# **Innovations**

## Social Networking and Performance of SMEs in South Eastern Nigeria

Isienyi, Raluchukwu Andrew<sup>1</sup>, Dr B.I Chukwu<sup>2</sup>, Onuorah Kenneth .I<sup>3</sup>, Onoh Chizoba Chuzzy<sup>4</sup>, Ikenna Amuka<sup>5</sup>

1,2,3,4 Department Of Management Faculty of Business Administration University of Nigeria Enugu Campus <sup>5</sup>Institute of Maritime Studies, University of Nigeria, Enugu Campus

Corresponding Author: Onoh Chizoba Chuzzy

Abstract: This study focused on social networking and performance of Small and Medium-size Enterprises in South eastern Nigeria. For SMEs, which often operate with limited resources, social networking offers a cost-effective and efficient means of sharing ideas with partners, enhancing exchange with suppliers, reaching potential customers and building brand awareness. Despite the relevance of, network structure, network size in fostering effective social networking effort towards improved performance of SMEs in the South Eastern Nigeria, there are still issues on privacy concern. The study examined the effect of network structure on sales volume; assess the influence of network size on productivity. The study adopted a survey research design. The population of this study was 57,035 SMEs. The sample size of the study was 398. A multi-stage sampling technique was utilized to ensure comprehensive representation. The study employed faces and construct validity. The study employed both descriptive and inferential statistics for data analysis. The study utilized linear regression to test the formulated hypotheses. Finding showed that network structure significantly and positively affects the sales volume of SMEs (given  $\beta$ = 0.719148; p-value <0.01), network size significantly and positively affects the productivity of SME. The study concluded that evolving landscape of social networking has become a pivotal element for SMEs, influencing various aspects of their performance. The study recommended that SMEs should prioritize developing a clear and organized network structure that facilitates effective communication and partnership among stakeholders, and that SMEs should actively seek to expand their network size by engaging with diverse partners, including industry peers, suppliers, and customers.

Keywords: Social Networking, Performance, network structure, network size

#### 1.1 Introduction

Globally, social interaction has been widely embraced by entrepreneurial organizations as a crucial tool for business growth and success. It has remained a topnotch in the field of entrepreneurship today. The dynamics in the business environment have led to an increased focus on shared responsibilities and social ties, attracting research attention. This evolution has occurred over time through the contributions of researchers and scholars. The challenge of how individual businesses can survive the dynamics has led to the establishment of entrepreneurial group development, collectiveness and social interaction among group members. This necessitates the use of internet-based platforms and technologies to connect and interact with others. Business enterprises have realized that social ties can serve as a channel through which success can be achieved in a tough competitive environment (whether globally or domestically). This informed the need for social networking. Aichner, Grünfelder, Maurer and Jegeni (2021) posit that social networking is the practice of creating virtual communities and fostering relationships through digital means.

In today's fast-paced digital era, social networking has emerged as a powerful tool that holds immense potential for businesses to create an interconnected web that fosters collaboration, innovation, and growth. The interconnected web of businesses plays a crucial role in acquiring vital knowledge, information, and resources with minimal costs (Phelps, Heidl, & Wadhwa, 2012; Shafi, Sarker, &Junrong, 2019). This interconnected web refers to the network of businesses, customers and suppliers that engage with each other through various social networking platforms, creating a virtual ecosystem where information, knowledge, and resources flow freely. One of the key advantages of the interconnected web of businesses is its ability to facilitate knowledge sharing. Through social networking platforms, businesses can connect with industry peers, thought leaders, and experts from different sectors, enabling them to access valuable insights, best practices, and emerging trends (Cohen, 2018; Ranjan & Foropon, 2021). This easy exchange of knowledge transcends geographical barriers, allowing companies to stay updated on global developments and adapt swiftly to changes in the market (Natalia & Ellitan, 2019).

In Nigeria, social networking enhances information dissemination within the business community. The phenomenon of social networking has emerged as a pivotal platform for business enterprise owners, enabling them to disseminate information and engage with their target audience effectively (Sedalo, Boateng, &Kosiba, 2022). Business enterprises can share updates about their products, services, and accomplishments with a vast audience, enabling them to reach potential customers and partners efficiently. This leads to increased brand visibility and recognition, ultimately contributing to business growth and expansion. However, this pervasive reliance on social networking also gives rise to a series of concerns pertaining to privacy, particularly within the domains of "collective information diffusion, collective information access, and collective information control" (Jia & Xu, 2016, p2).

Ideally, social networking is presupposed to facilitate idea sharing, resource exchange and effective business collaboration among others. Businesses leverage their social networking connections to identify potential suppliers, distributors, and partners (Dowin, Horky, & Kaufmann, 2023). Whether it is procuring raw materials, locating distribution channels, or collaborating on projects, these platforms streamline the process and reduce the time and cost associated with conventional networking methods. SMEs can also form strategic alliances, joint ventures, or partnerships with other companies that complement their strengths and weaknesses (Muthoka, Kilika & Muath, 2022; Oduro, 2019). By pooling resources and expertise, SMEs can tackle complex challenges, develop innovative solutions, and explore new market opportunities. The interconnected web promotes a sense of business community and fosters a supportive environment. Importantly, the performance of can be enhanced taking advantage of the benefits offered by social networking through its dimension.

Scholars have extensively explored the vast and complex field of social networking, providing diverse dimensions to thoroughly understand its complexities and effects on individuals and businesses. Elmer, Mepham, and Stadtfeld (2020) emphasize social support, friendship, and interaction as prominent dimensions of social networking. These aspects delve into the interpersonal connections and supportive relationships fostered through online platforms, exploring how individuals engage, connect, and derive emotional and practical assistance from their virtual networks. Ameh and Aka (2016) introduce another dimension of social networking, focusing on social trust and network size. This dimension investigates the level of trust individuals place in their connections and how the size of their social networks may influence their behaviors, decisionmaking, and sense of belonging in the business community. Despite the richness of the dimensions explored, one aspect that has received limited research attention is network structure (Muller & Peres, 2018). This dimension holds significant potential for understanding how social networks are organized and how their dynamics influence information diffusion and social influence processes. Scholars in this area examine the patterns of relationships among individuals and entities, such as centralized, decentralized, or distributed networks. Understanding the network topology can shed light on the flow of information, the key players or influencers within the network, and the potential for the rapid spread of information or trends (Peng, Zhou, Cao, Yu, Niu, &Jia, 2018). By analyzing network structure, researchers can gain insights into how

information propagates within social networks, how ideas or innovations spread, and how social influence mechanisms operate.

#### 1.2 Statement of the Problem

The relevance of social networking in business, particularly among SMEs, cannot be overstated. For SMEs, which often operate with limited resources, social networking offers a cost-effective and efficient means of sharing ideas with partners, enhancing exchange with suppliers, reaching potential customers and building brand awareness. Network structure, network size, are crucial aspects of social networking for SMEs in the South Eastern Nigeria.

Studying the network structure can reveal potential collaboration opportunities with other firms or organizations within the network, leading to mutually beneficial partnerships. The size of an SME's social network is another critical factor that impacts its social networking efforts. While a larger network can offer more extensive reach, it is essential for SMEs to focus on the quality of connections rather than sheer quantity. By prioritizing these aspects and strategically managing their social networking efforts, SMEs can unlock the full potential of their platforms to build strong relationships, and enhance their market share, ultimately contributing to their business performance in the South Eastern Nigeria.

Despite the relevance of network structure, network size in fostering effective social networking effort towards improved performance of SMEs in the South Eastern Nigeria, there are still issues on privacy concern. SMEs continue to face challenges relative to profitability, sales volume, productivity, market shares and customer satisfaction due to issues around collective information diffusion, collective information control and collective information access among others. Partners, suppliers and customers are increasingly apprehensive about how their personal data are collected, used, and shared for business, marketing and advertising purposes. Privacy breaches, data leaks, and potential misuse of personal information can lead to erosion of customer trust, diminished brand reputation, and social interaction among partners. The rapid dissemination of information across social networks can be both advantageous and detrimental to SMEs. While social networking facilitates the swift spread of promotional content, SMEs also face the risk of inadvertently disclosing sensitive or confidential information. The dynamic nature of social networking platforms poses challenges for SMEs to maintain complete control over the information shared by employees or customers. Misinformation or negative content can quickly go viral, and SMEs may struggle to correct false information or manage crises effectively. Furthermore, social networking platforms provide access to a vast amount of customers' personal data (with respect to preferences, behaviors, and interactions), which can be misused if not managed responsibly.

Neglecting the identified problems in social networking research can lead to extensive consequences for SMEs in the South Eastern Nigeria. These include decreased innovation, lowered brand visibility, low profitability and sales, diminished competitiveness, compromised sustainability, disruptions productivity, diminished customer satisfaction and low productivity. To succeed and foster robust relationships in the digital era, SMEs must take proactive steps to protect privacy, implement effective information control, and prioritize ethical data practices.

## 1.3 Objectives of the Study

The broad objective of the study was to investigate the effect of social networking on performance of SMEs in South Eastern Nigeria. The specific objectives of the study are to:

- i. Examine the effect of network structure on sales volume of SMEs in the South Eastern Nigeria.
- ii. Assess the influence of network size on productivity of SMEs in the South Eastern Nigeria.

### 1.4 Research Ouestions

- i. What is the effect of network structure on sales volume of SMEs in the South Eastern Nigeria?
- ii. How does network size influence productivity of SMEs in the South Eastern Nigeria?

## 1.5 Research Hypotheses

Network structure has a significant effect on sales volume of SMEs in the South  $\mathbf{H}_1$ : Eastern Nigeria.

Network size has a significant influence on productivity of SMEs in the South  $\mathbf{H}_2$ : Eastern Nigeria.

## 1.6 Scope of the study

The geographical scope of the study is South Eastern Nigeria. The study will specifically focus on Small and Medium-sized Enterprises (SMEs) operating within this geographical area. The study's topic scope covers the effect of dimensions of social networking on various aspects of SMEs' performance in the South Eastern Nigeria. It includes the examination of network structure, network size in relation to sales volume and productivity.

The sector scope of the study is manufacturing sector within the South Eastern Nigeria region.

#### 2.0 Literature Review

## 2.1 Social Networking

Social networking in business is a topic of extensive research and interest. The convergence of social networking platforms and business has brought about significant opportunities for business enterprises of all sizes to interact with their customers, suppliers, and other firms, enabling them to promote their brand and enhance their overall performance. This evolution has been fueled by the widespread adoption of social media and networking sites, transforming the way businesses engage with their target audience and conduct marketing, sales, and customer service activities. However, providing a clear definition of social networking is necessary to help ensure a common understanding of the concept. In academic and research settings, having a well-defined concept of social networking is essential for conducting studies, analyzing data, and building theoretical frameworks.

The concept of "social networking" lacks consensual definitions from authors and scholars. There are varying perspectives to the concept. Contreras, Cheng and Nghiem (2019) view social networking as to the strategic use of online platforms and tools to build and nurture relationships with customers, partners, and other stakeholders, with the aim of enhancing brand awareness, fostering customer loyalty, and driving business growth. This definition emphasizes its strategic nature and purpose within the context of business and marketing. This means social networking is not merely a casual or spontaneous activity but a deliberate and planned approach. It involves businesses intentionally using online platforms and tools to achieve specific objectives. Lashgari, Sutton-Brady, Solberg Søilen, and Ulfvengren (2018) added that social networking involves leveraging social media platforms and online communities to create a digital presence, interact with target audiences, and facilitate the exchange of information and resources to achieve business objectives. Social networking involves utilizing social media platforms as a method for establishing connections with individuals (Alalwan, Rana, Dwivedi, & Algharabat, 2017). The social network serves as a platform within the social media community space, emphasizing user collaboration, dialogue, and content sharing (Ebrahim, 2019). It encompasses the utilization of social media platforms and virtual communities to establish an online identity, engage with specific audiences, and facilitate the sharing of insights and assets in order to attain business goals. This strategy involves establishing a digital footprint to connect with target demographics, fostering meaningful interactions to cultivate relationships, and harnessing the power of digital connectivity to enhance

information sharing and resource utilization, ultimately serving the broader objectives of the business.

Aras, Xu, and Peñaloza (2022) stress that social networking involves leveraging social media and networking sites to build a community of brand advocates, foster word-of-mouth marketing, and create a positive brand image among the target audience. That is, social networking entails utilizing social media platforms and online networking sites to establish a dedicated group of brand supporters, stimulate organic word-of-mouth promotion, and cultivate a favorable perception of the brand within the intended demographic. This strategy focuses on actively engaging with followers, encouraging them to share their positive experiences and recommendations, and ultimately shaping a strong and favorable brand identity in the eyes of the target audience. In another manner, Bucholtz (2018) posits that social networking pertains to the practice of nurturing and up keeping business connections using virtual networking platforms, which empower individuals and entities to access new prospects, broaden their affiliations, and stay updated on industry shifts. This implies that social networking involves the active cultivation and maintenance of professional relationships via digital networking platforms (Liu, Sidhu, Beacom, & Valente, 2017). These virtual tools empower both individuals and organizations to tap into untapped opportunities, expand their network of contacts, and remain well-informed about the dynamic changes within their respective industries. By utilizing these platforms, users can foster valuable connections, broaden their sphere of influence, and stay attuned to the latest trends and developments that can impact their business endeavors.

Based on the definitions above, social networking refers to the strategic and deliberate utilization of online platforms, including social media and networking sites, to cultivate and nurture relationships with customers, partners, and stakeholders. This approach aims to enhance brand awareness, foster customer loyalty, stimulate word-of-mouth marketing, and drive business growth. It involves establishing a digital presence, interacting with target audiences, and facilitating the exchange of information and resources to achieve specific business objectives. For this study, proxies like network structure, network size, social trust, collective information diffusion, collective information access and collective information control are considered for social networking. Studies (Jia, Li, Liu, Christakis, &Jia, 2023); Xu, 2012) used collective information diffusion, collective information access and collective information control as proxies for social networking.

#### 2.2 Network Structure

Network Structure refers to the arrangement of connections and relationships between individuals, organizations, or entities within the social networking platforms. This concept encompasses the patterns of interactions, communication channels, and the overall organization of the network within the social media landscape that SMEs utilize for their business activities. Network structure involves the arrangement of nodes and ties within a network, including the patterns of relationships and the overall architecture of connections between actors or entities in the network (Visconti, 2019; Sonta& Jain, 2020). It is the configuration of connections and relationships among entities, which can include individuals, organizations, or other units, and the patterns that emerge from these connections (Faul, 2015; Guimarães, 2020). The network structure represents the organization of nodes and edges, capturing the arrangement of entities and the relationships or interactions between them within a network (Brugere, Gallagher & Berger-Wolf, 2018). Understanding the network structure is crucial for comprehending how information flows, how relationships are formed, and how these factors ultimately impact the performance and success of SMEs in the region.

In the context of contemporary business dynamics, SMEs in South Eastern Nigeria find themselves navigating an increasingly intricate web of digital interactions, largely facilitated by the widespread adoption of social media and online networking platforms. The concept of network structure, within the scope of this study, stands as a critical pillar in comprehending the framework of connections and relationships that SMEs establish within the digital landscape, and its profound effect on their performance and growth trajectories. At its core, the network structure embodies the nuanced arrangement of linkages and associations that SMEs forge with a diverse array of entities, including customers, suppliers, and business partners, within the expansive realm of social media and online networking platforms. Moreover, this conceptual exploration necessitates a meticulous examination of the nature of relationships that SMEs foster through their active digital footprint, leveraging a myriad of social media platforms such as Facebook, Twitter, LinkedIn, and Instagram, among others.

### 2.3 Network Size

Network size can encompass both the total number of direct connections an individual has, as well as the indirect connections that may be accessible through the direct connections (Baer, Evans, Oldham, &Boasso, 2015). Indeed, Anderson (2008) demonstrates that managers possessing more extensive networks had the capacity to accumulate a greater amount of pertinent information pertaining to tasks. Increased exposure to a wider range of information and varying perspectives could consequently provide individuals with a competitive advantage in recognizing existing opportunities for enhancement (Baer et al., 2015). Furthermore, this enhanced exposure might grant them access to the

essential resources required to cultivate innovative concepts for effectively capitalizing on these opportunities. The size of a network refers to the count of nodes within the network, and the mean degree exhibits a direct correlation with the overall quantity of connections within a specific network (Li &Zobel, 2020). The mean degree of a network serves as an indicator of both the level of connectivity and the clustering tendency present within the network. That is, the concept holds significant implications for understanding the reach and influence of an individual or entity within the SME sector. A higher mean degree signifies an increased number of links in the network, consequently reflecting a heightened level of intricacy within the network's structure (Li &Zobel, 2020).

Network size denotes the count of immediate and extended connections or ties that an individual or entity possesses within a social network, reflecting the extent of their reach and influence within the network (Dunbar, 2020; Xu, & Saxton, 2018). It is the quantitative assessment of the total number of connections, including direct and indirect ties, that a node or entity has within a network, reflecting the breadth of their social interactions and the potential reach of their influence within the network (Dang-Pham, Pittayachawan, & Bruno, 2017; Lee, Chong, Liao, & Wang, 2018). In the context of this study, network size refers to the quantitative measure of the total number of connections, followers, or interactions that SMEs have within their social media and online networking platforms. It involves assessing the extent of their digital reach and the number of individuals, organizations, or entities they are directly or indirectly connected to within these virtual spaces.

Understanding the concept of network size in the context of this study involves evaluating the scale of SMEs' online presence, the volume of their followers or connections, and the potential outreach they can achieve through their digital networks. It also encompasses analyzing the breadth of their influence within the digital community, considering the number of potential customers, suppliers, and business partners they can access and engage with through their online platforms. Furthermore, exploring network size within the context of this study requires examining the implications of a larger or smaller network size on success of SMEs. This analysis could involve understanding how a larger network size might contribute to enhanced brand visibility, increased customer engagement, and a broader market reach for these SMEs. Conversely, a smaller network size may indicate limited digital outreach and could potentially impact their competitiveness and market penetration in the region. Understanding the dynamics of network size can help SMEs in South Eastern Nigeria strategically leverage their digital networks to maximize their online presence, build strong customer relationships, and ultimately improve their overall performance within the competitive business landscape.

#### 2.5 Performance of SMEs

Performance within SMEs constitutes the yardstick for measuring how effectively these entities achieve their overarching objectives and goals in the dynamic marketplace. As Cho and Lee (2018) and Gerschewski et al. (2020) assert, the extent to which an organization attains its objectives serves as a pivotal marker for evaluating performance. SMEs, by virtue of their relatively modest scale in comparison to larger corporations, hold a significant position in the economy, contributing substantially to aspects such as employment, innovation, and overall economic growth. Therefore, understanding and enhancing performance in this context is crucial not only for the individual enterprises but also for the broader economic landscape.

Performance is linked to the achievement of strategic objectives across various dimensions. Kaplan and Norton's (1996) balanced scorecard framework emphasizes a comprehensive approach, evaluating performance in financial, customer, internal processes, and learning and growth perspectives. This multifaceted assessment allows for a nuanced understanding of how well an organization is positioned across different aspects critical to its success. This approach ensures that performance is not viewed solely through a financial lens but also considers customer satisfaction, internal operational efficiency, and the organization's capacity for learning and adaptation. Furthermore, the capacity of an organization to navigate the complexities of its external environment plays a pivotal role in determining business performance. As highlighted by Cho and Lee (2018), business performance can be delineated as the organization's ability to adeptly handle varying environmental elements. This includes, but is not limited to, aspects such as profits, productivity, employee satisfaction, social responsibility, and the overall sustainability of the business. In essence, the success of SMEs hinges on their capability to collect pertinent market information regarding customers and competitors, disseminate this information internally, and, critically, optimize its utilization to respond effectively to evolving market challenges and trends (Correia et al., 2022).

In practical terms, evaluating business performance necessitates a holistic measurement system that encompasses both financial and non-financial indicators. This approach, as advocated by Cho and Lee (2018) and reinforced by Kefe (2019), ensures a more nuanced and comprehensive understanding of organizational success. By considering a spectrum of indicators, businesses gain insights into their financial health, customer satisfaction levels, internal operational efficiency, and their capacity for innovation and growth. In this way, the evaluation of performance extends beyond mere financial metrics to encompass the broader spectrum of factors that contribute to the sustainable growth and success of SMEs. The performance metrics considered for this study

are profitability, sales volume, productivity, market shares and customer satisfaction.

#### 2.6 Sales Volume

Sales volume, as a pivotal dimension of performance, serves as a quantitative yardstick, systematically measuring the number of goods or services a business successfully sells within a specified timeframe. Beyond being a mere numerical representation, sales volume is a fundamental metric that possesses the potential to wield a profound impact on a company's financial well-being and, by extension, its overarching fiscal health. This metric, closely intertwined with revenue generation, offers a comprehensive view of a business's market activity, providing invaluable insights into its efficacy in marketing and selling its offerings and acting as a cornerstone for evaluating its competitive standing (Hassan, 2023).

At its core, sales volume is a reflection of customer transactions, providing a tangible measure of a company's market engagement (Basu, Lim, Kumar, & Kumar, 2023; Andersen & Bering, 2023). The quantity of products or services sold directly influences a company's revenue, making it an indispensable factor in financial planning and strategic decision-making (Tien, Phu, & Chi, 2019). A high sales volume suggests robust market acceptance, indicating that the enterprise's offerings align effectively with customer needs and preferences. Conversely, a lower sales volume prompts a reevaluation of marketing and sales strategies, urging businesses to adapt and refine their approaches to better resonate with their target audience. The correlation between sales volume and revenue underscores its significance in the financial landscape of a business (Himawari& Mohammad, 2023). While high sales volume is undoubtedly a positive indicator, it is important to note that profitability is contingent upon managing costs effectively. Nevertheless, sales volume remains a crucial factor in income generation, and understanding its dynamics provides businesses with a nuanced understanding of their revenue-generating capacity.

Beyond its financial implications, sales volume acts as a compass guiding businesses in assessing their market presence and competitiveness. Monitoring trends in sales volume over time allows companies to discern patterns, identify successful products or services, and gain insights into customer demand. This information, in turn, empowers businesses to make informed decisions, refine their product offerings, and adapt strategies to meet the ever-evolving demands of the market. The strategic significance of sales volume extends to its role in product performance evaluation (Ferreras-Méndez, Fernández-Mesa & Alegre, 2019). By analyzing which products contribute most significantly to overall sales volume, businesses gain a deeper understanding of customer preferences. SMEs can strategically focus on promoting high-performing products, optimizing

marketing efforts, and, concurrently, addressing areas where performance may be lagging.

## 2.7 Productivity

In the specific context of SMEs, productivity takes on a critical role in shaping their output and overall performance. For SMEs, which often operate with limited resources and face unique challenges, the concept of productivity becomes particularly nuanced, influencing their ability to compete, adapt, and thrive in the marketplace. Productivity is tied to efficiency in resource utilization (Winning, Bleischwitz, Calzadilla, &Nechifor, 2017). Given the constrained nature of their resources, including a smaller workforce, limited capital, and sometimes restricted access to advanced technologies, optimizing these inputs becomes paramount. Unlike larger enterprises, where economies of scale might offer advantages, SMEs must excel in extracting maximum value from every resource to ensure their sustainability and competitiveness.

Productivity is an economic measure of output per unit of input. Productivity is commonly described as the quantification of the physical output generated from a specific amount of inputs (Heshmati, &Rashidghalam, 2018). Inputs include labor and capital, while output is typically measured in goods or services produced (Gollin, 2019). Labor productivity becomes especially crucial for SMEs, where each team member plays a significant role in the production process. Optimizing the efficiency of the workforce, ensuring skill utilization, and implementing streamlined work processes are vital considerations (Bag, Wood, Mangla, &Luthra, 2020; Butt, 2020). In SMEs, where each employee's contribution can have a pronounced impact, enhancing labor productivity directly influences the organization's ability to meet production targets, deliver quality services, and respond effectively to market demands. Similarly, capital productivity is a key determinant of SME success. With limited financial resources, SMEs must strategically allocate capital to areas that yield the highest returns. Prudent financial management, careful investment decisions, and a focus on projects aligned with core business goals become essential (Picken, Zolfaghari & Hand, 2023). For SMEs, effective capital productivity not only supports immediate operational needs but also contributes to long-term financial sustainability.

#### 2.8 Theoretical Review

The theoretical framework of this study was based on Social Network Theory, Resource Dependence Theory, Social Influence Theory, Social Capital Theory Network Theory

## 3.0 Methodology

The study adopted the survey design. The population of the study comprised staff of the selected small and medium sized enterprises in South-East, Nigeria. a sample size of 398 was determined using the statistical formula for determining sample size. While pro5ortionate strategized random sampling technique was adopted to determine the allocation of questionnaire. Primary data were collected through the administration of questionnaire. The questionnaire was structured in five-point Likert scale. Face and content validity were determined by three experts from the Department of Management, University of Nigeria, Enugu Campus. Cronbach Alpha was used to test the reliability of the research instrument with a reliability coefficient of 0.7. Data were presented in tables and the corresponding values expressed in percentages while both descriptive and inferential statistics was used to test the hypotheses at 5 % level of significance.

## 4.0 Results and Interpretation

## **Hypothesis One**

- H<sub>0</sub>: 1 Network structure has no significant effect on sales volume of SMEs in the South Eastern Nigeria.
- Ha: 1 Network structure has a significant effect on sales volume of SMEs in the South Eastern Nigeria.

Network structure significantly and positively affects the sales volume of SMEs in South Eastern Nigeria (given  $\beta$ = 0.719148; p-value <0.01). This implies that SMEs enhance their sales performance by strategically developing and maintaining strong relationships within their networks, including partnerships with suppliers, customers, industry associations, and other stakeholders. Therefore, the alternate hypothesis which states that Network structure has a significant effect on sales volume is hereby accepted and null hypothesis rejected

#### **Hypothesis Two**

Ho:2 Network size has no significant influence on productivity of SMEs in the South Eastern Nigeria.

Ha:2 Network size has a significant influence on productivity of SMEs in the South Eastern Nigeria.

Network size significantly and positively impacts the productivity of SMEs in South Eastern Nigeria (given  $\beta$ = 0.816258; p-value <0.01). This implies that as social networks expand to include more members, partners, or stakeholders, SME productivity increases. Therefore, the alternate hypothesis which states that Network size has a significant influence on productivity is hereby accepted and null hypothesis rejected

#### 5.0 Conclusion and Recommendations

### 5.1 Conclusion

The study has demonstrated that social networking significantly affect the business performance of small and medium-sized enterprises (SMEs) in South-East Nigeria. Specifically, the findings reveal that Network structure enhancessales volume, while Network size contributes positively to productivity.

#### 5.2 Recommendations

Based on the findings of the study, the following recommendations are made that:

- SMEs should prioritize developing a clear and organized network structure that i. facilitates effective communication and partnership among stakeholders. Investing in relationship management tools can enhance connectivity and streamline interactions, and ultimately driving higher sales volumes.
- ii. To boost productivity, SMEs should actively seek to expand their network size by engaging with diverse partners, including industry peers, suppliers, and customers. Participating in networking events and industry associations can help SMEs build valuable connections that enhance resource sharing and operational efficiency.

#### References:

- 1. Aichner, T., Grünfelder, M., Maurer, O., & Jegeni, D. (2021). Twenty-Five Years of Social Media: A Review of Social Media Applications and Definitions from 1994 to 2019. Cyberpsychology, Behavior, and Social Networking, 24(4), 215–222.
- 2. Alalwan, A. A., Rana, N. P., Dwivedi, Y. K., & Algharabat, R. (2017). Social media in marketing: A review and analysis of the existing literature. Telematics and Informatics, 34(7), 1177–1190.
- 3. Ameh, A.A. & Aka, A.U. (2016). Social Networks and Entrepreneurship Orientation among Students in Nigerian Universities: A Study of Social Network Size and Risk Disposition. Business and Management Research, 5(2).
- 4. Andersen, T. J., & Bering, S. (2023). Integrating distribution, sales and services in manufacturing: A comparative case study. International Journal of Operations & Production Management, 43(10), 1489-1519.
- 5. Aras, A., Xu, X., &Peñaloza, L. (2022).Deciphering B2B marketers' concerns in marketing 'with' clients: Further insights into how B2B characteristics foster and inhibit UGC generation and its leverage. Industrial Marketing Management, 101, 71-81. ISSN 0019-8501.
- 6. Baer, M., Evans, K., Oldham, G. R., &Boasso, A. (2015). The social network side of individual innovation. Organizational Psychology Review, 5(3).

- 7. Bag, S., Wood, L. C., Mangla, S. K., &Luthra, S. (2020). Procurement 4.0 and its implications on business process performance in a circular economy. Resources, Conservation and Recycling, 152, 1-14.
- 8. Brugere, I., Gallagher, B., & Berger-Wolf, T. Y. (2018). Network Structure Inference, A Survey. ACM Computing Surveys, 51(2), 1–39.
- 9. Bucholtz, I. (2018). Bridging bonds: Latvian migrants' interpersonal ties on social networking sites. Media, Culture & Society, 1-16.
- 10. Cho, J., & Lee, J. (2018). Internationalization and longevity of Korean SMEs: The moderating role of contingent factors. Asian Business & Management, 17(2), 260–285
- 11. Cohen, M. C. (2018). Big Data and Service Operations. Production and Operations Management. 1-31.
- 12. Correia, R. J., Teixeira, M. S., & Dias, J. G. (2022). Dynamic capabilities: antecedents and implications for firms' performance. International Journal of Productivity and Performance Management, 71(8), 3270-3292.
- 13. Dang-Pham, D., Pittayachawan, S., & Bruno, V. (2017). Applications of social network analysis in behavioural information security research: Concepts and empirical analysis. Computers & Security, 68, 1–15.
- 14. Dowin, K.E., Horky, A. B., & Kaufmann, E. (2023). Ties that bind: Leveraging horizontal and vertical ties within an entrepreneurial community in crosspromotional social media marketing. Journal of Research in Marketing and Entrepreneurship, 25(2), 310-327.
- 15. Dunbar, R. I. M. (2020). Structure and function in human and primate social networks: implications for diffusion, network stability and health. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 476(2240).
- 16. Ebrahim, R. S. (2019). The Role of Trust in Understanding the Impact of Social Media Marketing on Brand Equity and Brand Loyalty. Journal of Relationship Marketing, 1-22.
- 17. Gerschewski, S., Evers, N., Nguyen, A. T., &Froese, F. J. (2020). Trade Shows and Internationalisation: Networking for Performance. Management International Review, 1-23.
- 18. Gollin, D. (2019). Farm size and productivity: Lessons from recent literature. IFAD Research Series, (34), 1+.link.gale.com.
- 19. Guimarães, P. R. (2020). The Structure of Ecological Networks Across Levels of Organization. Annual Review of Ecology, Evolution, and Systematics, 51(1), 1-28.
- 20. Hassan, S. (2023). Assessment of financial performance and competitive dynamics of insurance companies on the Indonesian Stock Exchange. Indonesia Accounting Research Journal, 11(2),11–127.Retrieved from: journals.iarn.or.id.

- 21. Elmer, T., Mepham, K., &Stadtfeld, C. (2020). Students under lockdown: Comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland. PLOS ONE, 15(7), 1-22.
- 22. Jia, H., &Xu, H. (2016). Measuring individuals' concerns over collective privacy on social networking sites. Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 10(1), 1-19.
- 23. Kaplan, R. S., & Norton, D. P. (1996). Balanced Scorecard: Translating Strategy into Action. HarvardBusiness School, 51 Press.
- 24. Lashgari, M., Sutton-Brady, C., Solberg Søilen, K., & Ulfvengren, P. (2018). Adoption strategies of social media in B2B firms: A multiple case study approach. Journal of Business & Industrial Marketing, 33(5), 730–743.
- 25. Li, Y., & Zobel, C. W. (2020). Exploring supply chain network resilience in the presence of the ripple effect.International Journal of Production Economics, 107693.
- 26. Liu, W., Sidhu, A., Beacom, A. M., & Valente, T. W. (2017). Social network theory. In John Wiley & Sons, Inc. (Eds.), 1-12.
- 27. Muthoka, R., Kilika, J. &Muath, S. (2022). What Sustains Performance in A Strategic Alliance? The Role of Level of Collaboration. Journal of Business and Management Sciences, 10(3), 113-123.
- 28. Muller, E., & Peres, R. (2018). The effect of social networks structure on innovation performance: A review and directions for research. International Journal of Research in Marketing, 1-17.
- 29. Natalia, I., &Ellitan, L. (2019). Strategies to achieve competitive advantage in Industrial Revolution 4.0.International Journal of Research Culture Society, 3(6), 10-16.
- 30. Oduro, S. (2019). Examining open innovation practices in low-tech SMEs: insights from an emerging market. Journal of Science and Technology Policy Management, 10(3), 509-532.
- 31. Peng, S., Zhou, Y., Cao, L., Yu, S., Niu, J., &Jia, W. (2018). Influence analysis in social networks: A survey. Journal of Network and Computer Applications, 106, *17–32.*
- 32. Phelps, C., Heidl, R., &Wadhwa, A. (2012). Knowledge, networks, and knowledge networks: A review and research agenda. Journal of Management, 38, 1115-1166.
- 33. Ranjan, J., & Foropon, C. (2021). Big Data Analytics in Building the Competitive Intelligence of Organizations.International Journal of Information Management, *56, 1-13.*
- 34. Shafi, M., Sarker, M. N. I., & Junrong, L. (2019). Social Network of Small Creative Firms and Its Effects on Innovation in Developing Countries. SAGE Open, 9(4), 1-16.

- 35. Sonta, A., & Jain, R. K. (2020). Learning socio-organizational network structure in buildings with ambient sensing data. Data-Centric Engineering.
- 36. Sedalo, G., Boateng, H., &Kosiba, J. P. (2022). Exploring social media affordance in relationship marketing practices in SMEs. Digital Business, 2, 1-7.
- 37. Visconti, M.R. (2019). Combining network theory with corporate governance: Converging models for connected stakeholders. Corporate Ownership & Control, 17(1), 1-15.

## Appendix Hypothesis one

## Regression on Network structure and Sales volume

|                    | Coefficien |                       |             |          |
|--------------------|------------|-----------------------|-------------|----------|
| Variable           | t          | Std. Error            | t-Statistic | Prob.    |
| С                  | 0.921995   | 0.130288              | 7.076600    | 0.0000   |
| NKS                | 0.719148   | 0.034028              | 21.13426    | 0.0000   |
| R-squared          | 0.547604   | Mean dependent var    |             | 3.517520 |
| Adjusted R-squared | 0.546378   | S.D. dependent var    |             | 1.244052 |
| S.E. of regression | 0.837887   | Akaike info criterion |             | 2.489510 |
| Sum squared resid  | 259.0583   | Schwarz criterion     |             | 2.510622 |
| Log likelihood     | -459.8041  | Hannan-Quinn criter.  |             | 2.497895 |
| F-statistic        | 446.6570   | Durbin-Watson stat    |             | 1.835146 |
| Prob(F-statistic)  | 0.000000   |                       |             |          |

## **Hypothesis Two** Regression Result on Network size and Productivity

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| С                  | 0.510289    | 0.094508              | 5.399436    | 0.0000   |
| NTS                | 0.816258    | 0.029826              | 27.36753    | 0.0000   |
| R-squared          | 0.669941    | Mean dependent var    |             | 2.849057 |
| Adjusted R-squared | 0.669047    | S.D. dependent var    |             | 1.351223 |
| S.E. of regression | 0.777339    | Akaike info criterion |             | 2.339496 |
| Sum squared resid  | 222.9704    | Schwarz criterion     |             | 2.360607 |
| Log likelihood     | -431.9765   | Hannan-Quinn criter.  |             | 2.347881 |
| F-statistic        | 748.9819    | Durbin-Watson stat    |             | 2.180050 |
| Prob(F-statistic)  | 0.000000    |                       |             |          |