marketing innovations, promotional strategies, distributional strategies, product quality and others are devised to attract and retain customers with a view to improve sales and remain on profitable path. Marketing innovation is the generation and implementation of new ideas for creating, communicating, and delivering value to customers and managing customer relationships (Tinoco 2005). Marketing innovation remains a workable tool for the sustainability of SME, firms actively invest in developing new product concepts, exploring potential needs, and expanding new market segments. However, marketing innovation plays a critical role in a firm's total performance as marketing is key to value generation (Bartoloni and Baussola, (2016). Dobbs and Hamilton (2007) also opined that it is only through continuous product innovation that SMEs can increase their competitive advantages and cope with market opposition.

- Entrepreneurial Innovativeness

According to Bala Subrahmanya (2011), the success of small firm innovation would invariably revolve around the personality of the entrepreneurs and characteristics of the firm. SME managers as a key decision makers in their firms, they take decision that enhance performance in sales and profitability. Those managers with innovative ideas and creativity are prone to accepting and implementing technological innovative ideas faster than others. Innovativeness is one of the fundamental instruments of growth

strategies to enter new markets, to increase the existing market share and to provide the company with a competitive edge. Therefore, Entrepreneur innovativeness is the process of seeking new opportunities and products and the elimination of obsolete operations ahead of competitors (Wambugu and Gichira, 2015). Kuratko (2017) also describes entrepreneur innovativeness as a process whereby an entrepreneur focuses on rejuvenating and shaping the organization's scope of operations through the exploitation of business opportunities. It play a pivotal role in the growth and survival of SME and other business. The efforts of SMEs to use technology to achieve desired results depend on the manager's initiative in learning and adopting technological innovation (Galloway, 2007). Entrepreneur innovativeness, therefore determine how soon and frequently firms embrace technological innovation and what type of innovation are brought to bears, this will thereby determine the success and growth of the business.

- Business environment

Modern organizations are experiencing environment that are changing rapidly and subject to increase in irregularities (Salau Business environment refers to those factors that are related to a business which affects enterprise decision and business performance (Adewale and Umoru, 2021). According to Zahra (2011), large numbers of firms face challenges while incorporating technology as an important component of their functions and processes due to gradual transformations in the environment. So also thus Rahim and Zainuddin (2016) observed that business environment is characterized by rapid technological and market changes that pose a risk to product or service development processes. Environmental changes include continuous technology changes, market demands, and staff competition, which all affect business performance (Zahra, 2011). The business environment which consists of customers, competitors regulatory body, government and employees determine how soon and frequently firms welcome technological innovation what type of technological innovation are brought to bears, this will thereby enhances business performance and sales growth.

V. EMPIRICAL REVIEW

- **Technological innovation and SME Sales Growth**
Technological innovation activities are considered as the driving force which brings about a new idea for businesses that provides customer value and also ensure the success and growth of the organisation. The findings of Rosli and Sidek, (2013), and Twaliwi and Isaac (2017) concludes that innovation has a positive effect on business performance.

In developed nation, Ni(2018) examined the importance of technological innovation in business administration in China's companies. The study concluded that scientific and technological innovation should be used by entrepreneurs in their business management in order to improve the level and efficiency of business administration and promote the working of employees in enterprises.

In developing nation, Mohamed, AbdikarimAdan, and Muhumed (2017) studied the effect of innovation on SME Performance in Somali land. The study revealed that innovation significantly affects the performance of SMEs in Hargeisa.

While in Nigeria, Akinwale, Adepojuand Olomu(2017) examined the influence of technological innovation on SME's profitability in Nigeria manufacturing industry. It was therefore recommended that SMEs in the manufacturing industry should intensify their innovation activities so as to create a competitive advantage environment which will further improve their turnover and profitability.

- **Marketing innovation and SME Sales Growth**
Marketing innovation is one of the strategies or tools for the firms sustainability, it is also very effective for the enhancement of their performance. According to Tinoco (2005), marketing innovation is the generation and implementation of new ideas for creating, communicating, and delivering value to customers and managing customer relationships. Mohamed, AbdikarimAdan, and Muhumed (2017) in their study found that the effects of marketing innovation is statistically significant to SMEs performance.

In developed nation, Peng, Qin, and Tang(2021) examined the impact of marketing innovations on the sustainability of firm. The results showed that both market driven and market-driving innovations significantly contribute to a firm's performance. The study further recommended that firms are should consider more proactive market-driving innovations.

In developing nations, Pramuki1 and Kusumawati (2020) explored the influence of digital marketing on firms performance. The study found that digital marketing is able to strengthen the relationship of product innovation in improving SMI marketing performance. The study recommended that the role of competitive advantage and digital marketing is important for product innovation to enhance marketing performance.

In Nigeria, Is-haq (2019) analysed the effect of digital marketing with sales improvement of SMEs in Nigeria. The results of the analysis showed that adoptions of digital marketing tools such as e-mails, pay per click and online advertising significantly improve sales of SMEs. However, the result further suggests that there is need to apply more than one digital tools as marketing strategies in order to improve SMEs performance.

- **Entrepreneurial Innovativeness and SME Sales Growth**
Ciemleja and Lace (2008) found that innovative activity of the enterprise is directly connected with the educational level of managers. Therefore, innovativeness help in sustaining SMEs, it is also a crucial part of firm survival strategies (Salau, 2022). There is tendency that SMEs with innovative managers have a high likelihood of accepting technology innovation earlier than those SMEs without innovative managers.

In developed nation, Elert and Magnus (2021) investigated how successful entrepreneurship depends on a collaborative innovation bloc (CIB), a system of innovation that evolves spontaneously and within which activity takes place through time. The study showed that the application of the CIB perspective can help make institutional and evolutionary economics more concrete, relevant, and persuasive, especially regarding institutional prescriptions.

In developing nations, Mohammad, Shehnaz, and Horne (2021) explored the impact of entrepreneurial innovativeness on SMEs’ performances. The study concluded that there was a significant positive influence of entrepreneurial innovativeness on business performances in Malaysia.

Also in Nigeria, Salau (2022) explored the effect of entrepreneurial orientation on SMEs performance with training and development as moderating effect. The study therefore concludes that entrepreneur innovativeness significantly influenced the performance of SMEs and further recommended that SME owners should nurture entrepreneurial orientation qualities on innovativeness to improve their business performance.

- Business environment and SME Sales Growth OR Technological Innovation

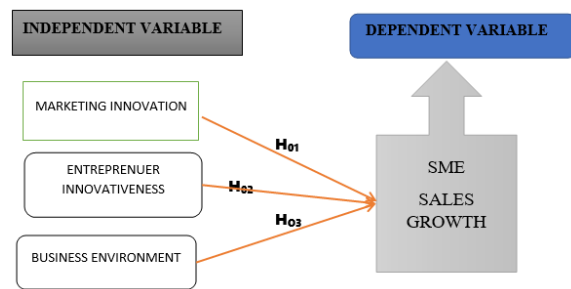
According to Adewale et al. (2021), success of business operations requires an adequate knowledge of the environment in which the business is situated. While Adeoye and Elegunde, (2012) found that external business environment has an impact on organisational performance. Sofyan and Primiana (2015) concludes that both internal and external environment analysis has a meaningful relationship on the performance of small and medium industries (SMEs) in Indonesia.

In developed nation, Rochaa (2012) explored the impact larger SME sector on the competitive or constraining business environments. The study concluded that productive and competitive SME sector must be associated with sophisticated and innovative business environments.

In developing nations, Laouiti, Gharbi And Liouane (2014) investigated the effect of business environment on firm performance in Tunisia. The study concludes that there exist a significant relationship among the business environment in its three dimensions (socio-cultural, institutional and technological) in one hand and firm performance in the other hand.

In Nigeria, Adewole and Umoru (2021) examined the business environment on the success of small and medium-scale enterprises (SMEs). The study concluded that SMEs’ success could be better guaranteed with sufficient knowledge of the business environment and further recommended that owners/managers of SMEs should always endeavor to increase their knowledge and skills to a maximum level in order to surmount challenges relating to business environment.

VI. CONCEPTUAL MODEL



Source: Researcher Conceptual Model (2023).

VII. METHODOLOGY

The study adopted descriptive survey research design in order to investigate the effect of technological innovation on SME sales growth. However, the population of the study consists of all registered SMEs in Lagos State. A well-structured questionnaire was administered on a targeted sample of 205 owners/managers of SMEs in Lagos state of which 178 was duly completed and returned. However, the study adopted purposive and simple random sampling techniques to draw the sample from the population. The descriptive statistics such as frequencies and percentage were used for the analysis of the research questions while correlation regression analysis method was used to analyse the hypotheses.

VIII. RESULT AND DISCUSSIONS

Table 1.

S/N	Question	SA	A	U	D	SD	TOTAL
1	Effective communication does not aid our	10	12	14	65	77	178

	firm's sales growth.	6%	7%	8%	36%	43%	100%
2	There is no interaction between business and its environment	15 8%	19 11%	22 12%	58 33%	64 36%	178 100%
3	Good understanding of the environment help to reduces the threat of competitors.	63 35%	64 35%	25 14%	14 8%	11 6%	178 100%
4	Development of new products and services in our company enhances our sales growth.	78 44%	65 36%	21 12%	11 6%	03 2%	178 100%
5	My company always try to catch the initiative on the market in order to beat the competitors.	60 34%	62 35%	25 14%	23 13%	08 4%	178 100%
6	Adoption of technology in the industry put us ahead of the competitors.	65 37%	75 42%	19 11%	13 7%	6 3%	178 100%
7.	Periodic discussion between the marketing unit and other functional department on the customer future needs enhances our turnover.	68 38%	63 35%	23 13%	18 10%	8 4%	178 100%
8.	Leveraging on information technology for customer contact brings us closer to the them.	83 47%	68 38%	18 10%	09 5%	0%-	178 100%
9.	Firm customers periodic feedback mechanism gives us idea on their future needs and boost our sales growth.	64 36%	60 34%	31 17%	18 10%	5 3%	178 100%
10	Our technological innovation remains our driving force which brings about a new idea for businesses that provides customer value.	58 33%	63 35%	32 18%	18 10%	8 4%	178 100%
11	Technological innovation aid in the exploitation of business opportunities.	70 39%	56 32%	19 11%	22 12%	11 6%	178 100%
12	Technological innovation remain our firm's important source of growth.	68 38%	63 35%	21 13%	13 7%	13 7%	178 100%

Data analysis of research questions as shown in the above table

Item 1 of the above research question represent the opinion of respondents on whether poor communication aid firm's sales growth. The analysis indicates that 10(6%) of the respondents strongly agreed, 7(7%) agreed, 14(8%) were undecided, 65(36%) disagreed while 77(43%) strongly disagreed with the position that effective communication does not aid firm's sales growth. From the analysis of the respondents, we therefore concludes that effective communication well supported with good technology do aid firm's sales growth.

Questions 2 from the above table represent the view of the respondents on whether interaction exists between

business and its environment. The results shows that 15 (8%) of the respondents strongly agreed, 19(11%) agreed, 22(58%) were undecided, 64(36%) disagreed while 64(36%) strongly disagreed with the statement that there is no interaction between business and its environment. The study therefore concluded from the analysis that interaction exist between business and its environment.

Questions 3 from the above table represent the view of the respondents on whether good understanding of the environment help to reduces the threat of competitors. The results shows that 63 (35%) of the respondents strongly agreed, 64(35%) agreed, 25(14%) were undecided, 14(8%) disagreed while 11(6%) strongly disagreed with the idea that good understanding of the environment help to reduces the threat of competitors

because competitors are part of the environment. The study therefore concludes from the analysis that a good understanding of the environment help to reduces the threat of competitors.

Questions 4 from the above table represent the view of the respondents on whether development of new products and services enhances the sales growth. The results shows that 78(44%) of the respondents strongly agreed, 65(36%) agreed, 21(12%) were undecided, 11(6%) disagreed while 3(2%) strongly disagreed with the proposition that the firms development of new products and services enhances the sales growth because it aid in gaining new customers. From the analysis of the respondents, the study concludes that a development of new products and services enhances the sales growth.

Question 7 from the above table represent the view of the respondents on whether periodic discussion between the firm's marketing unit and other functional department on the customer future needs enhances firms sales turnover. The results shows that 68(38%) of the respondents strongly agreed, 63(35%) agreed, 23(13%) were undecided, 6(4%) disagreed while 8(4%) strongly disagreed with the proposition that periodic discussion between the firm's marketing unit and other functional department on the customer future needs enhances firms turnover. From the analysis of the respondents, the study concludes that a periodic discussion between the firm's marketing unit and other functional department on the customer future needs aid the sales growth.

Questions 8 from the above table represent the view of the respondents on whether leveraging on information technology for customer contact brings firms closer to its customers. The results shows that 83(47%) of the respondents strongly agreed, 68(38%) agreed, 18(10%) were undecided, 64(36%) disagreed while none strongly disagreed with the statement that leveraging on information technology for customer contact brings firms closer to its customers. The study therefore concluded that leveraging on information technology for customer contact brings firms closer to its customers.

Item 10 of the above research question represent the opinion of respondents on whether technological

innovation remains firm's driving force which brings about a new idea for businesses that provides customer value. The analysis indicates that 58(33%) of the respondents strongly agreed, 63(35%) agreed, 32(18%) were undecided, 18(10%) disagreed while 8(4%) strongly disagreed with the position that technological innovation remains firm's driving force which brings about a new idea for businesses that provides customer value. From the analysis of the respondents, the study therefore concluded that he study therefore concluded that technological innovation remains firm's driving force which brings about a new idea for businesses that provides customer value.

Question 11 from the above table represent the view of the respondents on whether firm's technological innovation aid in the exploitation of business opportunities. The results shows that 70(39%) of the respondents strongly agreed, 56(32%) agreed, 19(11%) were undecided, 22(12%) disagreed while 11(6%) strongly disagreed with the statement that firm's technological innovation aid in the exploitation of business opportunities. The study therefore concluded that technological innovation aid in the exploitation of business opportunities.

IX. TEXT OF HYPOTHESIS

Hypothesis One

Table 2 below, indicated that there exist a strong positive correlation relationship between marketing innovation and SME sales growth (I.e n= 178, .675, p = 0.000) we therefore, reject the null hypothesis (H_{01}) which state that there is no significant relationship between marketing innovation and SME sales growth. Therefore, hypothesis one result showed that there exists a significant positive effect of marketing innovation on SME sales growth.

The result of this study in consonant with the empirical studies of: Mohamed, AbdikarimAdan, and Muhumed (2017), Is-haq (2019), Peng, *et all*,(2021) and Pramuki1, *et all*, (2020) which opined that the effects of marketing innovation is statistically significant to SMEs performance.

Hypothesis Two

However, the results in table 2 further indicate that there is a positive correlation between entrepreneurial innovativeness and SME sales growth. (I.e n= 178, .612, p =0.000) which is significant, we therefore, reject the null hypothesis (H₀₂) which state that Significant relationship does not exist between entrepreneurial innovativeness and SME sales growth. The table further showed that entrepreneurial innovativeness has positive relation with SME sales growth.

The present study result is in conformity with the empirical studies of: Salau (2022), Mohammad, *et al*, (2021) who concluded that entrepreneur innovativeness significantly influenced the performance of SMEs and Coad and Rao (2008) who concluded that innovation is of crucial importance for a handful of ‘superstar’ fast growth firms.

Hypothesis Three

Moreover, there exist a high positive correlation relationship between Business Environment on SME sales growth at (n= 178, .721, p < 0.05) we therefore, reject the null hypothesis (I.e. H₀₃) which state that there is no significant relationship between Business Environment on SME sales growth and state that there is a strong positive significant relationship between Business Environment on SME sales growth.

This finding is in term with the empirical studies of: Rochaa (2012) who concluded that productive and competitive SME sector must be associated with sophisticated and innovative business environments and Laouiti, Gharbiet *all* (2014) who opined that significant relationship exist between business environment and firm performance in the other hand.

Table 2: Pearson Product Moment Correlation Table Showing the Relationship among

Marketing Innovation, Entrepreneurial Innovativeness and Business Environment on SME sales growth.

		SME Sales Growth	Marketing Innovation	Entrepreneurial Innovativeness	Business Environment
SME Sales Growth	Pearson Correlation . Sig. (2 tailed) N	1 178			
Marketing Innovation	Pearson Correlation . Sig. (2 tailed) N	.675** .000 178	1 .000 178		
Entrepreneurial Innovativeness	Pearson Correlation . Sig. (2 tailed) N	.612** .000 178	.581** .000 178	1 .000 178	
Business Environment	Pearson Correlation . Sig. (2 tailed) N	.721** .000 178	.648** .000 178	.620** .000 178	1 .000 178

	tailed) N				
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X. CONCLUSIONS AND RECOMMENDATIONS

The paper explores the relationship between technological innovation measurements (I.e. marketing innovation, entrepreneur innovativeness and business environment) and SME sales growth in Lagos state. The result of the study revealed that all the measurements of technological innovation measurement (I.e. marketing innovation, entrepreneur innovativeness and business environment) have a positive significant relationship with SME sales growth in Lagos state. This implies that an increase in technological innovation will enhances the SME sales growth performance. The study therefore concludes that marketing innovation, entrepreneur innovativeness and business environment are important and therefore enhances SME sales growth. It further concluded that both entrepreneurial innovativeness and business environment plays a prominent role in introduction and acceptance of technological innovation in SME.

In view of the above conclusions, it was recommended that:

- i. SMEs owners/managers should develop a management technological innovation culture and model that suits the organisation taking into cognizance the cost, benefits, customers need and the industry.
- ii. Government should come up with policy that will support and facilitate introduction of technological innovations in SMEs
- iii. (iii) SMEs owners/managers should always adopt newer technologies for their marketing innovations with a view to increase their sales growth.

REFERENCES

[1] Adewole, E.G and Tumoru, T.A, (2021). Perceived influence of business environment on small and medium scale enterprises success in Nigeria. *Research Article European Journal of Business and Management*, 6 (6). DOI: <http://dx.doi.org/10.24018/ejbmr.2021.6.6.1182>.

[2] Afuah, A. (1998). *Innovation management: Strategies, implementation and profits*. New York, NY: Oxford University Press.

[3] Akinwale, Y.O., Adepoju, A.O. and Olomu, M.O. (2017) ‘The impact of technological innovation on SME’s profitability in Nigeria’, *Int. J. Research, Innovation and Commercialisation*, Vol. 1, No. 1, pp.74–92.

[4] Anjum, A (2018). Impact Of Technology Adoption on The Performance of Small and Medium Enterprises in India. *The Journal of Social Sciences Research*, 5, pp: 857-867.

[5] Azubuike, Vera M.U. (2013) "Technological Innovation Capability and Firm’s Performance in New Product Development," *Communications of the IIMA*: Vol. 13: Iss. 1, Article 4.

[6] Bala Subrahmanya, H, M (2011). Technological Innovations and Firm Performance of Manufacturing SMEs: Determinants and Outcomes. *ASCI Journal of Management* 41(1): 109–122.

[7] Bartoloni E and Baussola M (2015) *Persistent product innovation and market-oriented behaviour: The impact on firms' performance*, DISCE - Quaderni del Dipartimento di Scienze Economiche e Sociali dises 1505, Università Cattolica del Sacro Cuore.

[8] Bartoloni, E.; Baussola, M. Does Technological Innovation Undertaken Alone Have a Real Pivotal Role? Product and Marketing Innovation in Manufacturing Firms. *Econ. Innov. New Technol.* 2016, 91–113. [CrossRef]

[9] Cascio, Robert P., (2011). "Marketing Innovation and Firm Performance Research Model, Research Hypotheses, And Managerial Implications". *Electronic Theses and Dissertations*, 2004-2019. 1906. <https://stars.library.ucf.edu/etd/1906>

[10] Duncan, R. B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly Journal* 29(1), 52-63.

[11] Elert, Niklas, and Magnus Henrekson (2021). “Innovative Entrepreneurship as a Collaborative

- Effort: An Institutional Framework.” Foundations and Trends in Entrepreneurship, Vol. 17, No. 4, pp. 329–434.
- [12] Galloway, L. (2007). Can broadband access rescue the rural economy? *Journal of Small Business and Enterprise Development*, 14(4), 641–653.
- [13] Guan, J. C., Yam, R. C. M., Mok, C. K., and Ma, N. (2006). A study of the relationship between competitiveness and technological innovation capability based on DEA models. *European Journal of Operational Research*, 170, 971-986.
- [14] Guo, C., and Miller, J. K. (2010). Guanxi dynamics and entrepreneurial firm creation and development in China. *Management and Organization Review*, 6(2), 267–291.
- [15] Is-haq, H.O, (2019).Effect of digital marketing and sales improvement of small and medium enterprises in Nigeria. *International Journal of Innovation and Research in Educational Sciences* Volume 6, Issue 6.
- [16] Kuratko, D. F. (2017). Corporate entrepreneurship 2.0: Research development and future directions. *Foundations and Trends in Entrepreneurship*, 13(6), 441–490. doi:10.1002/9781118785317.weom130030.
- [17] Laouiti, R, Gharbi, S And Liouane, S, (2014). *The effect of business environment on firm performance Exploratory Study: Case of Tunisian enterprises. International Journal of Management & Information Technology*, 8(3).
- [18] Li, X. Z., & Zhang, X. D. (2007). Analysis of Effect of FDI on Technology Innovation of
- [19] Mohamed, H. A, Abdikarim Adan, H and Muhumed, M. M, (2017). The Impact of Innovation on Small and Medium Enterprises Performance: Empirical Evidence from Hargeisa, Somaliland. *International Journal of Academic Research in Business and Social Sciences 2017, Vol. 7, No. 8* . DOI: 10.6007/IJARBS/v7-i8/3202.
- [20] Mohammad, F, Shehnaz, T and Horne, C.N, (2021).Entrepreneurial innovativeness and its impact on smes’ performances. *International Journal of Entrepreneurship*, 22, (3) 20181 1528-2678-22-3-169.
- [21] Ni, H. (2018) Study on the Role of Technological Innovation in Business Administration. *Modern Economy*, 9, 1619-1624. doi: 10.4236/me.2018.910100.
- [22] Okpalaoka C, Ogunnaike O, Kalu A *et al.* (2022). Effect of technological innovation capabilities on the performance
- [23] Peng, J.; Qin, Q. and Tang, T (2021). The Influence of Marketing Innovations on Firm Performance under Different Market Environments: Evidence from China. *Sustainability* 2021, 13, 10049. <https://doi.org/10.3390/su131810049>
- [24] Pramuki1, W. A and Kusumawati, P. A, (2020). The influence of product innovation, digital marketing and competitive advantage in improving the marketing performance of small and medium industries in bali. *Advances in Economics, Business and Management Research*, 175.
- [25] Rafiki, A. (2020). Determinants of SME growth: an empirical study in Saudi Arabia. *International Journal of Organizational Analysis*
- [26] Rahim, T., and Zainuddin, Y. (2016). Moderating effect of environmental turbulence on firm’s technological innovation capabilities (TIC) and business performance in the automotive industry in Malaysia: A conceptual framework. *MATEC web ofConferences*, 01009.
- [27] Rochaa, E.A. G, (2012). The Impact of the Business Environment on the Size of theMicro, Small and Medium Enterprise Sector; Preliminary Findings from a Cross-Country Comparison. *Procedia Economics and Finance*, 4 (2012) 335 – 349.
- [28] Salau, N.A, (2022). Understanding the moderating effect of entrepreneurial training and development on entrepreneurial orientation and SMEs performance. *Iconic Research And Engineering Journals*, 5,(10).
- [29] Salau, N.A. (2022). Appraisal of The Effect of Strategic Management on The Performance of Small and Medium Scale Enterprise in Nigeria. A Case Study f Selected SMEs In Lagos State. *IRE Journal*, 5(8), February 2002
- [30] Samwel M. C, Daoping W & Shaldon L.S (2019):Impact of information technology

innovation on firm performance in Kenya,
Information Technology for Development, DOI:
10.1080/02681102.2019.1573717

- [31] Tinoco, Janet. "Marketing Innovation: The Construct, Antecedents and Consequences." *Unpublished Work*, 2005.
- [32] Wibawa T, Widjanarko H, Utomo HS, et al. (2020). Technopreneurship Based Product Innovation: a Case Study on Small Entrepreneur. Proceeding of LPPM UPN "Veteran" Yogyakarta Conference Series 2020—Engineering and Science Series, 1(1), pp. 439–444.
- [33] World Bank, (2022). Understanding Poverty: Small and Medium Enterprises (SMEs) Finance.