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Investigating the Determinants of Productivity Growth of the Small Scale Garment Industrial Cluster in Aba, Nigeria.

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Abstract.

Classical agglomeration theory posits that production is facilitated when there is a clustering of economic activities. Although, the theory failed to explain which of the economic activity will lead to the formation of the cluster, the theory also failed to explain what determines productivity growth in such a cluster. Hence this study investigates the determinants of industrial cluster productivity growth in the production activity using the small scale garment industrial cluster in Aba, Nigeria. This study employed the questionnaire for its data collection from a sample of 300 small scale garment operators in Aba. The Multi-criteria Decision Analysis (MCDA) and simple percentage statistics were used for the analysis. The study found the major determinants of productivity growth of the small scale garment industrial cluster in Aba to include; small market for the products, high competition from imported foreign goods, low quality of products, tax policy, multiplicity of taxes, levies and other rates, and high rate of infrastructural decay. Based on the findings of this study, we recommend that government should prioritize industrial cluster development in its development policies through improving her tax policies. Flexible trade regulations and infrastructural development should be embarked on for industrial sector productivity growth.

Keywords: Industrial Cluster; Small Scale; Productivity Growth; Agglomeration.

1. Intoduction

An industrial cluster is a dense geographical concentration of enterprises comprising manufacturers, producers, suppliers, support institutions, marketing, packaging, specialized trade associations or even traders (Schmitz, 2004). The geographic agglomeration of firms within industries has been recognized in many countries including Nigeria. According to Porter (1990), industrial cluster development will teach communities to analyze their existing business and industrial bases and build their economic development on those strengths.

The starting point of the debate on clusters and clustering is that firms do not innovate and grow in isolation, but rely extensively on external knowledge sources. The cluster is an economic phenomenon that is placed in a competitive context in which many businesses simultaneously compete and collaborate to gain different economic advantages. These advantages include increase in productivity through specialized inputs, access to information synergies, and access to public goods that includes engaging in more rapid innovation through competitive research and competitive striving, and the establishment of new business formation or expansion of boundaries of the cluster map.

Firms in dense geographic proximity tend to enjoy certain advantages of agglomeration relative to isolated enterprises. This happens in at least two different ways. First, demand for their goods and services are enhanced as potential customers become aware of the cluster. This is especially true for micro and small enterprises, whose markets tend to be local and dependent on direct sales to traders and individual consumers. Secondly, a cluster's ability to innovate and supply high

quality products also benefits from agglomeration because nothing sparks productive innovation better than having your competitor across the street.

According to Yohan et al., (2013), recognizing the benefits of clusters as a form of economic organization has influenced governments to implement policies to launch initiatives that support existing clusters or form new ones with regard to:

Small and Medium Enterprises (SMEs) as businesses whose personnel numbers fall below certain limits. Clusters matter because geographical agglomeration can potentially help small firms overcome constraints associated with size, promote technological development, and enhance their ability to compete in local and global markets. The gains of clustering include localized external economies, particularly economies of scale and scope as small firms specialize and engage in a division of labour. Geographical proximity also creates possibilities for local cooperation between firms and local institutions. Schmitz (2004) captured these clustering advantages in the concept of collective efficiency.

Research results from developing countries have shown that industrial cluster productivity growth has been faced with numerous challenges, which include low capacity utilization resulting from; unstable infrastructure, especially poor power supply, bad roads, insufficient telecommunication facilities and absence of venture capital, especially for business start ups, high cost of capital from banks and other financial institutions, lack of long term loans; poor macroeconomic environment, inadequate regulation, high competition from foreign goods, lack of business incentives as well as multiple taxation (Onwuchekwa et al., 2017). Therefore, based on the foregoing, the purpose of this study is to investigate the impact of high competition from foreign goods on small scale garment industrial cluster productivity growth in Nigeria: A Case of Aba City.

2 Literature Review

The meanings and theories surrounding the major concepts are discussed in this section. Industrial cluster, productivity growth are the important concepts in this study. The discussions are structured under different subsections for ease of analysis and understanding.

2.1 Review of Conceptual Literature

Productivity growth

Productivity refers to the physical relationship between the quantity produced (output) and the quantity of resources used in the course of production (input). 'It is the ratio between the output of goods and services and the input of resources consumed in the process of production while productivity growth is the increases in the overall productivity change per period measured in the gross domestic product (GDP).

$$Productivity\ (P) = \frac{Output\ (O)}{Input\ (I)}.$$

According to Fabrizio (2016), productivity is efficiency in production, how much output is obtained from a given set of inputs. Mojtaba Afsharian, Seid Mostafa Mirghasemi, Kamal Ebadzadeh, and Nasrin KhodaBakhshi (2013), argues that at firm level, productivity growth demonstrates that resources have been used efficiently and this situation causes decrease in the costs. Fabrizio (2016), identified internal and external drivers of productivity. The internal determinants include: Managerial practices, Higher-Quality labour and Capital, Information Technologies and R&D and Learning by Doing and product innovation while the external determinants are: Productivity Spillovers, Competition and Regulation, Input Markets and Market Demand. Bloom and Van Reenen (2010), grouped the best managerial practices into three broad areas, which includes; Monitoring- how well do the owners of these industries track what goes on inside their firms and use this for continuous improvements, Target Setting- Do these operators set the right targets, track the right outcomes, and take appropriate action and the People: Are the owners of these industries promoting and rewarding employees based on ability and effort and systematically try to hire and keep their best employees.

Pekka, Maliranta, and Vainiomaki (2004), argues that labour quality entails education, gender, training and overall experience and that productivity is increasing in workers' education. Mytelka (2004), show that a combination of accelerating technical progress in high-tech industries and the resultant investment in information technology (IT) are driving recent productivity gains in the United States. Akintoye and Oluwabunmi (2019), argues that core infrastructure investment is an important source of productivity growth and that the sluggish productivity performance of the 1970s can be largely attributed to a slowdown in public investment. OECD manual 2019, states that measurement of productivity growth in a production process is very important and the objectives include: Evaluation of technical change, Efficiency, Real Cost Savings, Benchmarking production processes and the Standards of Living. Griliches (1987), sees technology as "the currently known ways of converting resources into outputs desired by the economy.

Diewert and Lawrence (1999), opine that full efficiency means that a production process has achieved the maximum amount of output that is physically achievable with current technology, given a fixed amount of inputs. At the firm level, productivity growth demonstrates that resources have been used efficiently and this leads to a decrease in the costs. A firm therefore, can reduce the prices of its products while maintaining or increasing profit margins. At national level, productivity is one of the major determinants of economic growth and progress. Productivity growth brings into play a decrease in rate of inflation and also creates a window for the competitiveness of domestic firms.

Productivity growth, therefore, increases the wealth of a nation (Bao & Bao 1989). Ugochukwu (2018), re-stated the point that there is a myriad of sources behind productivity growth and labeled it the real cost savings. In this sense, productivity measurement in practice could be seen as a quest to identify real cost savings in production. Benchmarking production processes in the field of business economics as a measure of comparison of productivity, helps to identify inefficiencies while living standards measurement of productivity is a key element towards assessing standards of living. A simple example is per capita income. Measuring productivity growth of the cluster will help to better understand the development of living standards of the cluster based workers.

The Industrial Cluster Concept

Industrial cluster are much more than a concentration of industries within the same sector operating within a limited geographical area (Lawrence, 2013). According to Frank (2009), industrial districts are not just collections of disparate firms and services organized together on what the British call Industrial Estates and the French call it Zones Industrielles. What is specific and different is the way that the firms are organized together according to certain principles. The industrial districts/cluster model is an initiative aimed at learning from the Italian industrial cluster experience. It encourages the concentration of small and medium sized businesses in a particular geographical location so that they can enjoy economies of scale (Lawrence, 2013). Small industries become the backbone of the local economy, but they are developed on the basis of certain principles, ethics and norms. By obeying these rules and norms, the culture of businesses and the community is shaped. One of the key rules is cooperation among the businesses, workers and unions, which results in what some writers call "Collective Efficiency". The Italian principles of the industrial cluster model of production yielded not only economic success through advantageous access to low cost factors of production, but also brought social capital into the communities. In addition, some research results on industrial district during the 1970s revealed that a productive structure, under certain conditions, is capable of producing goods for the international markets at competitive prices. Brusco and Sabel (1982) went on to say that ten lathe machines in ten different rooms can be operated as efficiently as ten lathe machines that are put together in one room. This concept was named "Industrial Cluster Concept" by Professor Michael Porter in the 1990s which later became the Michael Porter's Diamond Model (Lawrence, 2013).

A typical Italian industrial district model is in Modena. Modena is one of the provinces of Emilia-Romagna, in which the features of the industrial cluster model appeared clearly. The experience of Modena presents a challenge to the school of thought that maintains that industrialization can only be achieved by channeling all efforts towards large-scale modern industries. This model of development is now well known to development scholars as a case where industrialization has been characterized by the presence of many small businesses (Natalia & Natalia, 2016). Many small firms in the Modena area were made to concentrate on the joint form of a "Productive System". Not being a mere concentration of small businesses, they had certain attributes that helped them to achieve economies of scale. These attributes are:

- Geographical proximity of the businesses
- Sectoral specialization
- Predominance of small and medium-sized firms
- Close inter-firm collaboration that leads to collective efficiency
- Inter-firm competition based on innovation rather than lowering wages
- A shared social and cultural identity which facilitates trust between firms, employers and skilled workers.
- Full involvement and assistance from the local government.

Industrial success is not credited to one individual firm. Its strength lies in clustering, which opens up flexibility and efficiency that individual producers can rarely attain. Industrial clusters are also found in other parts of the globe including Baden-Wurttemberg in Germany, West Jutland in Denmark, South West Flanders in Belgium, the Sino Valley in Brazil, Ludhiana and Tiruppur in India, and Toyota City in Japan, among others.

UNIDO (2019), also defined clusters as "geographical concentrations of inter-connected enterprises and associated institutions that face common challenges and opportunities". This definition highlights two essential features of clusters: - they consist of a critical mass of enterprises located in geographical proximity to each other and enterprises within them share many common features:

- Cluster as a critical mass of enterprises located in geographical proximity to each other.

There is no universally accepted way of establishing the exact boundaries of a cluster. What is perceived as close in one location may represent an insurmountable distance in others; distance can be influenced by the availability of transport facilities, as well as by cultural identity and social values. Moreover, the number of enterprises necessary to be considered as constituting a cluster can vary depending on the size of a country.

- Enterprises within clusters share many common features.

Cluster-based enterprises share one or more of the following characteristics:

First, they may use the same suppliers of raw materials and other inputs, especially when they are active in the same industrial sector. Second, they may cater to the same markets and clients (e.g. the local handicraft market), even when producing different goods. Eventually, all enterprises share the same territory, its infrastructure, services and, in many cases, a common cultural identity. Enterprises within a cluster also often face common obstacles and challenges including, for example, lack of infrastructure or limited access to capital.

Besides enterprises, clusters also include support institutions, such as:

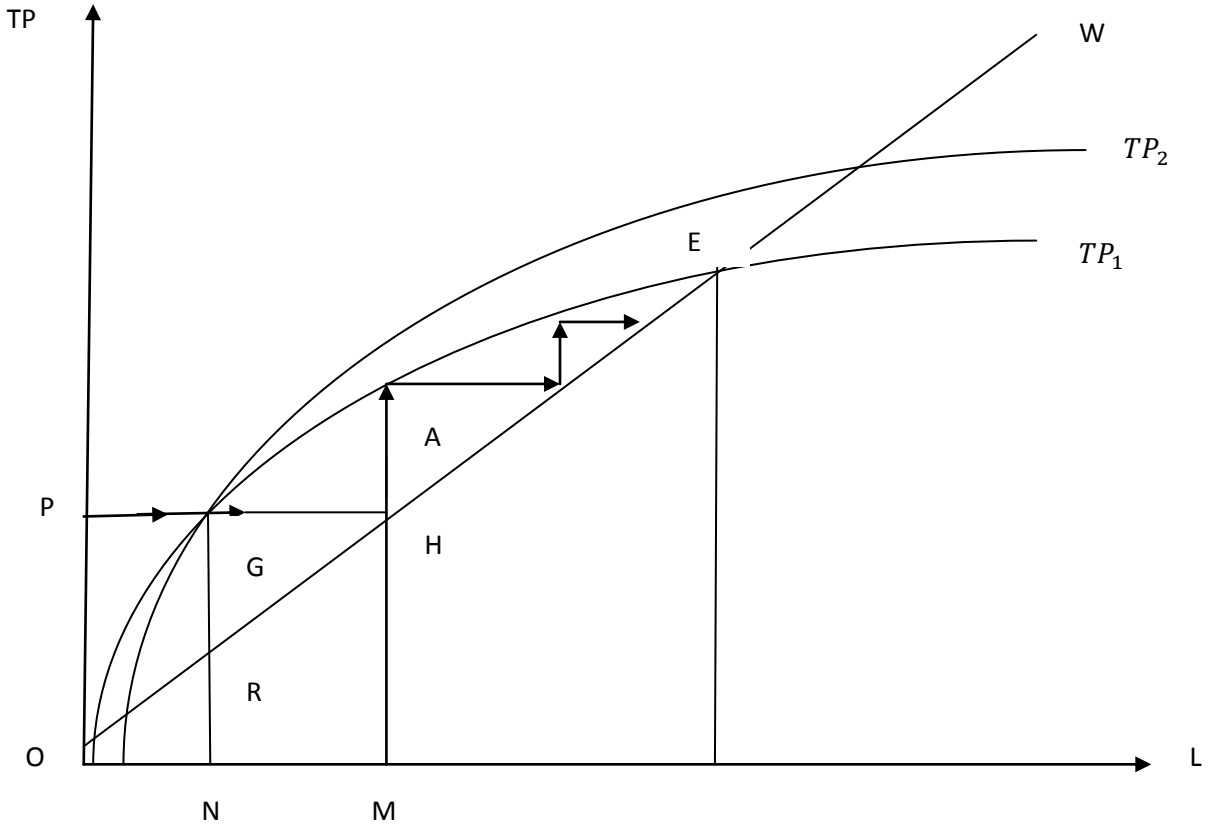
- Business associations;
- Business development service (BDS) providers;
- Financial service providers, including banks;
- Public authorities such as local, regional and national governments and regulatory agencies;
- Training agencies such as vocational schools, universities, etc.

2.2 Review of Basic Theories

Classical Growth Theory

The classical growth theory postulates that a country's economic growth will decrease with an increasing population and limited resources. Such a postulation is an implication of the belief of classical growth theory economists who think that a temporary increase in real GDP per person inevitably leads to a population explosion, which would limit a nation's resources, consequently lowering real GDP and as a result, the country's economic growth will start to slow.

Structural Model



In the figure above, the $y-axis$ represents total production and the $x-axis$ represents labour. Curve OW indicates the total subsistence wages. If the level of population (labour) is ON, and the level of output is OP, the per capita wage is represented by NR. Consequently, the surplus or profit is RG. Because of the surplus, the capital formation process comes into effect. Consequently, the demand for labour increases, leading to a rise in total wages, as the curve moves to GH. If the total population remains constant at ON, and wages exceed subsistence wages, ie, NG $>$ NR, then total population or total manpower will increase as the curve moves towards OM. Because of the increase in population, surplus can be generated. In such a manner, the process will continue until the economy reaches point E, as shown in the figure. Point E represents a stationary situation wherein wages and total output equalize, and no surplus can be generated. However, according to classical economists, with technological progress the production function will shift upwards as shown by the curve TP_2, thereby postponing economic stagnation.

Neoclassical Growth Model

The Neoclassical Growth Theory is an economic model of growth that postulates how a steady economic growth rate results when three economic forces come into play: Labour, Capital and Technology. The simplest and most popular version of the Neoclassical growth model is the Solow-Swan growth model. The theory postulates that short-term economic equilibrium is a result of varying amounts of Labour and Capital that play a vital role in the production process. The theory further argues that technological change significantly influences the overall functioning of an economy. However, the theory puts emphasis on its claim that temporary or short-term equilibrium is different from long-term equilibrium and does not require any of the three factors.

Production Function in the Neoclassical Growth Model

The Neoclassical Growth Model claims that capital accumulation in an economy, and how it is used, is important for determining economic growth. It further argues that the relationship between capital and labour in an economy determines its total output. Finally, the theory states that technology augments labour productivity, increasing the total output through increased efficiency of labour. Therefore, the production function of the Neoclassical growth model is used to measure the economic growth and equilibrium of an economy. The general production function in the Neoclassical growth model takes the form: $Y = Af(K, L)$

Where:

$Y =$ Income or the economy's gross domestic product (GDP).

$K =$ Capital

$L =$ Amount of unskilled labour in the economy

$A =$ Determinant level of technology

Also, because of the dynamic relationship between labour and technology, an economy's production function is often restated as $Y = f(K, AL)$. This states that technology is labour augmenting and that workers' productivity depends on the level of technology (UNU-WIDER).

Classical Agglomeration Theory

The concept of agglomeration, which refers to the spatial concentration of people and economic activities, has attracted research interest over extended time periods at least as far back as Alfred Marshall's Principles of Economics, which was first published in1890. In addition to Marshall (1890), other prominent scholars in this field of research include Hoover (1937) and Arrow (1962). Chinitz (1961), offers an explanation for the localized concentrations of economic activity using the concept of external economies of scale.

According to Chinitz, agglomeration advantages arise from three sets of localization economies, namely a pooled market for workers with specialized skills, the availability of specialized inputs and services, and technological spillovers. This triad of localization advantages first pointed out by Marshall has been at the core of the discussion on industry clustering and agglomeration. Drawing upon the work of Chinitz (1961), Gordon and McCann (2000) systematically defined the benefits that accrue to firms located with other spatial clusters of economic activities as agglomeration economies.

They offer a variety of plausible explanations for agglomeration economies, including economies of scale and scope within the firm, the development of varied labor markets and pools of specialized skills, enhanced interaction between local suppliers and customers, savings on transport costs and shared infrastructure. Gordon and McCann also made a distinction between urbanization economies, which are related to the advantages gained by all firms from overall size and diversity of the city and localization economies, which are related to the benefits that firms within the same industrial sector derive by gathering from co-location. There has been a long-standing debate concerning the relative importance of localization and urbanization economies. Numerous studies, which attempt to measure the impact of urbanization economies and localization economies using city size and industry size as measures of concentration, finds a positive relationship between city size and productivity (Malmberg & Maskell (2002), Cooke & Morgan (1998)).

Ciccone & Hall (1996), who examined the impact of localization and urbanization economies on productivity using data from Japan, finds an increase in productivity through doubling industry size to be higher than that through doubling the city population. Henderson (1986), finds evidence for the existence of localization economies for some manufacturing industries in the US and almost no evidence of urbanization economies. Also, Ciconne and Hall (1996) finds that a twofold increase in the density of economic activity results in a 6% increase in productivity across U.S. states.

The urbanization-localization debate, which has been a bone of contention for many years has not been resolved, as there is still a heated debate on whether localization or urbanization are important for knowledge spillovers. Early agglomeration theorists not only address the central question of how firms benefit from agglomeration economies, but also the implications of agglomeration economies on the spatial patterns of economic activity. Porter (2000) introduces agglomeration in location theory and recognizes that agglomeration will result in transportation cost savings.

Agglomeration economies are given a key position in studies of the location of economic activities in space, for they are considered as a major factor in the location decisions of industries, which attempt to minimize distance, transportation and production costs, obtain cheap labor, and minimize risks (Fujita & Thisse (2002)). Even though the important role of

localization and urbanization economies on industry location and city formation have been widely discussed, economic advantages may not provide sufficient explanation for the location choice of industries or the existence of agglomerations. This is because in some cases, agglomeration may result from "natural advantages" such as climatic and topographic suitability, proximity to raw materials, and locations with access to natural or manmade transportation routes (Ciccone & Hall 1996, Gordon & McCann 2000). While early classical agglomeration theorists focus on spatial concentrations of firms, later works on industry agglomeration and clusters bring attention to the different kinds of linkages, including production, service, and marketing linkages that exist between industries (Lundvall 1992).

Drawing upon classical work on agglomeration, regional scientists have developed theoretical as well as methodological approaches that deal with the transmission of external economies to firms through direct and indirect linkages. For instance, the system of linkages and interdependences among industries in exchanging goods and services has been at the core of the growth pole/center policy, which was a very popular economic development policy during the 1960s and 1970s. A common feature of the growth pole policy is the deliberate focusing of investment at a limited number of locations and sectors in an attempt to encourage economic activity and raise the level of welfare in a regional economy (Brusco 1982, Lundvall 1992).

The policy is viewed in terms of a complex of buyer-supplier industries dominated by propulsive industries or key sectors in input-output sense whose structure of backward and forward linkages creates above-average impacts on the rest of the economy (Vladimir *et al.*, 2016). The focusing of investment on propulsive industries at a planned growth pole is anticipated to make a region (location) attractive to firms that are related to the industry in terms of backward and forward linkages (Adrian, 2002). The unevenness of benefits that stem from implementing this strategy arouses the balanced and unbalanced growth debate in economics.

The importance of inter-industry linkages in restructuring a regional economy has also prompted regional scientists to develop techniques to identify not only key sectors but also industry clusters and complexes using input-output data (Ivars, 2011). The major focus is identifying "industrial complexes", which are seen primarily as geographical clusters formed by inter-firm input-output trading links. In general, classical work on agglomeration focuses on the external economies of scale, industrial linkages and the mechanisms that give economic advantages to the individual firm located in close proximity to other similar and related firms. Even though the classical body of work on agglomeration based on location theory and external economies of scale is very different in focus and method from recent studies of industrial clustering, it has not only dominated the theoretical and empirical inquiry into the subject for many years but also has far-reaching implications to new business formation in the clusters of today (Francisco & Miguel 2017).

2.3 Review of Empirical Literature

The review of empirical literature has been discussed based on the objectives of this study. On the effect of high competition from imported goods on productivity growth of small scale industries, Ivars (2011), submits that through industrial cluster development, efficiency will be heightened in productivity and this will motivate greater competition through innovation, creating exports and favourable conditions for integrated development. Cheryl (2010), found that with less reliance on external financing, more small firms will emerge within clusters, leading to higher levels of export and total factor productivity resulting to a more fierce competition.

3 Method of Data Analysis

3.1 Multi-criteria Decision Analysis

Multiple-criteria decision analysis (MCDA) is a sub-discipline that explicitly evaluates multiple conflicting criteria in decision making. Multi-criteria decision-making analysis (MCDA) deals with decisions involving the choice of a preferred alternative from several potential variables in a decision, subject to several criteria or attributes that may be tangible (quantifiable) or intangible (unquantifiable) (Chow, 2013). The formal analysis of multi-attribute processes becomes important when an aid to rational choice is needed for individual decision makings or consensus of value judgement, and when knowledge and experience of experts are required in complicated evaluations or decisions (Yin, 2013).

Multi-criteria analysis (MCA) is a systematic methodology that takes input from scientific and engineering studies of cost and benefit as well as stakeholder views and values to rank project alternatives (Kiker et al., 2015). MCA accommodates unquantifiable attributes (intangibles) to which weights are assigned, unlike cost benefit analysis where all the parameters must be quantifiable (tangible). The weights reflect the importance of the attributes to the decision and they represent the opinion of a single decision maker or synthesize the opinions of a group of experts using a group decision technique (Fulop, 2015). The basis of multi-criteria decision analysis (MCDA) is philosophical, to eliminate conflicts, to provide insights into the nature of the conflicts amidst objectives and to achieve consensus among stakeholders (Yin, 2013). MCDA deals with both uncertainty and multiple conflicting objectives (Chow, 2013). This approach incorporates a mixture of quantitative and

qualitative information (Fullop, 2015). However, in MCDA several types of numerical scales are used to rank criteria and alternatives. These are:

- Ordinal scale: which are invariant under strictly monotone increasing transformations.
- Interval scales: which are invariant under positive linear transformations.
- Ratio scales: which are invariant under positive similarity transformations.
- Absolute scales: which are invariant under the identity transformation (Kiker et al, 2015).

It structures complex problems better and considers multiple criteria explicitly which leads to a more informed and better decision. This study adopts (MCDA) in order to structure and investigate the decisions involving multiple criteria of the research study. The purpose is to investigate the impact of high competition of foreign goods on productivity growth of the small scale garment industrial cluster in Aba.

3.2 Analytic Hierarchy Process

The Analytic Hierarchy Process (AHP) of the MCDA is a systematic procedure for representing the elements of any problem hierarchically. It is used to derive ratio scale from both discrete and continuous pair-wise comparison of alternatives and criteria in multi-level hierarchy structure (Chow, 2013). It organizes the basic rationality by breaking down a problem into smaller and smaller constituent parts and then guides the decision-maker through a series of pair-wise comparison judgments to express the relative strength or intensity of impact of the elements in the hierarchy. These judgments are then translated to numbers. The AHP includes procedures and principles used to synthesize the many judgments to derive priorities among criteria and subsequently for alternative solutions.

Alternatives and criteria are scored using pair-wise comparison methods and mathematics. In AHP, weights and values are not explicitly distinguished; both weights of attributes and values of alternatives are derived by pair-wise comparison (Kiker et al., 2015). According to the objective of this research, systematic evaluation is the process of assessing the impact of this factor on industrial cluster productivity growth of the small scale garment firms. The benefits are not only financial cost saving for the implementation of the systems, but also other benefits in terms of the environmental benefits that cover all the components.

3.3 Structural Model

Structural model (SM) was used in this study to analyze the inter-relationships between independent variables and the dependent variable. The use of SM was justified because of its ability to model latent variables, correct and specify measurement errors and their covariance structure, and avoid multi-collinearity that would have resulted if other statistical techniques such as multiple regression was used (Chinda & Mohamed, 2008).

Theoretically, SM comprises of two models, a measurement model and a structural model. According to (Doloi *et al.* 2011), the measurement model is concerned with how well various exogenous variables measure latent variables. In other words, the measurement model within the structural model incorporates estimates of measurement errors of the exogenous variables and their intended latent variable (Green, 1990). The structural model on the other hand models the inter-relationships between underlying variables and allows for direct, indirect, and correlation effects to be analyzed unlike regression models which allow for only direct relationships, but this study adopts the structural model to make inferences about relationships.

4 Result Presentation, Analyses And Discussion Of Findings

This section is dedicated to presenting the data collected from the field study using questionnaire. The interpretation, analysis as well as discussion of findings is also made. The data were analyzed and presented on the basis of the objective of the study. This chapter is discussed under different subsections as shown below.

4.1 Result Presentation

Table 4.1: Questionnaire Survey Response Rate

Description	Frequency	Percentage (%)
Distributed Questionnaire	371	100
Returned Questionnaire	250	67.39
Invalid Questionnaire	24	6.47

Valid Questionnaire	226	60.92

Source; Field Work Analysis, 2021

Table 4.1 shows the survey response rate of the questionnaire administered through the present research work. A total of 300(100 %) questionnaires were administered to the said respondents. However, only 250(83.33 %) questionnaires were returned while 24(8.00 %) of the total number of them were rejected because they were considered invalid in the sense that the information supplied by the respondents were incomplete. Only 226(75.33 %) of the questionnaire were retained.

Table 4.2: Distribution of Respondents by Academic Qualifications

Educational Status	Frequency	Percentage
Primary	88	38.94
Secondary	116	51.33
HND/BSc	14	6.19
Postgraduate	8	3.54
Total	**226**	**100.00**

Source: Field Work Analysis, 2021

Table 4.2 presents the distribution of the respondents by academic qualifications. Out of the 226 respondents, 116(51.3.3 %) attended secondary school while 88(38.94 %) attended only primary school. The respondents with B.Sc./HND degree were 14(6.19 %) of the total number. However, only 8(3.54 %) of the respondents had Postgraduate -Doctoral qualification. Those without any formal education were purposely excluded because of the aid/support of adult education programs by the different institutions.

Distribution of Respondents by Sex

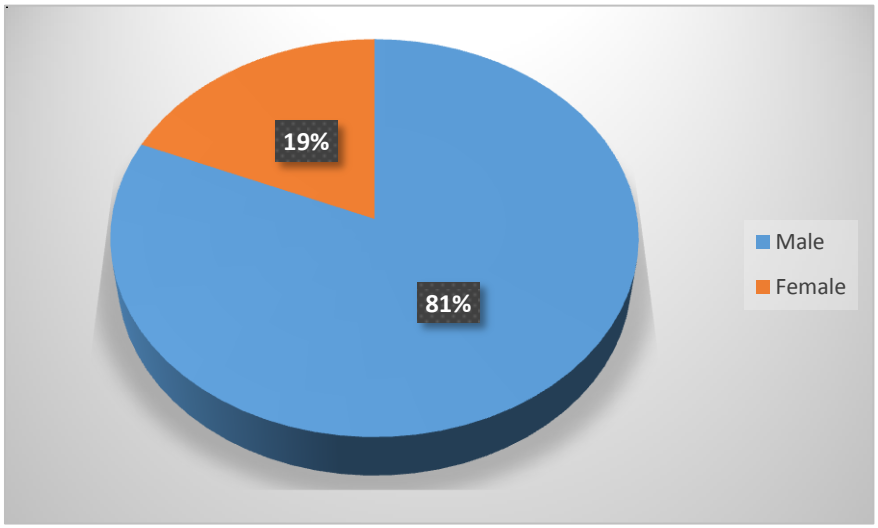


Figure 4.1: Distribution of the Respondents by Sex

Figure 4.1 shows the respondents' distribution on the basis of sex. Out of the total respondents sampled, 184(81%) are male while the remaining 42(19%) are female.

Table 4.3: Distribution of Respondents by Marital Status

Marital Status	Frequency	Percentage
Single	17	7.52
Married	200	88.50
Divorce/Separated	7	3.10
Widow/Widower	2	0.88
Total	**226**	**100.0**

Source: Field Work Analysis, 2021

The distribution of respondents by marital status is presented in Table 4.3. The result showed that 200 (88.50%) of the total respondents are married while 17 (7.52%) are single. Meanwhile, only 7(3.10%), of the total 226 sampled respondents are separated/divorced while 2(0.88%) are widow/widower.

Distribution of Respondents by years of working Experience

Figure 4.2: Years of Working Experience of Respondents

The duration of working experience of the respondents is as shown in figure 4.2. The result showed that 49.6% (112) of the total respondents have working experience duration of 11-15 years while 101(44.7%) have worked for 16-20 years. 9 (4%) of the total respondents have working experience duration of 20 years and above while only 4(1.8 %) of them have worked for 6-10 years.

Table 4.4: Distribution by Ownership and Control Structure of industry

Ownership/control structure	Frequency	Percentage
Total control of the industry	177	78.32
Group of ownership control the industry	20	8.85
Ownership fairly diffuse with controlling & mgt not directly controlled by group of owners	29	12.83
Total	**226**	**100.0**

Source: Field Work Analysis, 2021

The distribution of ownership and control structure of industries were examined through the various respondents of the sampled industries and are as presented on Table 4.4. The result shows that the structures in which control is owned by the owners of the industry amounts to 177(78.32%) of the total number of sampled respondents. Structures where ownership is fairly diffused with no controlling group of owners as well as the industries not directly controlled by the group owners make up 12.83% (29) of the total respondents. However, only 20(8.85%) of the respondents operate a structure where the group of owners effectively controls the industry less than.

Table 4.5: Distribution of Respondents by type of industry

Type of Industry	Frequency	Percentage
Stand-alone industry	68	30.08
Subsidiary of a family-based industry group	2	0.9
Subsidiary of an industry group not controlled by families	145	64.16
Part of an industry not controlled by family's parent firm, subsidiary	11	4.87
Total	**226**	**100**

Source: Field Work Analysis, 2021

Table 4.5 presents the distribution of respondents on the basis of the type of industry (Stand-alone/Subsidiary). The result showed that 64.16% (145) of the total 226 respondents operated a subsidiary of an industry/ business group which is not controlled by families whereas 30.08% (68) of the respondents was stand-alone industry. However, 11(4.87%) of the total sampled 226 respondents were part of a holding industry not controlled by family's parent industry while only 2(0.88%) was subsidiary of a family-based business group.

Table 4.6: Distribution of Respondents by Legal Structure

Government involvement	Frequency	Percentage
No	226	100.0
Total	226	100.0

Source: Field Work Analysis, 2021

Table 4.6 above represents the distribution of the respondents by legal structure.

The 226(100 %) respondents, reported that government has no involvement in their industry.

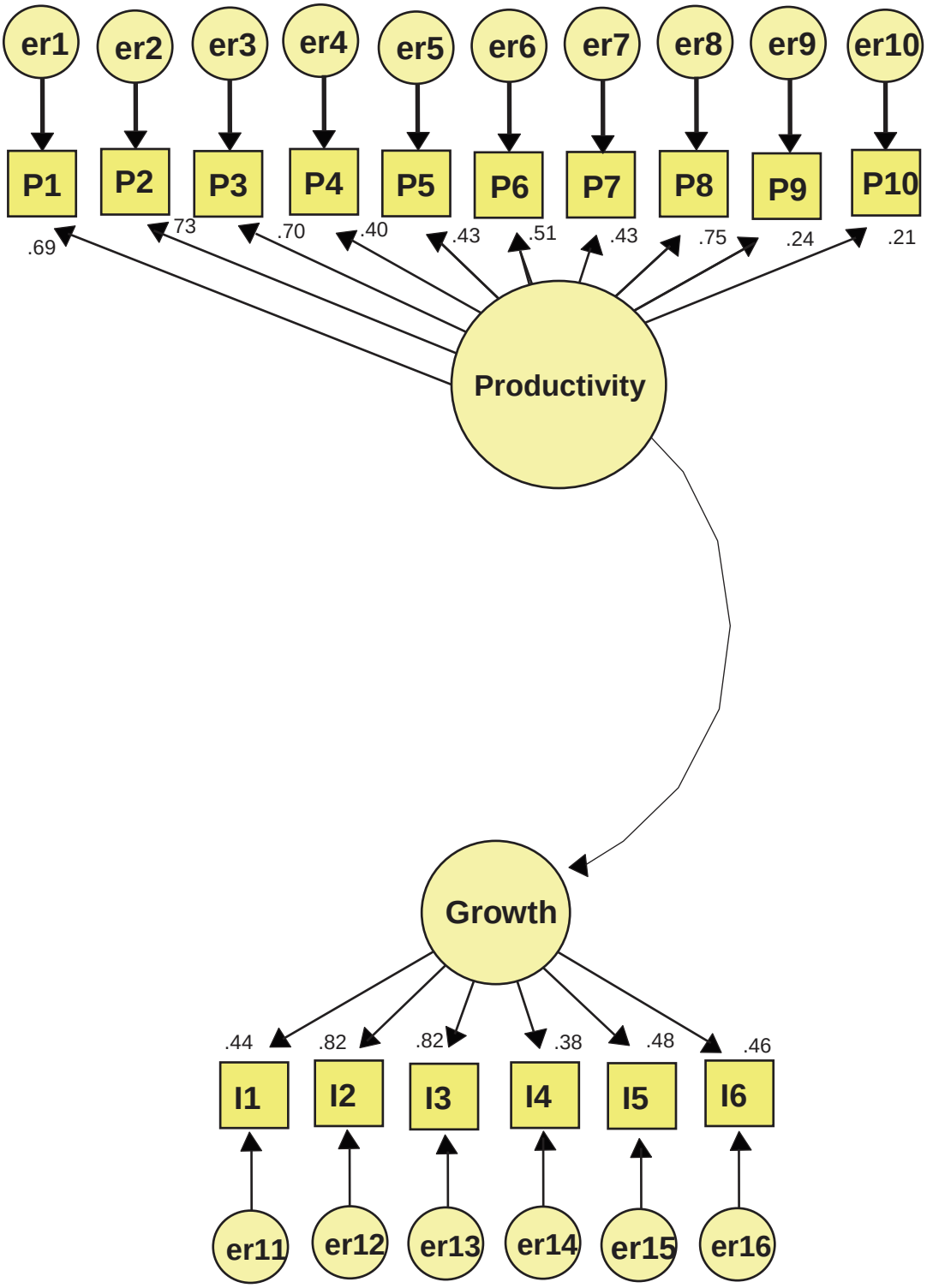


Figure 4.3 Structural Model Fitness

4.2 Discussion of Findings

The data collected for this study were subjected to statistical test of normality using (Skewness and Kurtosis), and multi-collinearity test using (VIF & TOL). The study also examined the correlation analysis of the variables in the questionnaire template. The study adopts the multi-criteria decision analysis model because of the number of variables involved as it gives room for error correction than the regression model. The study tested for model fitness using statistical tools of CMIN, CFI, RMSEA and the Pclose.

Normally, index weight of .50 and above is an indication of a serious impact of the variable and determines the urgency of intervention. According to Kiker et al (2015), variables with weight index score of 3.0 to 3.5 are the most appropriate to be considered.

From the result, it was found that products not patronized because of low quality, products not patronized because of high competition from foreign goods, products not patronized because of small market for the products, industrial cluster experienced low sales due to high rate of infrastructural decay, businesses shut-down mainly due to multiplicity of tax, levies and other rates and tax policy in Nigeria affecting the industrial cluster productivity have an index weights of 3.35, 3.50, 3.32, 3.64, 3.28 and 3.50. The implication is that the factors need serious policy intervention to boost the productivity growth of the small scale garment industry in the study area. This agrees with the findings of (Akinwale & Oludayo, (2019)), that industrial policy has been partly effective in influencing industrial sector productivity in Nigeria. They also added that productivity growth contributes positively to real economic growth. To offset the effect of high cost of credit from financial institutions on small scale garment productivity growth in Nigeria, Cheryl (2010) advocates that closer proximity (clusters) will make the provision of trade credit among firms easier, bring about less reliance on external financing. He further noted that by this, more small firms will emerge within clusters, leading to higher levels of export and total factor productivity.

5 Conclusion

This study undertakes "Investigating the Determinants of Productivity Growth of the Small Scale Garment Industrial Cluster in Aba, Nigeria''. This study has found that small market for the products, high competition from imported foreign goods, low quality of products, tax policy, multiplicity of taxes, levies and other rates, and high rate of infrastructural decay affects the small scale garment industrial cluster productivity growth adversely. This study therefore concludes that if the result is given due policy intervention, it will lead to infant industry protection, industrial productivity growth and enhance export growth. This will tackle the problem of low productivity, weak industrial base, high import dependency ratio of the industrial sector and the neglect of the non-oil international trading activities of Nigeria.

6 Recommendations

Based on the findings and conclusion of this study, it recommends government policy intervention to protect the infant industries and the SMEs from high competition from foreign products, make tax policy review that will encourage local and foreign investors in Nigeria as this will encourage local productivity and consumption for sustainable industrial sector productivity growth.

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