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Original Research Article

Vocational Training and Productivity: Evidence from Family-Owned SMEs in Rivers State

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Abstract: This study investigates the connection between productivity and vocational training in forty (40) family-owned small and medium-sized businesses in Rivers State, Nigeria. The cross-sectional survey was employed, and the researcher used regression analysis, Spearman's rank-order correlation coefficient, and descriptive statistics for demographic data. According to the results, company size considerably modifies the association between vocational training and the productivity of family-owned SMEs in Rivers State, which shows a significant relationship between vocational training and productivity of family-owned SMEs. The study found that in order for SMEs to benefit from innovation and receive incentives for productivity and exports, strategic activities and public policies that support knowledge spillovers should be very transparent. The competitive potential of the business fabric may be eroded over time by suppressing self-selection mechanisms or closing the productivity gap between SMEs and larger companies due to open or triple-helix innovation actions and policies, for example, that do not take intellectual property protection for the most innovative and leading SMEs into consideration.

Keywords: Vocation training, Productivity, SMEs.

INTRODUCTION

Researchers and practitioners are focusing more on the operations of small and medium-sized firms (SMEs) as a result of the widespread agreement that SMEs play a vital role in economic growth (Cusmano, Koreen & Pissareva, 2018; Hoffman, Parejo, Bessant & Perren, 1998; Manez, Rochina-Barrachina, Sanchis & Sanchis, 2013). Although studies show that SMEs are more susceptible to economic downturns than large companies (Cusmano *et al.*, 2018), they typically account for 60% of all manufacturing jobs, making them a key factor in economic growth (Manez *et al.*, 2013; OECD, 2017). Moreover, SMEs make up a major portion of the economy in the OECD, with microenterprises accounting for between 70 and 95 percent of all businesses (Hoffman *et al.*, 1998; OECD, 2017).

The crucial importance of SMEs is demonstrated by the favourable effects of their expansion on the generation of employment, productivity, and competitiveness (Cusmano *et al.*, 2018). SMEs may also be able to offer more inclusive growth and help economies adjust to the main tendencies of the next industrial revolution, according to research (Cusmano *et al.*, 2018). Hence, encouraging SME productivity has been a top priority for managers and policymakers, with a focus on understanding the innovative processes of SMEs (Hemert, Nijkamp, & Masurel, 2013; Hoffman *et al.*, 1998; Manez *et al.*, 2013). This information is particularly pertinent at a time when many organisations are dealing with low productivity growth, expanding wage and income discrepancies, and shifting demographic and employment trends (Cusmano *et al.*, 2018).

The component of education known as vocational training is that which results in the acquisition of fundamental scientific information as well as practical and applied skills. Vocational training has been linked to higher earnings for those who participate in it, according to studies by Meer (2007), Sakellariou (2003), Hotechkiss (1993), Dearden *et al.*, (2002), Hall (2012), Malamud and Pop-Eleches (2010), Tripney and Hombrados (2013), Pfister *et al.*, (2015), Espinoza and Speckesser (2019), and Korber (2019).

On theoretical (e.g., Becker, 1962; 1993; Accemoglu & Pischke, 1999; Malcomson, Maw & McCormick, 2003) and empirical (e.g., Bassanini, Brunello, Booth, De Paola & Leuven, 2007; Sepulveda, 2010; Sala & Silva, 2013) grounds, the effect of vocational training on a firm's productivity is a hotly debated topic. The popular wisdom holds that while on-the-job training can increase business productivity and occasionally salaries as well, labour market frictions typically enhance employers' profitability towards funding training programmes. Vocational education and training are crucial because they enrich a person's life and give them the skills required in a democratic society. The effectiveness of vocational education and training, which offers access to skills and entry points into the job market, is crucial to societal and economic progress. It can be a crucial step towards a better life, particularly for marginalised and poor communities.

With vocational training, a number of African nations worked to alleviate talent shortages. The Industrial Training Levy Fund in Kenya, the Industrial Vocational Training Board in Mauritius, the National Continuing Training Program in Tunisia, and the National Board for Technical Education in Nigeria are just a few of the numerous programmes that were established (Sekkat, 2011). The low level of training participation among African businesses may indicate that they do not perceive any benefits to performance from training. In order to determine whether or not this holds true in practise, it is required to conduct an empirical study of how training affects production. If such an influence is discovered to be favourable and considerable, one can draw the conclusion that training might be a successful strategy for these nations to increase their level of competitiveness. The results also imply that businesses in these nations are squandering a chance to increase worker training and boost productivity and competitiveness.

The external efficiency of vocational and technical education programmes in Nigeria is extremely low because labour market information was not taken into consideration when designing the curricula; the quality of vocational and technical education programmes is also extremely low because there are insufficient facilities, equipment, and staff; gender inequity; and a shortage of vocational educators.

Ajuwon, Ikhide, and Akotey (2017) list a number of challenges that hinder the productivity of SMEs in Nigeria, including poor infrastructure development, an unfavourable loan market, insufficient support, and problems with globalisation (dumping). Also, PWC (2020) cited the following as COVID-19's effects on MSMEs in Nigeria: Negative feelings that persisted could cause MSMEs to completely abandon their mission and business plan. MSMEs are more vulnerable to higher costs associated with underutilizing their resources, cash flow issues that could make it difficult to meet obligations on time and increase the risk of credit default and bankruptcy, and revenue shortfalls because of waning demand that impede operations and the implementation of short- to medium-term strategies.

The relationship between information technology and productivity has been studied previously (Brynjolfsson & Yang, 1996); factors affecting SME productivity: a systematic review and research agenda (Owalla, Vorley & Brooks, 2019); the relationship between work-family policies and the productivity gap (Kossek & Ozeki, 1999); the measurement and improvement of manufacturing systems productivity (Muthiah & Huang, 2006); the relationship between productivity and structural change (Kruger, 2008); and innovation (Abdul-Kemi, 2015; Akinmulegun & Oluwole, 2015; Paul, Amarachi, Oyedele, Odafe & Juliana, 2018). To the best of the researcher's knowledge, there is no study on the relationship between productivity and vocational training, and there is little data from family-owned SMEs in Rivers State.

Human Capital Theory

People enter the realm of the labour market with varying degrees of education, knowledge, skill, and ability, as well as expectations. A more educated, better-trained person is capable of giving a bigger amount of helpful, productive work than one with less education and training, according to McConnell *et al.,* (2009). (p. 85). An organisation relies on employees' talent, knowledge, and aptitude as a crucial notion of value creation since the importance of human capital theory is widely accepted to boost organisational performance.

Smith (1973) started an increase in human aptitude that is crucial to production in the eighteenth century, and Schultz (1961), writing in the American Economic Review, used the phrase "investment in human capital." After Gary Backer won the Nobel Prize for Literature, the term "human capital" became widely used to describe the idea that different levels of education and training led to different levels of wages and salaries and that having more knowledge, skill, and ability increased one's chances of landing a better job (Blair, 2012). Human capital is a physical means of production, according to Becker (1964). Organizations make investments in human capital through training, education,

and health. Later, Davenport (1999) stated that "the component of human capital comprised of abilities, knowledge, skill, personal talent, behaviour, and effort" and he added that 1) the knowledge contained IQ, intelligence, specific knowledge, and general knowledge for work. 2) Skill is knowledge applied to a task, including the use of one's body and movement. 3) Talent is an innate quality of the individual that can be enhanced via development. 4) Behavior is an outward manifestation of one's own beliefs, norms, and observed behaviour. 5) People make an effort when they strive to use their natural or unique resources, such as their talent, experience, knowledge, and capacity for hard work, in order to succeed. Time is the final component of effort.

Resources-Based View Theory

One of the theoretical approaches to strategic management that has had the most success is the resource-based view of the organisation (RBV). It has acquired a domination rarely seen in any academic field, along with the five-forces paradigm (Davis & DeWitt, 2021). The performance of firms is often seen to be impacted by a good combination of their own resources and competencies (Kaleka, 2002; Kaleka, 2011). The resource-based view concentrates on internal resources and capabilities to find the factors that determine a firm's performance and competitive advantage. According to some (Florez *et al.*, 2012; Zou & Stan, 1998), the inclusion of the resource-based view is a worthwhile direction that would enhance management literature by emphasising dynamic capabilities, taking into account interactions between resources and capabilities, and incorporating viewpoints from other academic fields (Zou & Stan, 1998; Kaleka, 2012).

Technical and Vocational Education and Training in Nigeria

In Nigeria, technical and vocational education and training (TVET) seeks to support the federal and state education authorities in their efforts to revitalise, reform, and increase the availability of skills, vocations, science, and technology to meet the country's current and future socioeconomic needs. In order to coordinate and regulate all facets of technical and vocational education outside of higher education, the NBTE Enabling Act No. 9 was developed. All TVET institutions, including polytechnics and monotechnics, are included in this. The Board has the authority to decide what kind of labour force Nigeria would need in the industrial, commercial, and other pertinent domains. Also, it collects and distributes money from the federal government to polytechnics while advising the federal government on the budgetary requirements of polytechnics and other technical schools (NBTE, 2017).

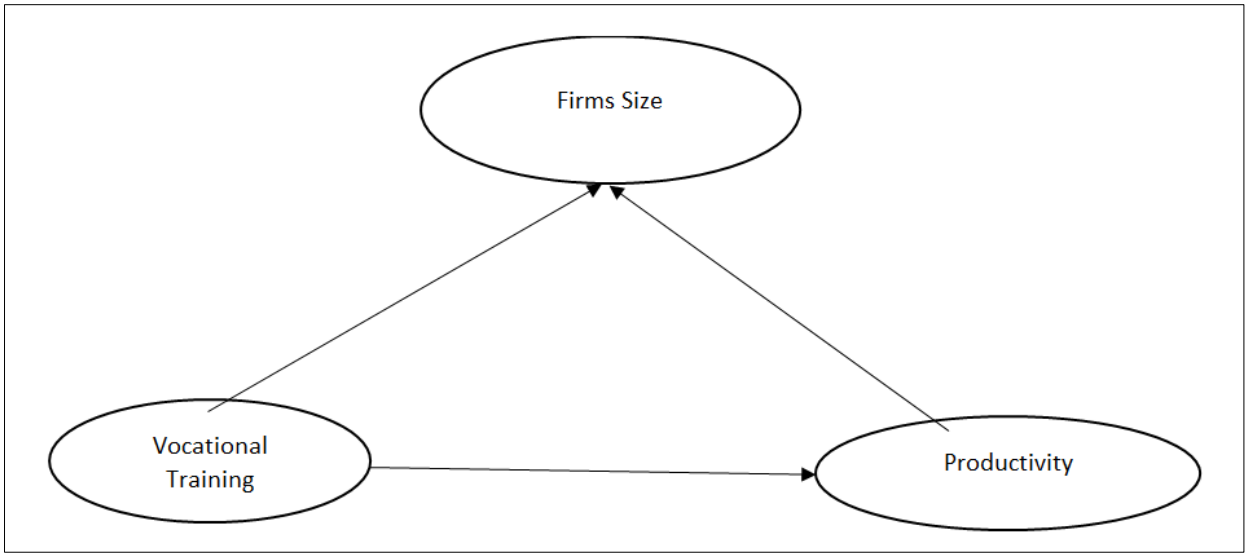

Fig. 1: Research Model

Research Hypotheses

H1: There is a significant relationship between vocational training and productivity of family owned SMEs in Rivers State.

H2: Firms size significantly moderates the relationship between vocational training and productivity of family owned SMEs in Rivers State.

Vocational Training

Vocational training, or kinds of remedial vocational training, refers to short-term job training programmes run by ministries of labour (rather than education) and offered to the long-term unemployed, welfare beneficiaries, and other people whose relationship to the labour field is weak. Moreover, the term "vocational training" is frequently used to refer to businesses' efforts to increase training for their own employees, sometimes with public funding and other times with employer funding solely. Vocational training is sometimes perceived as having a shorter duration and lesser intensity

than vocational education, concentrating solely on job-related skills rather than including any general competences, and aiming at lower-level competencies and professions.

When businesses train their own employees, training is frequently company-specific rather than general. The available research indicates that, in some nations, the economic returns from training are relatively small or even negative when compared to vocational education, which, under the appropriate circumstances, can produce significant economic gains (Ryan, 2001; Grubb & Ryan, 1999; Grubb, 1996). However, there may be some overlap between training and vocational education, especially in low-skilled fields (such as word processing, food service work, entry-level medical occupations, and possibly some crafts), where roughly the same kinds of preparation can be seen in both training programmes and in vocational education programmes.

Firm Size

Larger family businesses may be able to reduce the risk of agency conflict and the costs associated with hiring nonfamily managers by creating formal monitoring systems to make sure that managers follow the instructions of owners and by implementing incentive compensation schemes to align managers' interests with those of owners (Carlson, Upton & Seaman, 2006). Bigger organisations may benefit from economies of scale in the design and execution of these systems, which would make controlling nonfamily agents more affordable and efficient than it would be in smaller ones (Grandori, 2004). These strategies both serve to safeguard the family business from the agency conflicts that are frequently connected to the employment of nonfamily managers and to make working for family businesses more appealing to capable managers. Bigger family businesses ought to offer more career prospects and are more likely to be professionalised, which lessens the risk of favouritism to some extent (Sonfield & Lussier, 2009). The knowledge asymmetries that exist between family owners and nonfamily management are expected to be lower since the relative importance of economic goals in larger family enterprises is likely to be greater (Chrisman, Memili, & Misra, 2014). These factors make working for larger family businesses more appealing to nonfamily management. Because of this, family business owners will have more options for employing employees of higher calibre.

SMEs and large companies often engage in different kinds of innovative activity. Activities that are innovative outside of the company use internal resources, outside expertise, and technical know-how. They primarily include raising a company's productivity levels. Similar to this, Mabenge, Ngorora-Madzimure, and Makanyeza (2020) claim that larger and younger enterprises appear to be more affected by innovation.

Firm Productivity

Recent years have seen an increase in research in numerous disciplines of economic theory as a result of a growing understanding of persistent productivity disparities across a number of businesses and industry samples globally (Syverson, 2011). Research in the area of industrial organisation has connected a corporation's productivity to a number of value chain components and competitive market dynamics across a variety of global firms and industry samples (Syverson, 2011). Research in the area of industrial organisation has connected a corporation's productivity to a variety of value chain components and market dynamics. Competition and interactions between product rivalry and technological spillovers (Bloom, Schankerman, & Van Reenen, 2013) have lately gained prominence as explanations for the dynamics of productivity (Dosi, Moschella, Pugliese, & Tamagni, 2015). R&D, innovation, and ICT-related investment are three of a firm's main activities in the value process connected to knowledge generation and diffusion, and there is already a tonne of evidence in the literature indicating they have a positive impact on the firm's productivity. Following a seminal work by Griliches (1979), it is well known that R&D is necessary to enhance firm technology absorption capacity and, through innovation, raise productivity levels (Luintel *et al.*, 2014; Kose & Sakata, 2019). Furthermore, the importance of international R&D for productivity has been emphasised. An international technology transfer mechanism that combines knowledge about intermediary goods and services with those goods and services themselves has actually proven to be able to provide spillovers and returns when compared to domestic innovation (Ang & Madsen, 2013; Eberhardt *et al.*, 2013).

METHODOLOGY

The research design used in this study was cross-sectional. Because it is descriptive in nature and the researcher has no control over the respondents, it is appropriate for this research. Given that the research regions are in several locations and the sample elements are measured at a particular point in time, a cross-sectional survey is appropriate. 40 family-run quick service eateries in the Port Harcourt metropolitan that were registered and operating in Rivers State and were classified by TripAdvisor made up the study's sample. There were 217 managers and supervisors in the target population. The sample size was determined by the researcher using the target population (census study). The Statistical Package for Social Sciences was used to analyse the hypotheses using the Spearman Rank-Order Correlation Coefficient and to analyse the demographic data using descriptive statistics employing tables, frequencies, and simple percentages (SPSS, Version 21).

RESULT AND DISCUSSION

The questionnaire was given out to the SMEs under study in a total of two hundred and seventeen (217) copies; one hundred and eighty-three (183) of these copies were filled out correctly, hence all analysis will be based on these copies.

Descriptive Analyses

Table 1: Demographic (Descriptive) Data Analysis

Gender	**Response Rates**
Male	122
Female	61
Total	**183 (100%)**
Age of the Respondents	**Response Rates**
Less than 35Yrs	25
36-40Yrs	57
41-45Yrs	44
Above 45 Yrs	57
Total	**183 (100%)**
Marital Status	**Response Rates**
Married	107
Single	76
Total	**183 (100%)**

Research Data, 2021

The outcomes of the descriptive statistics analysis are as follows:

- There were 61 female responses and 122 male replies. This suggests that more men participated in the study because it shows that 66.7% of the participants are male.
- The vast majority of respondents are between the ages of 36 and 40 and over 57. 114 respondents, or 62.3%, fall into this category.
- Married people make up the majority of respondents (58.5%).

Inferential Analyses

Hypothesis One

H1: There is a significant relationship between vocational training and productivity of family owned SMEs in Rivers State.

To test this hypothesis data collected were subjected to Spearman's Rank Order Correlation Coefficient.

Table 2: Correlations between Vocation training and Productivity

			VET	**PY**
Spearman's rho	VTE	Correlation Coefficient	1.000	.733**
		Sig. (2-tailed)	.	.000
		N	183	183
	PY	Correlation Coefficient	.733**	1.000
		Sig. (2-tailed)	.000	.
		N	183	183
**. Correlation is significant at the 0.05 level (2-tailed).				

A positive and substantial association between vocational education and training and SMEs productivity exists, according to the results of the Spearman rank-order correlation analysis displayed on Table 2 above (r = 0.733, at p 0.05). This finding suggests that increasing vocational education and training will greatly boost the productivity of SMEs.

Regression: Trust and Consumer Purchase Decision:

H2: Firms size significantly moderates the relationship between vocational training and productivity of family owned SMEs in Rivers State.

Result of the regression analysis carried out to determine the effect of firm's size on vocational training and education and productivity is shown below:

Table 3a: Model Summary: Without the moderating variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.825[a]	.727	.746	.41178

Source: SPSS 21.0 Output

Table 3b: Coefficients[a]

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-1.026	.267		-6.995	.000
	Vocational Training & Education	1.175	.038	.825	33.206	.000

Source: SPSS 21.0 output (*** dependent variable: productivity***)

Tables 3a and 3b display the results of the linear association between SME productivity as the criterion variable and occupational training and education as the predictor factors. Without the moderating variable, firm size, the results show that the correlation coefficient R is 0.825 and the R2, which measures the model's fitness, is 0.727. This indicates that, when the moderating variable is not included, occupational training and education account for 72.7% of the variation in SME production.

Table 4a: Model Summary: Without the moderating variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842[a]	.758	.756	.39220

Source: SPSS 21.0 Output

Table 4b: Coefficients[a]

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-2.170	.109		-6.929	.000
	Vocational Training & Education	2.077	.171	.816	17.066	.000
	Firm Size	.397	.063	.312	4.382	.000

Source: SPSS 21.0 output (*** dependent variable: productivity***)

Tables 4a and 4b demonstrate that the addition of the moderating variable enhanced the correlation coefficient R from 0.825 to 0.842 and the R2 from 0.727 to 0.758. This indicates that business size, education, and occupational training together account for 75.8% of the variation in SME production. With a significant p-value of p 0.005, a t-statistic of 4.382, and an unstandardized coefficient of 0.397, firm size has a considerable impact on the model. This indicates that the association between vocational training and education and SME productivity is considerably moderated by company size, increasing the model's variability by 3.1%.

DISCUSSIONS

The first hypothesis, which holds that education and vocational training have a considerable impact on the productivity of SMEs in Rivers State, was found to be true. This is consistent with earlier research on the association between staff productivity in SMEs in Rivers State and micromanaging behaviour by Amadi, Edwinah, and Okocha (2022), which discovered a favourable and substantial relationship. In their study on technical and vocational education and training in small and medium-sized businesses, Matlay and Poell (2019) come to the conclusion that by examining the future of TVET in a SME context as affected by recent trends in globalisation, technological developments, robotization, social media, and the growing individualised nature of learning, Moreover, Oyeniyi, Adeyemi, and Cole (2019) evaluated the impact of vocational training on the growth of entrepreneurship and discovered that students consistently cited entrepreneurship education as one of the crucial elements affecting one's success in business. Adiela, Amah, and Okocha's (2022) study on leadership abilities and organisational productivity in Nigeria revealed strong and favourable relationships between the constructs, which this study also corroborated.

The study supported Hypothesis 2, which claims that the connection between vocational education and training and SME production is strongly moderated by firm size. Previous research by Kijkasiwat and Phuensane (2020), who examined the relationship between innovation and firm performance as well as the moderating and mediating roles of firm size and small- and medium-sized enterprise finance, supported this conclusion. They discovered that firm size and financial capital both moderate and mediate the impact of innovation on firm performance, whether it be positively or negatively, depending on the innovation. Because they emphasise the importance of business size and funding sources

while preparing to deploy innovations to improve firm performance, the findings have decision-makers in mind. Additionally, Fang, Randolph, Memili, and Chrisman (2015) examined how firm size affected the employment of nonfamily managers in privately held family SMEs and discovered that firm size is hypothesised to positively moderate those relationships because, as family firm size rises, the advantages of hiring nonfamily managers increase faster than the costs.

CONCLUSION

Vocational-technical education is essential because people with marketable skills contribute positively to their communities rather than acting as parasites. Training people and enhancing their technical abilities is the aim of vocational-technical education at trade centres, technical colleges, colleges of education (technical), polytechnics, and universities in order to meet the demands of Nigeria's industrial sector. The realisation of Nigeria's indigenization plan depends heavily on vocational-technical education. There have been more technical institutions since Nigeria attained political independence in October 1960.

The analysis's findings revealed the following things: This study looks at the productivity and vocational training that family-owned small and medium-sized enterprises provide to Nigeria's economy. The Nigerian economy has undergone a number of economic reforms over the years, taking the pandemic and its effects on the economy into consideration. The empirical results demonstrate that vocational education and training significantly affect the productivity of family-owned SMEs in Rivers State.

Practical Implications

- In particular, in nations that are strongly dependent on international trade, the pandemic has served as an anchor for the global economic crisis. Nigeria's economy is dependent on oil revenues and the availability of FOREX, making it sensitive to the declining impact of these significant externalities. In order to reposition themselves for optimal productivity and resilience, small and medium-sized firms might adopt the following crucial strategies:
- To preserve productivity and foster creative thought, take specific steps to protect your employees' health, safety, and well-being.
- Employers should set up virtual vocational training on the use of digital tools to upskill and improve employee abilities.
- Keep up with industry insights and related news that may aid in improving and maximising your risk reduction and new opportunity tactics.
- To find weaknesses, the best and worst case scenarios, and suitable coping mechanisms, perform a scenario analysis.
- The strategy for promoting skill development programmes needs to be revisited in particular because it is not effectively reaching all segments of the rural population as intended. So, it's essential to focus on more effective strategies for extending the reach of such programmes. Those from the community who have benefited from training initiatives ought to be included in attempts to educate people about the potential advantages of formal vocational training.
- In Rivers State, quick-service eateries were used for this study. Further research might be done in a variety of industries and workforces, such as manufacturing, financial services, healthcare, and hospitality and tourist management.

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