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## Product mediation and innovation and creativity: Global business prospects of manufacturing small and medium enterprises in South-East, Nigeria

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### ABSTRACT

The aim of this study is to find the relationship between product mediation and innovation and creativity in the South-East region of Nigeria. This is a desk research and the researchers used secondary data from other journal articles, books, other internet publications, and the empirical views of other researchers which were extensively reviewed. The theoretical findings in line with the reviewed literature revealed a significant relationship between product mediation and Research and Development Investment and also a significant relationship between product mediation and employee engagement. Therefore, the study recommended that SMEs should adopt the use of R&D investment so as to roll out products that can compete with others.

### Keywords:

*Online Intermediation, Product mediation, employee engagement, innovation and creativity*

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## Background of the study

Scholars and practitioners have argued that the growth and survival of small and medium enterprises all over the world have been unceasing innovation and creativity, networking, knowledge-sharing, technological activities, etc. Also, the current environment of business is turbulent, and small and medium enterprises are the most vulnerable under this condition and their sustainability is seriously challenged (Chesbrough, 2020; De Marco, Martelli, Di Minin, 2020).

Zhang, Teng, Le, & Li, 2023). They require the results of efficient R&D, knowledge-sharing, networking, and other factors to overcome this huge challenge, however, small and medium enterprises especially in developing countries have a lower ability to engender innovation compared to large corporations because they allocate very little of their resources to research and development which in turn inhibits innovation and creativity (Stojčić, 2021).

Many scholars and practitioners have agreed with the fact that small and medium enterprises are constrained by their resources, including the ones acquired for international businesses, lack of management skills, poor financing, and so on (Bowen, 2020; Dalla Costa & El Alam, 2017). However, small and medium enterprises can enhance their innovation and creativity performance through the acquisition of external resources (Lu, Qi, & Hao 2023), developmental policies, and the use of technology will enhance the growth and sustainability of these SMEs (Surya, Menne, Sabhan, Suriani, Abubakar, & Idris 2021). By this, managers and owners of SMEs have to think outside the box to know what mix of resources to employ in order to enhance their innovation capability especially those in the manufacturing and service industries as this will enable their products and services to compete favorably with other products at the global market.

Over the years, this global market has been dominated by the products of developed countries and later the Asian tigers (South Korea, India, Indonesia, etc.) that made their way into innovation and creativity with very little or nothing seen of Nigerian enterprises. This has made Nigeria and the entire African continent heavily rely on imported products, making our nation and the entire continent a dumping ground for these foreign firms. The resultant effects cannot be quantified as this has caused massive loss of jobs, brain drain, and deficits in the trade balance between African countries and other nations in the world especially America, Europe, and the Asian Tigers, and this hindered economic growth. Del Carpio Gallegos and Miralles (2023) posited that China's manufacturing industry has engendered rapid economic growth but has also posed a serious environmental challenge by degrading it with so many toxic hazards.

Despite the growing needs and benefits of SMEs in every economy of the world, African businesses still face many challenges like; lack of access to finance, supportive political structures and ecosystem, market, supply chain, and other external resources (Degbey, Eriksson, Rodgers, & Oguji, 2021), absence of a supporting environment (Cheong, Lee, &

Weismann, 2020), (Hamdan,

Fathi & Mohamed, 2018), security breaches, technical factors (Johnson, Pretorius, & Lavhengwa, 2023), and lack of entrepreneur's business experience, poor business management practices and lack of funding (Zhou & Zondo, 2023).. It is expected that this paper will be utilized by the government and stakeholders by putting in place those factors and infrastructures that will enhance the growth and performance of SMEs in Nigeria and also enable them to become notable players on the global scene to better our economy, improve the standard of living, create jobs, etc.

### **Statement of the problem**

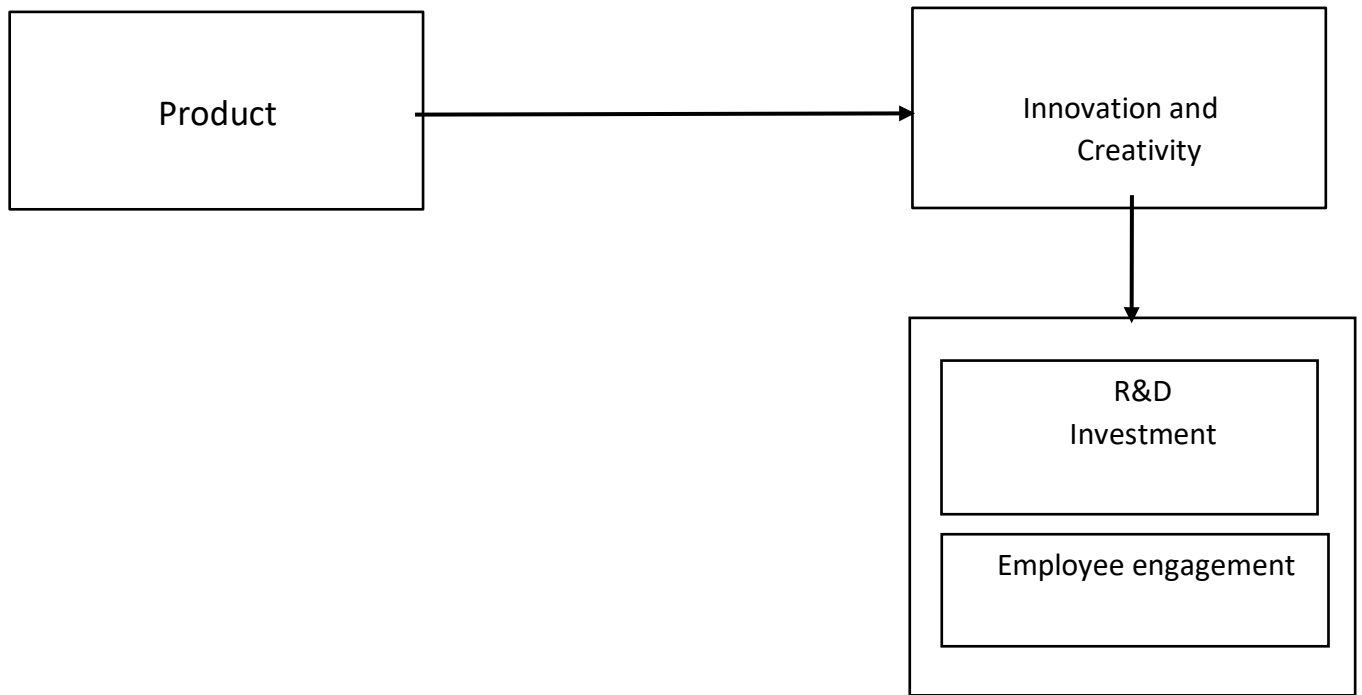
Nigerian-made products have been scarcely seen in the global market with Nigeria and other African countries becoming heavy consumers of foreign goods without producing anything despite the abundance of natural resources on the soil of this country and the entire African continent. This has caused so many problems to our economy such as deficits in trade balance and so on, and as we have in the past years become a dumping ground, and without regulations on these products thereby having very many sub-standard products brought to us for consumption. Many scholars have proffered solutions, stakeholders, and different government administrations have come up with many suggestions, and programs rolled out by the government but characterized by massive corruption, and all have yielded no fruit and the case worsened by the day.

The activities of government, stakeholders, and large corporations can no longer give the growing population their demands in terms of products that can enhance their standard of living, employment, and other benefits accruing from them. It is very important to note that our society will be bedeviled by poverty and over-dependence on foreign products which is not good for our economy. If this problem is not resolved, it will increase poverty, unemployment, crime, and other social vices that are inimical to society and our country's image. Subsequently, further studies will find it useful to know the part innovation and creativity can play in enhancing SMEs, especially in the manufacturing sector on the global market. This can also improve our economy, increase living standards, create employment, etc.

This research aims to investigate the effects of innovation and creativity on product mediation in the South East of Nigeria. This study will identify the most significant factors of innovation and creativity through the use of empirical reviews of similar studies conducted by authors through journal articles, online publications, textbooks, and other materials related to the study. Thereby showing how product mediation innovation and creativity can enhance the capacity of manufacturing SMEs in the Southeast to measure up with their foreign counterparts on the global scene giving them a competitive advantage and also becoming big players like those firms in the United States, Canada, United Kingdom, China and other known names in the international market. There is no doubt that the study will fill the gap

created by literature by sufficiently treating the concepts of product mediation, innovation, and creativity.

### Conceptual framework



**Source:** Rachmawati, N. P. & Sankita, I. W. (2022) (*Product mediation*) Ghura, A. S., DeNoble, A. & Flores, R. M. (2022) – (*R&D Investment and Employee Engagement*)

The conceptual framework above shows the relationship between product mediation and the innovation and creativity of SMEs. The predictor variable product mediation and its dimensions (product quality and customer satisfaction) were adopted from the study conducted by Rachmawati and Sankita (2022) and the criterion variable innovation and creativity and its measures (R&D investment and employee engagement) were adopted from the study conducted by Ghura, De Noble and Flores (2022). This is a theoretical research paper and the researchers will be relying on journal articles, online publications, textbooks, etc. of other authors and our findings, conclusion, and recommendations will be made from the extensive reviews of these materials.

### Aims and objectives of the study

The main aim and objective is to examine the relationship between product mediation and innovation and creativity of SMEs in the manufacturing sector in South-East, Nigeria. However, other aims and objectives include to:

- i. Examine the relationship between product mediation and R&D investment of SMEs in the manufacturing sector in Southeast, Nigeria.
- ii. Examine the relationship between product mediation and employee engagement of SMEs in the manufacturing sector in Southeast, Nigeria.

### **Significance of the study**

The findings of this study will reveal how product mediation can strengthen the innovation and creativity of SMEs in the country and enable domestic businesses to think outside the box in engendering innovation and creativity in their businesses to compete favorably with their counterparts in the global market. The benefits of international trade are numerous, and countries and businesses that engage in it gainfully have been rated among the best in the world. This study will therefore reveal how businesses in the country should concentrate on producing quality products that can satisfy their target customers by engaging their employees meaningfully to achieve organizational aims and objectives and also show how the use of R&D can result in superior performance in other to increase their stake at the global market.

### **Product mediation**

Ampadu, Jiang, Debrah, Antwi, Amankwa, Gyamfi, and Amoako (2022) posited that consumers' lifestyles and their buying habits have been transformed greatly by a couple of factors, and with the aid of technology, they do not have to follow the traditional methods of visiting the stores to get the desired products, of course, this requires a new strategy in re-positioning the company's product to give them the appeal they require before potential buyers since no one is there to convince them to buy these products. Reaching customers around the globe needs to be taken seriously, and in other to compete favorably with the products of other firms, especially the ones from developed countries. SMEs that intend to go global are for this reason thinking about certain areas that their products that can be modified not just on their thoughts but after thorough research of what their target customers want in terms of size, shape, weight, and other features that can enhance the products' competitive advantage in the market they wish to compete.

Rachmawati and Suroso (2019) described product mediation as an attention-to-product and its characteristics (attributes), tailored to the information received from research conducted to satisfy the target customers. However, there are other features of the product that should be considered in product mediation such as; affordability (price in about similar products), accessibility, ease of use, perceived usefulness, quality of the product, social influences, and trust (Amoroso & Lim, 2017). Some researchers have argued that in recent years global businesses have been majorly controlled by technology and for a business to make an impact globally, they must secure the services of an influencer to give it an appeal (Kim & Park, 2023), product design, the introduction of modern machines (Morgan, & Liker, 2020), product design and assessment, supply chain management (Rusch, Schöggel, & Baumgartner,

2023).

Certain areas of neglect have also hampered the chances of SMEs in Africa, especially in Nigeria, where corporate governance has been neglected and this has been an issue for venture businesses (Wen, Alessa, Marah, Kyeremeh, Ansah & Tawiah, 2023), others include; African underdevelopment and Western influence (Ekakitie, 2023), owner-manager based business orientation (Akengbor, 2021), the inability of challenged regional economic blocs in Africa to stand in the gap for SMEs (Ogbor, 2019; Ekakitie, 2019). However, all these challenges can be resolved through crowdfunding (Marughu & Akintoye, 2023), the provision of cheap funds for SMEs (Ogujiuba, Olamide, Boshoff, Agholor, & Ogujiuba, 2023), the introduction of modern facilities such as digital technologies (Ormond, 2023), and regularly organizing seminars to make business owners have adaptive capacities (Ali, Li, Qiu & Farooq, 2023).

RajasQualityp, Ardana, Yusuf, and Harizahayu (2023) defined product quality as the combination of properties and features that can determine the extent to which that product can meet customers' satisfaction. Product quality therefore can be defined as the comprehensive evaluation of consumers about satisfaction of that customer's want. Ewe and Tjiptono (2023) posited that there are eight factors to be considered in the definition of product quality which include; the performance of the product, durability, compliance with industry codes and standards, features, reliability, aesthetics, perceived quality and serviceability of the product. Keller (2013) included tangible goods, services, information, experience, concepts, places, and properties as examples of products. Susanto (2016) argued that society in modern days is very selective and very careful in their choice of product and as a matter of fact, the strategy adopted must create an excellent product.

One major challenge for SMEs in Nigeria has been the issue of sub-standard products compared to what is obtainable in other developed countries. This has made products from Nigeria less admirable to competitors. Badalov (2023) attributes this to the absence of a unified state system of product quality management as it is in Europe and America. He argued that it serves as a code for the improvement of the manufactured product, evaluates the quality of the product, decides the minimum technology for the product, decides the raw materials to be used, personnel, training, transportation, storage, quality indicators, promotion strategies to adopt, supply, inspection, etc.

When systems like this are put in place by the government, SMEs can now manufacture under the stipulated condition and in turn become efficient with quality products at the end, become competitive, and with time gain space in the global market.

Customer satisfaction can be defined as a condition of the customer's need, want, desire, and expectation of the consumer in the usage or consumption of that product or service (Puspasari, Nurhayaty, Riftiasari, Yuniarti, Suharyadi, Martiwi, & Adawia, 2022). Ginting, Chandra, Miran, and Yusriadi, (2023) defined customer satisfaction as a response and the

consumer's assessment of the level of satisfaction he derives in the consumption of that particular product. Wibowo (2018) posited that there are indicators that measure customer satisfaction: the quality of the product, price, discounts, and other deductions, and the convenience of using that product. Noorossana, Saghaei, Shadalouie, and Samimi (2023) argued that for superior performance of every organization, customer satisfaction must be measured by constructing avenues that they can respond and their satisfaction with the product will be measured. They further argued that it helps the organization monitor and take certain actions where necessary to maintain a decent place in the market.

Customer satisfaction has a lot of importance in the life of a business, especially SMEs and their sustainability. It stimulates customers' loyalty, provides insight into the team's innovation performance, encourages repeat visits, increases lifetime value, and drives customer acquisition (Ying, 2023). Recently, some models have been developed for SMEs and other organizations to measure customer satisfaction. These include; Customer Satisfaction Scores (CSAT), Customer Effort Scores (CES), and Net Promoter Scores (NPS) (Szyndlar, 2023). Asserted that customer satisfaction can be boosted by scanning the ecosystem with scientific metrics, fixing the firm's disconnects, satisfying customers' drive, sticking around and being loyal, appreciating complaining customers, handling properly quality performance matters, having in mind that value is more or less price, and that satisfaction is never guaranteed, and customer's satisfaction is an asset.

African SMEs have the potential to become the most attractive investment hub for global businesses due to the enormous endowment of natural resources on the soil of the continent. This they can do by meeting standards and acquiring certifications from the International Standards Organization (ISO), broadening their ownership structure, locating quality sources of raw materials, adopting a modernized production technology, and belonging to industry associations and chambers of commerce (International Trade Centre, 2018). SMEs in South Africa are now re- strategizing and re-positioning their business operations by adopting new practices in combining innovation, agility, and determination in facing the challenges bedeviling them (Salesforce, 2021). Understanding customers' journeys, listening to them, offering proactive multi-channel support, acting on feedback, and personalizing your experience can enhance product satisfaction (Hotjar, 2023).

### **Innovation and creativity**

Innovation and creativity are two words that are always used together, however, Wiley (2013) defined creativity as the capability or the act of conceiving something new, unusual, or original and further added that creativity is essential for the sustainability of the business. Creativity is not confined to fine and applied arts, literature, or performing arts, they also occur in all other fields of life like medicine, business, defense, etc. It produces tangible things and includes doing things in novel and effective ways (Treffinger, Isaksen, & Stead-Dorval, 2023). While Innovation refers to the application of novelty in a product, strategy, or business model and it increases usability and the entity of the new product, it does not have to

be a breakthrough in business, it may include a major technological introduction, new business model, upgrade of the company's machinery and equipment, etc. Innovation is very important in a firm's sustainability journey, and getting it right can be very challenging (McKinsey. 2023).

There is a growing interest among scholars of entrepreneurship in the concept of innovation and creativity (Luhillery, Raffo & Hamdan-Livramento, 2015). Peter Drucker once said that what you cannot measure, you can also not be able to manage. To back this up, Fischer (2023) posited that innovation is not serendipitous and can be measured by collecting and tracking each idea, estimating the costs and benefits of each idea, measuring the implementation of each idea, calculating the value of each idea, and determining the innovation rate across the organization. Cropley, Kaufman, and Cropley (2011) argued that innovation can be measured through three means which are; indirect measurement, global judgment, and criterion-based measurement and the tools for measurement are rating scales and subjective assessment. The benefits of innovation and creativity are realized both locally and internationally because its products are limitless in boundaries (Szakálné Kanó, Vas, & Klasová, 2023).

The concept of innovation has received many accolades due to its immense benefits to organizations that have exhibited innovation and creativity, countries where these firms exist, and the entire globe as it has been seen as the main driver of industrial growth and economic (Corrente, Garcia-Bernabeu, Greco, & Makkonen, 2023). The evolving and dynamic nature of the market, the increasing needs of contemporary days' consumers, intellectual property protection laws of virtually all the countries of the world, increase in knowledge, collaborations, partnerships, franchising, improved research and developments, creative thinking, the increasing social and environmental needs, improvements on the existing products, and the disruption of existing industries have been found as the source that innovation and creativity emanate from (Kalko, Erena & Debele, 2023).

Many organizations that started very small have grown to large firms that have a significant presence in almost all the countries of the world because they invested heavily in R&D like KFC, Walmart, Microsoft, etc. (Gladyshev, 2023). Despite the huge cost of acquiring modern R&D equipment and the employment of well-trained people to run it, Zhang and Mohnen (2022)) argued that the benefits of innovation and creativity can be short-lived, however, R&D is an investment in knowledge that yields innovation in the short and the long run increases the stock of knowledge, the standard of living, and organizational sustainability. Some authors further argued that the benefits of R&D are numerous and it costs so much to acquire, that subsidies and other incentives should be given to businesses that want to acquire it for their businesses and that the entire society will benefit from it (Boeing, Eberle & Howell, 2022; Muñoz-Bullón, Sanchez-Bueno & De Massis, 2020).

There are many breakthroughs recorded by R&D in every facet of life, be it in medicine, sports, meteorology, academics, engineering, or automobiles. Renewable energy, aerospace,



and so on. These breakthroughs cut across a wide range of sectors, industries, and companies of all sizes life and in all disciplines of life and have not only improved the standard of living of people but have also caused harm as some of the products of these research have injected toxins into our environment, affected the food we eat, and caused harm to human beings, depleted the ozone layer and climate changes, and many other effects on the globe (Shaari, Abdullah, Alias & Adnan, 2016). Apart from the chaos that R&D has caused, organizations are strongly advised to move in the direction of investing in it because of the immense benefits organizations that have adopted it have enjoyed in most developed countries like the United States, Canada, United Kingdom, China, Malaysia, etc. (Lu, Qi & Hao, 2023).

Like every other concept that can be measured in business, the impact of R&D can also be measured to show the level it has helped the organization in the achievement of its goals and objectives. The measurement of the impact of R&D in an organization greatly depends on the unique needs of the organization and therefore involves both quantitative and qualitative methods (Werner & Souder, 1997). The use of surveys, the ratio of investment in R&D to revenue, the starting point technique, and the Key Performance Index (KPI) data set are some techniques that can be used to measure the impact of R&D in an organization (Habtewold, 2023).

Employee engagement is described as the level of enthusiasm and dedication a worker feels toward his job and it can be critical to the success of an organization, increase productivity, and encourage higher performance (Kral, Janoskova & Dawson, 2022). It can also be defined as how much a worker is ready to assist their organization in achieving their goals and objectives (Bridger, 2022). Argued that things are changing and organizations are adopting fierce competitive strategies in the achievement of their objective and as such the most important part of an organization's resources should be taken seriously. Industries these days rely on very competent workers especially in the information technology sector as system developers, system analysts, and several other areas that have seen breakthroughs (Varma, 2017). In light of this, an organization's human relations policies should be tailored in line with what is globally acceptable and also meet the expectations of the employees (Riyanto, Endri & Herlisha, 2021).

There are many barriers to employee engagement and managers of business need to get rid of them, they include job insecurity, unfairness especially in the area of rewards and payments, jobs with a repetitive work cycle, highly stressful jobs with little flexibility, poor line management behavior, workplace culture, participative management style, and relationship, challenging jobs, listening managers, trust, and autonomy are listed as the drivers of employee engagement (Robertson-Smith & Markwick, 2009). Organizations can revive the morale of their employees by offering flexible hours, improving work-life balance, increasing productivity, greater employee retention, and improving the morale of employees through employee engagement strategies (HR Cloud, 2022). For SMEs in Nigeria to make significant success, they must have employee engagement orientation doing the right things for their staff and remunerating them adequately. The most important resource in the business is the

human being and as such treat it with utmost care.

## **Theoretical framework**

The theoretical foundation is hinged on the technological mediation theory postulated by Professor Jean Gagnepain in the 60s in Rennes, France and it offers a framework for analyzing the roles technologies play in both human beings and the environment. The central idea is that technologies when they are used, help to shape the relationship between human beings and the society at large. Peter-Paul Verbeek, one of the proponents of this theory also stated that this theory should not be approached as a “material object opposed to human subjects” but should be approached in the post phenomenology and this also affects the philosophical theory and the practices of design and technological developments. He claimed that the theoretical aspect of this theory will help to guide those mediating technologically to have a central thought of some philosophical subfields like epistemology, ethics, and metaphysics (Mieli, 2022). Pavel, Medola, Berg, and Brevik (2020) also agreed that this approach will help the philosophy and design of technology proffer a lasting solution rather than creating technology-facilitated violence.

## **Empirical Review**

Kang, Um, Wang, Park, Colclough, and Park (2022) researched Integrating manufacturing and R&D functions for better quality and product development performance with organizational culture as its moderating variable. Data was collected from 931 manufacturing companies around the world with the aid of a questionnaire. Regression analysis and SPSS were used to analyze the results of the data collected. The findings revealed that R&D can improve the quality of the product and the development of the product.

Chen, Gu, and Luo (2022) studied corporate innovation in R&D, and companies that have R&D and those without the use of R&D were considered data was collected and analyzed the data analysis, China between 2007 to 2014 and using the questionnaire many Indians and Russians. It was revealed that R&D has a positive relationship with product quality and product performance and that in the absence of institutional protection, the market competition will hurt R&D. They also observed that market completion, state ownership, and firm size are affected by R&D.

Kassa and Tsigu (2022) studied corporate entrepreneurship, employee engagement, and product innovation. Copies of the questionnaire were sent to 246 people (12 managers and 236 employees) in the manufacturing industry and the data collected was analyzed with a cross-sectional analysis. It was observed that R&D encourages all of those drivers of employee engagement and that the success of R&D strengthens employee engagement.

Al-Ajlouni (2021) studied how high-performance systems can promote organizational innovation with a focus on the SMEs in Jordan, targeting the employees in R&D centers. A

quantitative- deductive causal method. Data was collected through a self-administered questionnaire responded to by 272 employees and structural equation modeling SMART-PLS was used for statistical analysis. It was revealed that employee engagement is significantly related to high-performance work systems and causes more than sixty-five percent of innovations that occur in the organization and the presence of an efficient R&D and good leadership style in an organization strengthens employee engagement.

Tou, Watanabe, Moriya, Naveed, Vurpillat, and Neittaanmäki (2019) studied how the investment in R&D in 2017 triggered organizational growth, development, and global customer satisfaction of Amazon. An empirical analysis of Amazon's R&D model system was studied to provide convincing answers to the questions asked. It was observed that Amazon based on R&D as their organizational culture has been promoting company-wide experimentation to provide customers being obsessed with purchase decisions. This obsession also has caused Amazon to deploy digital architecture by harnessing the power of customers' usage power. The emergence of an efficient R&D has activated a self-propagating function that has induced functionality development, leading to supra-functionality beyond an economic value which satisfies a shift in customers' preferences. Parast (2020) studied the moderating effects of a firm's R&D investment in the mitigation of supply chain disruptions. Four supply chain disruption risks were used which are the environment, demand, process, and supply. Survey data was collected from service and manufacturing organizations in the United States and the findings revealed that R&D investment increases a firm's resilience capability, and significantly mitigates the effects of process disruption, supply chain disruption, and demand disruption which in turn enhances customers' satisfaction and confidence on the organization's products or services.

Ningsih, Wijaya, Muntahari & and Damayanti (2023) studied the impact of transformational leadership on employee satisfaction, employee performance, and employee engagement in state- owned pension and insurance companies in Indonesia. The study utilized a SMART-PLS 3.0 with a sample population of 372 from class 3 and class 4 cadre in state-owned insurance and pension companies. The results revealed that the transformational leadership style has a very significant impact on the outcomes felt by employees (in terms of employee satisfaction, employee performance, and employee engagement) which in turn affects their productivity positively and also affect positively the customers' satisfaction.

Bouchriha, Farid, and Ouiddad (2023) researched how enhancing value co-creation behaviors through employee engagement in the Moroccan hotel context affects customers' satisfaction and brand image in luxury hotels. Research data was collected through an online questionnaire from 583 tourists and analyzed with SPSS 23.0 and SMART-PLS 3.3. The findings revealed a very strong relationship among customer satisfaction, customer value co-creation behavior, and a positive hotel image.

## Findings

From the literature gathered so far in this study, since there was no empirical study conducted, the findings include but are not limited to the following:

- i. That there is a positive and significant relationship between product mediation and the research and development of manufacturing SMEs in Southeast, Nigeria.
- ii. There is a positive and significant relationship between product mediation and employee engagement of manufacturing SMEs in Southeast, Nigeria.

## Conclusion

Based on the findings obtained from this study, we, therefore, reached the following conclusions:

Product mediation can influence the research and development of manufacturing SMEs in Southeast, Nigeria. Product mediation can influence employee engagement of manufacturing SMEs in Southeast, Nigeria.

## Recommendations

1. SMEs should adopt the technological part in their activities as knowledge has gone technological and is no longer biological for superior performance
2. SMEs should take a critical look at products that are similar to theirs produced in developed countries and upgrade to such standards to gain global attention.
3. Indigenous researchers, scholars, ministries, agencies of government, and industry experts should come together and develop codes and standards for every product used here in the country.
4. Banks and other financial institutions should make loans available for R&D investments for SMEs in Nigeria to compete favourably in the international market.

## Contribution to knowledge

This study was motivated to examine the relationship between technological mediation and the proactiveness of corporate gig businesses in South-West, Nigeria. It was observed during the study that many business owners and managers do not want to embrace changes in the business environment. By this, the following were hereby suggested as follows:

1. The government's involvement should be visible in the development of SMEs in Nigeria as their benefits are quite huge and necessary for national development.
2. There should be legislation made and enforced to enhance access to loans for

R&D and other facilities that will enhance the development of SMEs in Nigeria.

3. Seminars, symposiums, and other programs are constantly held by agencies of government and chambers of commerce for SMEs to know what is happening in the global market as information is key.
4. SMEs should also learn how to partner with others and also consult the services of experts in their business activities.

## References

- Akenbor, C.O. (2021) Paradigm Shift in Accounting: Epistemological & Phenomenological Perspective, being the 7th Inaugural Lecture delivered, Thursday 4th November, Faculty of Management Sciences, Federal University Otuoke, Bayelsa State.
- Ali, H., Li, M., Qiu, X., & Farooq, Q. (2023). Global Mindset and Adaptive Marketing Capabilities in the Internationalization of Mature Chinese SMEs: International Opportunity Perspective. *Sustainability*, 15(3), 2044.
- Amoroso, D., & Lim, R. (2017). The mediating effects of habit on continuance intention. *International Journal of Information Management*, 37(6), 693-702.
- Ampadu, S., Jiang, Y., Debrah, E., Antwi, C. O., Amankwa, E., Gyamfi, S. A., & Amoako, R. (2022). Online personalized recommended product quality and e-impulse buying: A conditional mediation analysis. *Journal of Retailing and Consumer Services*, 64, 102789
- Badalov, U. N. O. (2023, January). Quality in product quality management significance of indicators. In International Scientific Conference" Innovative Trends In Science, Practice And Education" (Vol. 2, No. 2, pp. 65-75).
- Boeing, P., Eberle, J., & Howell, A. (2022). The impact of China's R&D subsidies on R&D investment, technological upgrading, and economic growth. *Technological Forecasting and Social Change*, 174, 121212.
- Bowen, R. (2020). Motives to SME internationalization: A comparative study of the export propensity among food and drink SMEs in Wales and Brittany. *Cross Cultural & Strategic Management*, 27(1), 51-74.
- Bridger, E. (2022). *Employee engagement: A practical introduction* (Vol. 24). Kogan Page Publishers.
- Cheong, C. W., Lee, M. H., & Weissmann, M. A. (2020). Credit access, tax structure, and the performance of Malaysian manufacturing SMEs. *International Journal of Managerial Finance*, 16(4), 433-454.
- Chen, C., Gu, J., & Luo, R. (2022). Corporate innovation and R&D expenditure disclosures. *Technological Forecasting and Social Change*, 174, 121230.
- Chesbrough, H. (2020). To recover faster from COVID-19, open up: Managerial implications from an open innovation perspective. *Industrial Marketing Management*, 88, 410-413.

- Corrente, S., Garcia-Bernabeu, A., Greco, S., & Makkonen, T. (2023). Robust measurement of innovation performances in Europe with a hierarchy of interacting composite indicators. *Economics of Innovation and New Technology*, 32(2), 305-322.
- Cropley, D. H., Kaufman, J. C., & Cropley, A. J. (2011). Measuring creativity for innovation management. *Journal of technology management & innovation*, 6(3), 13-30.
- Dalla Costa, A., & El Alam, N. A. (2017). Financial difficulties in the internationalization process of Brazilian SMEs in Latin America. *Espacios*, 38, 21.
- Degbey, W. Y., Eriksson, T., Rodgers, P., & Oguji, N. (2021). Understanding cross-border mergers and acquisitions of African firms: The role of dynamic capabilities in enabling competitiveness amidst contextual constraints. *Thunderbird International Business Review*, 63(1), 77-93.
- De Marco, C. E., Martelli, I., & Di Minin, A. (2020). European SMEs' engagement in open innovation When the important thing is to win and not just to participate, what should innovation policy do? *Technological Forecasting and Social Change*, 152, 119843.
- Del Carpio Gallegos, J. F., & Miralles, F. (2023). Interrelated effects of technological and non- technological innovation on firm performance in EM—A mediation analysis of Peruvian manufacturing firms. *International Journal of Emerging Markets*, 18(8), 1788-1807.
- Ekakitie, E.S. (2019) Managing Turbulent Business Environments in Nigeria: A Model Approach, *Journal of Education, Society and Behavioural Sciences*, 29(3); 1-11. <http://www.sdiarticle3.com/review-history/22092>.
- DOI:10.9734/JESBS/2019/v29i330111
- Ekakitie, E. S. (2023, March). Taxonomy for reclassification of SMEs for optimal performance in sub-Sahara Africa. *Journal of Xidian University* <https://doi.org/10.37896/jxu17.1/037>.
- Ewe, S. Y., & Tjiptono, F. (2023). Green behavior among Gen Z consumers in an emerging market: eco-friendly versus non-eco-friendly products. *Young Consumers*, 24(2), 234- 252.
- Fischer, B. (2022, November 10). How to Measure Innovation. *Elmhurst University*. September 15, 2023, <https://www.elmhurst.edu/blog/how-to-measure-innovation/>
- Gladysrev, D. (2023). Factors Affecting R&D Share in University Revenues: Case of Russia. *Journal of Risk and Financial Management*, 16(2), 80.
- Ginting, Y., Chandra, T., Miran, I., & Yusriadi, Y. (2023). Repurchase intention of e-commerce customers in Indonesia: An overview of the effect of e-service quality, e-word of mouth, customer trust, and customer satisfaction mediation. *International Journal of Data and Network Science*, 7(1), 329-340.

- Habtewold, T. M. (2023). Impacts of internal R&D on firms' performance and energy consumption: Evidence from Ethiopian firms. *International Journal of Innovation Studies*, 7(1), 47-67.
- Hamdan, A. R., Fathi, M. S., & Mohamed, Z. (2018). Evolution of Malaysia's technology transfer model facilitated by national policies. *International Journal of Engineering & Technology*, 7(2.29), 196-202.
- International Trade Centre. (2018). Promoting SME competitiveness in Africa: Data for de-risking investment. Geneva: ITC.
- Johnson, A. O., Pretorius, A., & Lavhengwa, T. (2023, April). The Effect of Internet Threat on Small Businesses in South Africa. In *Computer Science On-line Conference* (pp. 149- 168). Cham: Springer International Publishing.
- Kalko, M. M., Erena, O. T., & Debele, S. A. (2023). Technology management practices and innovation: Empirical evidence from medium-and large-scale manufacturing firms in Ethiopia. *African Journal of Science, Technology, Innovation and Development*, 15(1).
- Kang, M., Um, K. H., Wang, S., Park, K., Colclough, S. N., & Park, Y. (2022). Integrating manufacturing and R&D functions for better quality and product development performance. *Journal of Manufacturing Technology Management*, 33(1), 191-212.
- Kassa, A. G., & Tsigu, G. T. (2022). Corporate entrepreneurship, employee engagement and innovation: A resource-based view and a social exchange theory perspective *International Journal of Organizational Analysis*, 30(6), 1694-1711.
- Keller, K. L. (2013). Building strong brands in a modern marketing communications environment. In *The evolution of integrated marketing communications* (pp. 65-81). Routledge.
- Kim, H., & Park, M. (2023). Virtual influencers' attractiveness effect on purchase intention: A moderated mediation model of the Product-Endorser fit with the brand. *Computers in Human Behavior*, 143, 107703.
- Kral, P., Janoskova, K., & Dawson, A. (2022). Virtual skill acquisition, remote working tools, and employee engagement and retention on blockchain-based metaverse platforms. *Psychosociological Issues in Human Resource Management*, 10(1), 92-105.
- Lin, Y., Dong, D., & Wang, J. (2021). The negative impact of uncertainty on R&D investment: international evidence. *Sustainability*, 13(5), 2746.
- Lu, C., Qi, Y., & Hao, S. (2023). Enhancing innovation performance of SMEs through open innovation and absorptive capacity: The moderating effect of business model. *Technology Analysis & Strategic Management*, 1-17.
- Marughu, J., & Akintoye, I. R. (2023). Growing the African Economy Through SMEs: A Consideration for Crowdfunding. *European Journal of Business and Management Research*, 8(2), 216-221.
- Meyer, D. F. (2019). An analysis of the causal relationships between economic development, good governance, and political stability in Malaysia. *International*



*Journal of Innovation, Creativity, and Change*, 5(2), 639-657.

- Morgan, J., & Liker, J. K. (2020). *The Toyota product development system: Integrating people, process, and technology*. CRC Press.
- M. Hult, T. T., & Morgeson, F. V. (2023, January 12). 10 ways to boost customer satisfaction. *Havard Business Review*. September 10, 2023, <https://hbr.org/2023/01/10-ways-to-boost-customer-satisfaction>
- Muñoz-Bullón, F., Sanchez-Bueno, M. J., & De Massis, A. (2020). Combining internal and external R&D: The effects on innovation performance in family and nonfamily firms. *Entrepreneurship Theory and Practice*, 44(5), 996-1031.
- Noorossana, R., Saghaei, A., Shadalouie, F., & Samimi, Y. (2023). Customer satisfaction measurement to identify areas for improvement in higher education research services. *Quarterly journal of research and planning in higher education*, 14(3), 97-119.
- Ogbor, J.O. (2019) Business Policy and Strategic Management: Concepts, Contexts & Cases: 1st edition. Institute of Entrepreneurial and Strategic Studies, Lagos – London
- Ogujiuba, K. K., Olamide, E., Boshoff, E., Agholor, I., & Ogujiuba, C. (2023). SMEs, Success, and Capital Startups: Evidence from the Service Sector in South Africa. *Administrative Sciences*, 13(5), 127.
- Ormond, E. (2023). Governance of AI Ethics: Perspective from the Global South (Africa). Available at SSRN 4368020.
- Rachmawati, E., & Suroso, A. (2019, October). Mediation Product Involvement against Purchasing Decisions. In the *6th International Conference on Community Development (ICCD 2019)* (pp. 195-197). Atlantis Press.
- Rajasa, E. Z., Manap, A., Ardana, P. D. H., Yusuf, M., & Harizahayu, H. (2023). Literature Review: Analysis Of Factors Influencing Purchasing Decisions, Product Quality And Competitive Pricing. *Jurnal Ekonomi*, 12(01), 451-455.
- Riyanto, S., Endri, E., & Herlisha, N. (2021). Effect of work motivation and job satisfaction on employee performance: Mediating role of employee engagement. *Problems and Perspectives in Management*, 19(3), 162.
- Rusch, M., Schöggel, J. P., & Baumgartner, R. J. (2023). Application of digital technologies for sustainable product management in a circular economy: A review. *Business Strategy and the Environment*, 32(3), 1159-1174.
- Salesforce (2021, April 16). Tactics for South African SMEs to Drive Future Growth. *Salesforce EMEA*. September 10, 2023,
- Shaari, M. S., Abdullah, D. N. C., Alias, N. S. B., & Adnan, N. S. M. (2016). Positive and negative effects of research and development. *International Journal of Energy Economics and Policy*, 6(4), 767-770.
- Szyndlar, M. (2023, June 6). Customer Satisfaction: Why It's Important in 2023. *Survicate*. September 10, 2023, <https://survicate.com/customer-satisfaction/importance-customer-satisfaction/#:~:text=In%20simple%20words%2C%20customer%20satisfaction,>



- predict%20business%20growth%20and%20revenue.
- Stojčić, N. (2021). Collaborative innovation in emerging innovation systems: Evidence from Central and Eastern Europe. *The Journal of Technology Transfer*, 46(2), 531-562.
- Szakálné Kanó, I., Vas, Z., & Klasová, S. (2023). Emerging synergies in innovation systems: Creative industries in Central Europe. *Journal of the Knowledge Economy*, 14(1), 450- 471.
- Surya, B., Menne, F., Sabhan, H., Suriani, S., Abubakar, H., & Idris, M. (2021). Economic growth, increasing the productivity of SMEs, and open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 20.
- Susanto, H. (2016). *The Effect of Brand Image, Product Quality, and Price Toward Purchase Decision (Empirical Study on Consumer Cv. Rown Division in Surakarta)* (Doctoral dissertation, Universitas Muhammadiyah Surakarta).
- Treffinger, D. J., Isaksen, S. G., & Stead-Dorval, K. B. (2023). *Creative problem solving: An introduction*. Routledge.
- Varma, C. (2017). Importance of Employee Motivation & Job Satisfaction for Organizational Performance. *International Journal of Social Science & Interdisciplinary Research*, 6(2), 10-20.
- Wen, K., Alessa, N., Marah, K., Kyeremeh, K., Ansah, E. S., & Tawiah, V. (2023). The Impact of Corporate Governance and International Orientation on Firm Performance in SMEs: Evidence from a Developing Country. *Sustainability*, 15(6), 5576.
- Werner, B. M., & Souder, W. E. (1997). Measuring R&D performance—state of the art. *Research-Technology Management*, 40(2), 34-42.
- Wibowo, T. (2018). The Influence of Consumer Trust and Expectation on Online Repurchase Intention through Customer Satisfaction on the Bukalapak Online Buying and Selling Site in Yogyakarta City. *Jurnal Ekobis Dewantara*, 1(12), 2230.
- Puspasari, A., Nurhayaty, E., Riftiasari, D., Yuniarti, P., Suharyadi, D., Martiwi, R., & Adawia, P. R. (2022). The effect of service quality perception and company image on customer satisfaction and their impact on customer loyalty Indihome. *International Journal of Social and Management Studies*, 3(2), 220-233.
- Robertson-Smith, G., & Markwick, C. (2009). *Employee engagement: A review of current thinking*. Brighton: Institute for Employment studies.
- Ying, C. L. (2023, June 8). What is customer satisfaction? Definition + importance. *Zendesk blog*. September 10, 2023, <https://www.zendesk.nl/blog/3-steps-achieving-customer-satisfaction-loyalty/#georedirect>
- Zhang, M., & Mohnen, P. (2022). R&D, innovation and firm survival in Chinese manufacturing, 2000–2006. *Eurasian Business Review*, 12(1), 59-95.
- Zhang, X. E., Teng, X., Le, Y., & Li, Y. (2023). Strategic orientations and responsible innovation in SMEs: The moderating effects of environmental turbulence.

Spencer Ugochukwu, N., Rosemary, P.-I., & Samuel Dogo, A. (2025). Product mediation and innovation and creativity: Global business prospects of manufacturing small and medium enterprises in South-East, Nigeria. *GPH-International Journal of Business Management*, 8(05), 50-67. <https://doi.org/10.5281/zenodo.15762597>

*Business Strategy and the Environment*, 32(4), 2522-2539.

Zhou, H., & Zondo, R. W. D. (2023). The role of business incubation programs in the performance of small and medium enterprises in South Africa. *The Seybold Report; Vol. 18, Issue 05*.