THE MEDIATING ROLE OF INNOVATION IN THE RELATIONSHIP BETWEEN BUSINESS NETWORKING AND SMALL FIRMS' PERFORMANCE IN NIGERIA

Joseph Eyo Duke
Department of Business Management
University of Calabar, Calabar
Cross River State, Nigeria
Corresponding Author's Email: joeduke@unical.edu.ng

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Afo Sunday Edu
Department of Business Management
University of Calabar, Calabar
Cross River State, Nigeria

Abstract
This study examined the mediating role of innovation in the relationship between business networking and performance of small firms in the Niger Delta region of Nigeria. Four dimensions of business networking (network competence, network capability, volume of networks and strength and content of ties) were explored, while performance was measured with financial (profitability and sales growth) and non–financial (customer retention, and corporate reputation) indicators. Descriptive research design was used for the study, with data collected from a sample of respondents drawn from 389 firms. The regression analysis results showed that network competence, volume of network and strength and content of ties each had significant positive effects on performance, while network capability had a negative impact. The Sobel test indicated that innovation fully mediated the relationship between business networking and small firm performance. The findings reinforce the need for small firms to increase the scope of their networks, while also investing in developing the knowledge and capacity of their managers in soft-skills, as these are important for building and managing relationships

Keywords: Business networking, Network competence, Network capability, Innovation, Small firm performance

Introduction
The challenges associated with globalization and increased competition across industries have made it imperative for firms to build functional networks to help them deal effectively with the ensuing uncertainties and dynamism of the business environment (Jovane et al., 2017). Networking describes a social process under which an organization maintains a pool of strategic allies with requisite knowledge and other resources from which it can tap inputs for improving its performance (Lacerda, 2015). Networks can be built both within and outside an organization's industry or market with a range of elements of the ecosystem including suppliers, buyers, creditors, competitors and others. It involves cooperating with and maintaining close ties with relevant individuals and teams in other organizations for sharing information and other resources that can facilitate the achievement of business objectives. The Resource Dependency Theory (RBT) suggests that firms may increase their operational and financial performance by engaging other firms strategically and depending on them for resources which they lack (Pfeffer & Salancik, 2003). The benefits are multifarious. For instance, through networking, organizations can increase their access to knowledge, technology, markets, funding and other useful resources leveraging on the strengths of their allies or strategic partners (Yli-Renko et al., 2020). In managing the dependencies compelled by the exigencies of the environment, firms typically use such strategies as mergers, acquisitions, joint ventures, other inter-

organizational relationships, their boards of directors, corporate political resources and executive succession to create (Hillman et al., 2009).

Networking facilitates the identification of new business opportunities and innovativeness, which ultimately lead to improved financial performance and increased market share. Maintaining business networks has been recognized as a source of innovativeness for firms. Indeed, the more the business ties a firm has, the more entrepreneurial and innovative it becomes (Etriya et al., 2019). More importantly, networking assists not just in identifying business opportunities, but also in providing information on how to utilize such opportunities in an ongoing, rather than discrete way. Business networks are therefore strategic for the development and expansion of new ideas and innovation. Empirical evidence confirms that deploying organizational resources towards networks in any of the number of the formal and informal inter-organizational relationships helps firms cope effectively with environmental uncertainties (Hillman et al., 2009). What however continues to warrant further research attention is the set of factors is that required for enhancing the effectiveness of networks, especially in small firm circumstances.

While a significantly large stream of research has focused on the mechanics and processes of networking, relatively less attention has been paid on how the dynamics of networking; in particular such elements as network competence and capability, impact the effectiveness of business networks in small firms. The Dynamic Capabilities Theory (DCT), for instance, describes the capacity of the firm to meet the challenges of rapidly changing environments (Teece et al., 1997). However, developing or possessing the requisite capabilities for successfully managing networks is crucial, particularly to ensure that the firm deftly navigates the required changes with minimal negative disruptions to the operations of the system.

Central to converting the advantages of networks into valuable outcomes is innovation. Innovation is an organizational change that is produced either as a response to the external environment or as a pre-emptive action to influence the environment (Sungur, 2015). Innovation explains how firms develop radically different and significantly improved or transformed products or services (Duke et al., 2022). Firms essentially innovate either by delivering new offerings to the market, or by generating incremental changes to the existing products or services, often relying on feedback from consumers or knowledge acquired from business allies and the internal R&D mechanism. Innovativeness helps small firms pursue new venture opportunities, reduce the risk of market failure and outperform the competition through product superiority (Dess & Lumpkin, 2005).

Networking is particularly essential for small firms, given their usually limited resources (Shaw, 2006). Although small firms maintain some fair volume of networks of stakeholders, the full potentials of this valuable resource are often not effectively realized (Stam et al., 2014). In view of this, the present study investigates business networking in small firms with a focus on how the underlying dynamics impact its effectiveness. In this regard, we analyze the construct along four dimensions: network competence, network capability, volume of networks and strength and content of ties. Given the growing evidence of the centrality of innovation in mediating the relationship between such knowledge-related processes as business networking and firm performance (Duke et al., 2022; Mardani & Doustar, 2018), we examine innovation as the mediator in this study. We measure the firm performance construct along financial and non-financial dimensions, using sales growth, profitability, customer retention and corporate reputation as the variables.

Theoretical Framework and Hypotheses Development

Resource Dependency Theory

The Resource dependency theory posits that business success is a function of a firm's interaction with its environment (Pfeffer & Salancik, 2003). It suggests that because businesses are often resource-deficient, they are unable to overcome external influences on their own (Lama & Shrestha, 2011), and therefore must manage this dependency effectively. This makes them depend on their environment to acquire the resources that they lack. The interdependence is best managed using beneficial business networks. As resource insufficiency is particularly acute among small firms (Kroon et al., 2013; Wincent et al., 2010), creating networks which enable them access new knowledge and other strengths is

an existential requirement for survival and competitiveness. Empirical evidence confirms the effectiveness of networking strategies for dealing with interdependence and environmental uncertainty by firms (Hillman et al., 2009).

Dynamic Capabilities Theory

The turbulent and fast-changing pace of most markets requires firms to be resourceful. Only managers that are equipped with the requisite skills will be able to respond to the dynamic nature of such markets (Monteiro et al., 2017). DCT essentially describes the capacity of the firm to meet the needs of rapidly changing environments (Teece et al., 1997). While the Resource-Based View (RBV) focuses mainly on the use of internal resources to achieve efficiency and effectiveness, DCT fills the market dynamism gap by focusing on the more uncertain external environmental resources (Landroguez et al., 2011). However, DCT is not separated from RBV, rather it identifies another element in explaining competitive advantage of firms (Barreto, 2010). Specifically, it argues that the dynamic capabilities of a firm are its ultimate source of competitive advantage. The theory suggests that the success of a firm is not only dependent on its resources and capabilities, but also on how it adjusts to the market it operates in (Rua et al., 2018). Three important aspects of organizational capability are key in managing networks and superior value for stakeholders, viz, market orientation, knowledge management and customer relationship management (Landroguez et al., 2011). Empirical evidence confirms that the dynamic capabilities needed for managing business networks are strongly and positively related with sustainable performance of small firms (Abbas et al., 2019). Against the background of the underpinning theories and related empirical evidence, this study we predict that:

H1: *Business Networking (network competence, network capability, strength and content of ties, volume of networks) will have a significant positive effect on the performance of small firms.*

Henderson and Clark Model of Innovation Categorization

The Innovation Categorization Model proposed by Henderson and Clark (1990) describes innovation as both a process and an outcome of knowledge exchange (Han, 2017). Knowledge is at the core of the innovation process. As knowledge exchange is mainly what occurs in business networking, it becomes an important source of innovation. Business networking is therefore a path to firm innovativeness (Pittaway et al., 2004). The exchange and use of knowledge gathered between allies in business networks dominate in the interactions that involve problem research and analysis, design of solutions testing and implementation of new products or services (Duke et al., 2022; Gardeazabal et al., 2021). The evidence demonstrates that knowledge-based processes connect innovation with performance (Nawaz et al., 2014). Accordingly, we propose that:

H2: *Innovation will mediate the relationship between business networking and small firm performance.*

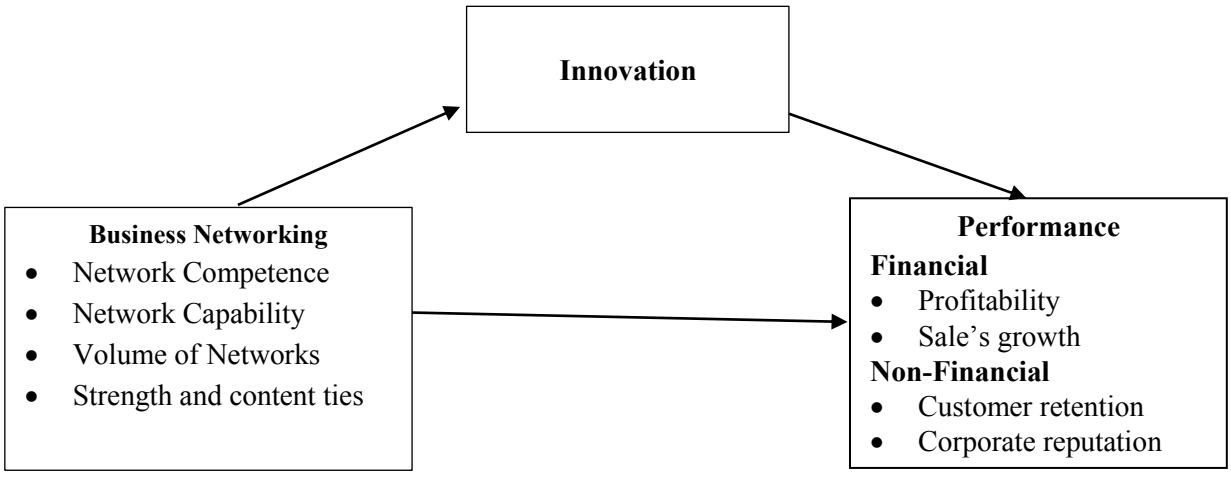

Figure 1. Conceptual framework

Methodology

Study Area, Population and Sampling

The study population comprised small firms located and operating in the Niger Delta region of Nigeria. The population frame was derived from the 2017 database of the Small and Medium Enterprise Development Agency which listed a total of 16.2million functional and active small and medium-sized firms existing in the area. In describing the firms, the small and medium-sized firms were combined into a single category of small firms in the present study, following precedents in prior research involving firms of such nature (Sheehan, 2014). Niger Delta Region comprises nine states, which make up about 25% of the country (National Bureau of Statistics and Small and Medium Enterprises Development Agency of Nigeria, 2017). The Niger Delta Region is an economically active zone of the country with several commercial nerve centers within it. The firms in the database cut across virtually all industries, including agriculture, mining and quarry, manufacturing, hospitality, water supply, waste management and remediation, construction, trade, housing, food services, transport and storage, information and communication, arts, entertainment and leisure, finance and insurance, real estate, technical, profession, scientific and technical services, administrative and support services, education, human health and social services. The sample size for this study was 389.

Instrument

The survey instrument was a close-ended questionnaire that covered all the variables in the three constructs of the study, viz, business network, innovation and firm performance. This format was adopted as it was considered suitable for the study on account of the advantages it has over other data collecting methods, including enabling better and more transparent statistical generation and coding, tabulation, and analysis. Apart from being simpler to use, it allows the researcher code the data for further review (Sekaran & Bougie, 2016). The Likert scale response format was used, where *1 = strongly disagree*, and *5 = strongly agree*.

Validity and Reliability

All relevant reliability and validity tests to confirm the suitability of the items in the instrument were carried out, including component factor analysis (CFA), the Standardized Factor Loadings (SFL), Composite Reliability (CR) and Average Variance Extracted (AVE). The regression analysis was carried out using AMOS software version 23. In conducting the analysis, the recommendations of Hair et al. *(2010) were adopted in evaluating the factor structures indices in the measurement model. Accordingly, only variables with SFL greater than >.70, CR exceeding >.50 and AVE above the threshold value of >.50 were retained in the model. Also, Cronbach's alpha above .70 was used as the yardstick in assessing the reliability of the scales in the instrument.*

Data Analysis

Data gathered for the study were analyzed using both descriptive and inferential statistics. Frequencies and percentage distribution were used for evaluating data on the profile and context information of the respondents. The mean score of relevant questions were extracted and the qualitative responses provided by the respondents were converted to quantitative data using the weights of the five-point Likert scale. EViews version 12 was used for data entry and the statistical analysis. The data collected were analyzed using multiple regression analysis and Sobel test. Nevertheless, before the test of hypotheses, preliminary data cleaning and multivariate assumption tests were carried out to verify the soundness of the regression analysis assumptions. The necessary preliminary analysis performed included missing data analysis, descriptive statistics, outliers' analysis, normalit, linearity, homoscedasticity, serial correlation and multicollinearity tests.

Results

In the business network construct, the first variable, network competence, had SFL ranging between 0.781 and 0.818, AVE of 0.541, and CR of 0.844. The second variable, network capability, had SFL between 0.791 to 0.889, AVE value of 0.813, CR value of 0.781. Similarly, the third variable, volume of network, had SFL ranging from 0.854 to 0.916, AVE value of 0.832 and CR value of 0.862. The forth variable, strength and content of ties, had SFL ranging from 0.792-0.836, AVE of 0.879 and CR of 0.877. The dependent variable, firm performance (sales growth, profitability, customer retention and corporate reputation), had SFL ranging between 0.731 and 0.896, AVE ranged from 0.521 to 0.656, while CR fell between 0.843 and 0.893. The mediating variable, innovation, had SFL

ranging from 0.729-0.865, AVE of 0.521 and CR of 0.827. The *Cronbach's alpha values for the all the variables ranged from* .757 to 0.872. All the items were suitable since their values fell within the acceptable threshold.

Results and Analysis

TABLE 1

	Probit			Logit			Extreme value		
Variable	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.	Coef.	z-Stat.	Prob.
NCom	0.925	6.79	0.000	1.583	6.41	0.000	1.129	6.89	0.000
NCap	-0.345	-4.21	0.281	-0.374	-3.67	0.223	-0.268	-2.21	0.120
VNet	0.562	4.38	0.001	1.321	4.32	0.000	1.113	5.21	0.000
SCT	0.634	4.76	0.003	1.232	2.67	0.002	0.217	3.28	0.002
Inn	0.674	5.62	0.000	1.321	4.11	0.001	1.121	4.24	0.000
Psuedo R^2		0.562			0.548			0.528	
LR statistic		145.97	0.000		138.67	0.000		129.98	0.000

Model A: Estimated results for the test of hypotheses

Source: Fieldwork, 2021

TABLE 2

Estimate threshold values

		Probit	
Threshold	Coef.	z-Stat	Prob
LIMIT_2:C(7)	-2.397	-1.49	0.323
LIMIT_3:C(8)	-1.159	-0.689	0.341
LIMIT_4:C(9)	0.298	0.197	0.314

Source: Fieldwork, 2021

Hypotheses test

4.1.1 H1: *Business Networking (network competence, network capability, strength and content of ties and volume of networks) will have a significant positive effect on the performance of small firms.*

In hypothesis one, the probit model coefficients of Network Competence (NCom), Volume of Networks (VNet) and Strength and Content of Ties (SCT) were significant at the 0.05 significant level. However, the coefficient of Network Capability (NCap) was not significant. Specifically, the estimation result of the probit model rindicated that network competence (NCom) had a significant positive effect on the performance of small firms. This implies that network competence is central to the effectiveness of the firms' relationships with business allies. Similarly, volume of networks (VNet) had a significant positive effect on the performance, signifying that the volume of business networks played a great part in enhancing the performance of small firms. Strength and content of ties (SCT) had a significant positive effect on performance, thus suggesting that the depth and scope of coverage in such relationships are important for business network success and overall firm performance. Network capability (NCap) however had a negative effect on firm performance, with an indication of a need for raising the capacity of the firms' key managers in this regard. Overall, the hypothesis was supported.

4.1.2 H2: *Innovation will mediate the relationship between business networking and small firm performance*

In hypothesis two, the results showed a Sobel z-score of (10.682241) and a p-value of (p = < 0.000001) which is less than 0.05, and a 95% confidence interval with upper and lower values of .17552 and .24293 respectively. The results

indicated that innovation has a significant mediating effect on the relationship between business networking and small firm performance. The results validated the second hypothesis.

Discussion and Conclusion

This study investigated the mediating role of innovation in the relationship between business networking and performance of small firms. It specifically investigated the effect of network competence, network capability, strength and content of ties and volume of networks on the financial (sales growth and profitability) and non-financial performance (customer retention and corporate reputation) of the firms. The study established that network competence, strength and content of ties and volume of networks each have significant positive effects on the performance of small firms. On the contrary, network capability had a significant negative effect on the performance, which indicates it as the weak link in the business networking capacity of small firms. Innovation was found to fully mediate the relationship between business networking and performance of small firms.

Overall, the study affirmed that business networking is helpful for the performance of small firms. The results indicate that the firms with large network of partners or allies will enjoy greater benefits in terms of access to varied range of knowledge, competencies and experiences that would be beneficial for identifying new business opportunities and innovating. In view of the finding about network capability among small firms, it is recommended that small firms should invest in developing their managers and other key persons' knowledge and capacity, particularly in soft-skills, as these are relevant for building and managing relationships.

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