
COMPARATIVE ANALYSIS ON THE TREND IN GLOBAL TECHNOLOGY SPEED AND ITS EFFECT ON ORGANIZATIONAL PERFORMANCE OF MANUFACTURING FIRMS IN SOUTH EAST NIGERIA (JUHEL NIGERIA- ENUGU – SOUTH EAST NIGERIA CAMILA VEGETABLE OIL LTD – OWERRI IMO – STATE RICE CLUSTER COMPANY – ABAKILIKI EBONYI STATE)

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Abstract

The study examined the trend in global technological speed and its effects on organizational performances of manufacturing firms in South East Nigeria. The specific objectives include to: Assess the extent global technological speed affect the rate productivity of the manufacturing firms in South East Nigeria. Determine the effect technological changes have on the market shares of the manufacturing firms in South East Nigeria and examine the effect of introduction of new equipment on employee retention. The study adopted a survey design. The scope of the study is the manufacturing firms in South East Nigeria. The study utilized primary and secondary sources of data. Information on globalization was obtained from CBN Statistical Bulletin while questionnaire were used to gather information from the staff of the sampled manufacturing firms. The population consists of 562 workers of selected manufacturing firms South Eastern Nigeria. The study used the survey approach. The primary sources used were used to administer 288 copies of questionnaire to the sampled staff, 282 were returned and accurately filled. The validity of the instrument was tested using content analysis and the result was good. The reliability was tested using the Pearson correlation coefficient (r). It gave a reliability co-efficient of 0.87 which was also good. The hypotheses were analyzed using f-statistics (ANOVA). The study observed that globalization had great effects on the performance of manufacturing firms in South East Nigeria based on the findings, the study recommended among others that thorough environmental scanning is necessary whenever a company plans to enter into a new territory. This allows for smooth operations of the company and standardized service delivery.



Keywords: Globalization, technological speed, organizational performance.

1.0 INTRODUCTION

1.1 Background of the Study

Technology has huge impact on globalization enables companies of all sizes to do business with easterners all over the world. In addition, businesses can establish satellite offices in practically my country no matter how remote as long as there is Internet access. The competition for providing Internet access to developing nations will proliferate, enabling growth in areas previously deprived of business opportunities due to lack of communication devices. Productions of goods and services in the world today have been greatly influenced by the systematic application of physical forces through different types of technology. Technology in most organization provided the required forces through various forms by which goods and services were produced. Dauda (2009) may be in forms of machine equipment information and communication made up of knowledge, tools, method and system directed to work in specific manner.

Technology is made up of the hardware, the software and the brain ware. The hardware is the physical structure and logical of equipment, the software is knowledge and method used for production or output from the hardware and the brain ware is the reason for using the technology in a particular way. All these depend on a particular way. Khalil (2000) sees technology to be the result of mans learned and acquired knowledge or his technical skills regarding how to do things well. The state of technology determines the quality and quantity of goods and services produced. Organizational performance and development are determined by the types of technologies they use in production. Technology also influences living conditions of individual 2nd groups in organizations and nations and the relationship between them. Technology is prone to change, and the state of technology have direct link to the relationship between the employer and employee. Technology, labour and capital are interconnected.

1.2 Problem Statement/Justification

It has been observed that the main cause of poverty in underdeveloped countries is that they suffer from the technological backwardness. A specific level of technological advancement is the necessary pre-condition for rapid growth. Therefore, the task of technological change in underdeveloped countries is difficult because the social set up in backward pre-industrial economies is not conducive to technological improvements on any significant scale. It is observed that the absence of proper technological change retards the economic growth, reduces rate of profit and equally encourages unemployment. Thus, it is imperative either to explore new

technology or import technology from industrially advanced countries to promote the economic growth.

The U.N, experts observed that, "unless special effort is made, the process of technological development in the UDC's will be relatively slow and the gap in technology will continue to grow wider as the cumulative scientific progress of developed countries accelerates". Beyond the standard office laptop and smart phone, organizations implement Information systems, custom software or specialized technology equipment to keep operations running smoothly. Advancements in technology have the potential to decrease the time needed to complete a task, or in some cases eliminate the need for a business process or job function. Typically, the desire for increased productivity drives upgrades to technology within an organisation, which can significantly influence company operations and profitability. Repeated economic crises and steadily increasing competition, brought about in particular by the globalization of markets, are forcing an unprecedented rationalization of resources. These and other short comings gave rise for this study and it is designed to a solution for our manufacturing firms to remain in the business not minding the recession that has crippled all facet of our economy.

The inability of manufacturing firms to meet with the speed of technological changes leads to drop in revenue, profit and unemployment, hence low contribution to national economic growth and development. The justification therefore, is to create an integrated network of communication on the trend of changes in technology on daily basis for manufacturing firms. The firms will be required to register for the information with a token and use the information they got for strategic planning in the technological competition that have engulfed the manufacturing firms. This will be also helpful for the type of human resource they will employ and the training they will give to their workers. The study is optimistic that the choice to use these three manufacturing firms in South East Nigeria namely: JuhelNig.LtdEmene, GamhaVegetable Oil Ltd Owerri And Rice Cluster Coy Ltd Abakaliki will give an empirical result that will be useful to both the private and government owned manufacturing firms as they compete for a favorable gap in the craze technological environment.

1.3 Objectives of the Study

The main objective of the study was to comparatively analyze the trend in global technological speed and its effects on organizational performances of manufacturing firms in South East Nigeria. The specific objectives include to:

1. Assess the extent global technological speed affect the rate productivity of the manufacturing firms in South East Nigeria
2. Determine the effect technological changes have on the market shares of the manufacturing firms in South East Nigeria.

3. Examine the effect of introduction of new equipment on employee retention

1.4 Research Questions

1. To what extent does global technological speed affect the rate productivity of the manufacturing firms in South East Nigeria?
2. What is the effect technological change on the market shares of the manufacturing firms in South East Nigeria?
3. What is the effect of introduction of new equipment on employee retention?

1.5 Statement of Hypotheses

- H₀₁: Global technological speed on the rate of productivity of manufacturing firms in South East Nigeria is significantly low.
- H₀₂: Technological changes on the market shares of the manufacturing firms in South East Nigeria is significantly low
- H₀₃: The introduction of new equipment does not have significant effect on employee retention of manufacturing firms in South East Nigeria

2.0 LITERATURE REVIEW

2.1 Globalization

The term globalization has been in use since early 1990's to characterize present period in which we live (Ababa, 2002). "Globalization is a multi-scalar transformation of worldwide social space, and one of its main organizational-institutional dimensions is constituted through the territorial state itself". Globalization is related to social space and it is defined through spatial practice and discourse. The processes of globalization "is seen as blurring state boundaries, shifting solidarities within and among nation-states, and profoundly affecting the constitutions of national and interest-group identities. What is new is not so much its form as its scale" Globalization is largely view as contemporary process of growing intense inter- connectedness/ interactions/ interdependence/ integration across boundaries/state and community (local/ national) in different aspects of human life - economic/ financial, technological, cultural, social and political. This process, is leading to the emergence of 'one world', a global society (Choudhary, 2014).

The globalization period began in the mid of 1970s, thus briefly overlapping with end of the Cold War. This period is likely candidate, as it suggests that globalization began with two facts simultaneously. The first was the strained relation between the United States and Soviet Union.



The second was the collapse of the 'Social Contract,' at first in Britain but eventually throughout the advanced industrial states. The significance of the end of 'historic compromise' the connection among labour representation, wage control, social welfarism, full employment, and dominant mass production system is that globalization represents an evolution to a new formulation about the terms and nature of work (Reich, 2017). Significant changes in the workplace are the result of new and advanced technology. For the past generation, technological inventions and improvements seem to be introduced every week. The trend is guaranteed to continue. Technology impact on the 21st century workplace will result in rapid changes. Productions of goods and services in the world today have been greatly influenced by the systematic application of physical forces through different types of technology. Technology in most organization provided the required forces through various forms by which goods and services were produced. Argyres,(1999) may be in form of machine equipment information and communication made up of knowledge, tools, method and system directed to work in specific manner. Technology is made up of the hardware, the software and the brain ware.

The hardware is the physical structure and logical of equipment, the software is knowledge and method used for production or output from the hardware and the brain ware is the reason for using technology in a particular way. All these depend on a particular way. Bergeron (2004) sees technology to be the result of man's learned and acquired knowledge or his technical skills regarding how to do things well. The state of technology determines the quality and quantity of goods and services produced. Organizational performance and development are determined by the types of technologies they use in production. Technology also influences living conditions of individual and groups in organizations and nations and the relationship between them. Technology is" prone to change, and the state of technology have direct link to the relationship between the employer and employee. Technology, labour and capital are interconnected. Some technology use a lot of labour and some use more of other equipment or capital. Investors and manage based their selection or the quantity of both to their price and prefer or choose the one with lesser price to maximize their profit. The choice is explicit but rapid and radical change and regulatory control may create problem that make it sometimes difficult to make a rational choice.

The choice and the preference place on capital at the expense of labour may reduce labour co-operation, lowered their morale, productivity, create conflict that may reduce organizational profit. On the other hand choice of labour may reduce the quality and quantity of goods produced mc lowered organizational profit, competitiveness and profitability. Investors constantly face the 5L.er3.ma of making rational choice and to balance the needs for each of them so as to make sustainable profit(Matanmi, 2015). Information and communication technologies (ICT) have changed all aspects of organization direction and operation. Work systems and employment relations have been affected by ICT in nearly and its major aspects.

Microchips revolution and optic fiber cable have altered technology and work as never before. Employee and managers are interconnected through network of computers and other information gadgets. Many aspects of organization, industrial, national and international relations are organized and directed through ICT networking.

These networking also connect production within and outside the industry and it extends to customers, suppliers, vendors, research and development maintain its systems. Workers of different categories, even the less educated factory workers have benefited. Internet and multimedia telephone and other communication systems have provided opportunities to all categories of employees to receive and send information from and to anywhere in the world. This Ms provided access to technical and non technical solution to their individual and organizational problems and increase their efficiency and effectiveness. Engineers, technologist, technicians, craftsmen and artisan now use internet to search for solution, tools and materials that may help to improve performance and solve problems which have increased individual and team performance in many organization(Slevin and Pinto, 2014).In recent years, many organizations have attempted to manage organizational performance using the balanced scorecard methodology where performance is tracked and measured in multiple dimensions such as:

1. **Financial performance** (e.g. shareholder return)

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Kenton, 2018).

2. **Customer service**

Customer service is the process of ensuring customer satisfaction with a product or service. Often, customer service takes place while performing a transaction for the customer, such as making a sale or returning an item. Customer service can take the form of in-person interaction, a phone call, self-service systems, or by other means (Kenton,2018).

3. **Market share**

Market share is the proportion of total sales a company claims to have in a particular market over a specified period, i.e. the size of a business relative to the size of the industry. Total sales may be measured by volume (unit share) or value (revenue share).The share may be a measure of percentage of total sales in a city, region, country, or continent. It may also be a percentage share of the global market.

4. **Rate of productivity**

Production rate, in terms of manufacturing, refers to the number of goods that can be produced during a given period of time. Alternatively, production rate is also the amount of time it takes to produce one unit of a good. This is the rate at which workers are expected to complete a certain segment, such as a road or building. The production rate will depend on the speed at which workers are expected to operate, generally categorized as slow, average or fast (Kenton, 2018).

5. **Social responsibility** (e.g. corporate citizenship, community outreach)

Social responsibility (or, corporate social responsibility) is a theory that asserts that businesses, in addition to maximizing shareholder value, have an obligation to act in a manner that benefits society (Akhilesh, 2019).

6. **Employee stewardship**

Employee stewardship refers to taking responsibility for the business and the effects it has on the world around it. This involves considering more than just the bottom line and looking at elements such as values, ethics and morals. Stewardship examples include corporate stewardship, environmental stewardship and service-oriented stewardship. The careful and responsible management of something entrusted to one's care (Anam, 2019).

7. **Organizational performance**

Organizational performance comprises the actual output or results of an organization as measured against its intended outputs (or goals and objectives). Organizational performance including strategic planners, operations, finance, legal, and organizational development.

8. **Performance measurement systems**

Performance measurement is the process of collecting, analyzing and/or reporting information regarding the performance of an individual, group, organization, system or component. Performance measurement is not a new concept, some of the earliest records of human activity relate to the counting or recording of activities (Behn, 2013).

9. **Performance improvement**

Performance improvement is a form of organisational development focused on increasing outputs and improving efficiency for a particular process or procedure. Performance improvement can occur at different levels including the employee level, team level, the division or unit level and the organisation as a whole.

10. Organizational engineering

Organizational engineering (OE) is a form of organizational development. Organizational Engineering is a knowledge base that is being applied internationally to hundreds of different organizations. Its focus is to increase the efficiency, effectiveness, communication and coordination in groups of all kinds. These include teams, departments, divisions, committees and many other forms of goal directed organizations. Focusing on how relationships and information is structured allows groups to be "engineered" to produce superior results on a consistent basis without trying to "change" any individual.

2.1.2 Technological Speed

In economics, a technological speed is an increase in the efficiency of a product or process that results in an increase in output, without an increase in input. In other words, someone invents or improves a product or process, which is then used to get a bigger reward for the same amount of mark. Technological change, technological development, technological achievement, or technological progress is the overall process of invention, innovation and diffusion of technology or processes.

Impacts of Technological Speed

We have all likely experienced the impact of technology. Let's take a look at the ways, both good and bad, technological change has impacted our world:

- 1. Creates new products and processes:** When telephones were first invented, the object was to be able to verbally communicate with someone. Due to technological changes, we have multiple ways to communicate using our phones, such as text, email, or talk.
- 2. Increases efficiency, lower costs:** Technology makes it possible to perform everyday tasks faster and with less energy on our part. For instance, some people have a vacuum cleaning robot. Instead of spending 30 minutes vacuuming, they push a button and go do something else. That's efficiency.
- 3. Disruptive Technology:** A disruptive technology is one that displaces an established technology and shakes up the industry or a ground-breaking product that creates a completely new industry.

2.1.2 Globalization and Technology

Technology has huge impact on globalization enables companies of all sizes to do business with customers all over the world. In addition, businesses can establish satellite offices in practically any country no matter how remote as long as there is Internet access. The competition for



providing Internet access to developing nations will proliferate, enabling growth in areas previously deprived of business opportunities due to lack of communication devices. The other side of the coin is the international marketing of technology researched by George Washington University technology professor Robert W. Rycroft (2014). He makes an interesting observation about multinational countries engaged in international marketing of technology products. This practice has been coined as "technology exploitation."

2.1.3 Organizational Performance

Hashem (2015) assert that performance is one of the most argued concepts about which there has never been an agreement among various researchers and theorists. Organizations perform various activities to accomplish their organizational objectives. Organizational performance has always had a significant influence on the actions of companies. One of the consequences of this influence is the increase in the number and variety of the means and methods to accurately measure the performance and, gradually establishing an important research field for both companies and academics. Organizational performance involves analyzing a company's performance against its objectives and goals. In other words, organizational performance comprises real results or outputs compared with intended outputs. The analysis focuses on three main outcomes, first, shareholder value performance; second, financial performance; and third, market performance. Many types of professionals, including strategic planners, focus on organizational performance (Hashem, 2015).

Organizational performance is the comparison of an organization's goals and objectives with its actual performance in three distinct areas- financial performance, market performance, and shareholder value. Organizational performance is generally assessed with financial indicators such as return on investment or profit per share. This narrowness of criteria for measuring organizational effectiveness is in fact a phenomenon of range restriction having consequences on the way managers organize work and manage people in organizations. It is argued that the greater the range among the performance criteria, the greater the worth of the work experience. Organizational performance or effectiveness holds a central position in the management of private and public organizations as well as in the field of organizational research. Over the last decades, concerns for efficiency, productivity, excellence and total quality have become increasingly widespread in Western organizations (Estelle and Audebrand, 2014). These concerns are often motivated by the perception of threats to the durability of the organization. They also seem to be justified by the ever-greater international competition for market shares and resources (Maltz & Shenhar, 2013).



2.1.4 Technology Innovation and Organizational Performance

The starting point of technological development, changes and innovations is always people. It is the people who create, initiate, use and manage ideas that are the bases and directions of technology. Identity theory provides a way of assessing individual relations to organizational objectives and national goals and enables us to understand human resource inspiration and readiness for technology innovation. The motivation the individual receives determines the extent of its identity and his readiness to for organizational and national development. This theory to Bennis (1969) provides strategies intended to change beliefs, attitudes, values and structure of an organization so that they can better adapt to new technologies, market challenges and changes. It can also be used to intervention in organization process to increase organization effectiveness and health. Both (Bechard, 1969) and Bolle De Bal (1992) demonstrated the relationship between organizational development and managerial effectiveness. Organizational efficiency requires that somebody in strategic position should feel the need for innovation and change.

2.1.5 Technological Changes and Market Shares

Technological change covers the invention of technologies (including processes) and their commercialization or release as open source via research and development (producing emerging technologies), the continual improvement of technologies in which they often become less expensive, and the diffusion of technologies throughout industry or society which sometimes involves disruption and convergence. In short, technological change is based on both better and more technology. Technological change affects cultural consumption by lowering its price and furnishing new consumption possibilities, and also a model of new technology affecting other sectors to a greater extent than culture, raising the relative cost and price of cultural consumption (Jason, 2014). Market share represents the percentage of an industry, or a market's total sales, that is earned by a particular company over a specified time period. Market share is calculated by taking the company's sales over the period and dividing it by the total sales of the industry over the same period. A company's market share is its portion of total sales in relation to the market or industry in which it operates (Adam, 2018).

Every industry has a target market, and each company within an industry has sold to a percentage of the market. That is market share. Market share is calculated on a national level, as well as on more regional and local levels, to determine specific market share. Market share can be broken down into very specific categories to let a company know where it has a competitive advantage. market share does not give a company a defined number regarding its profitability, it does provide key insights about a company's revenues, growth and net profits. Market share tends to be a driving force within a company that has a compounding effect. The larger the company, the more efficiently it can offer products; thus, the more effective that company is in capturing market share. Market share is a firm's percentage of an industry's total sales (Kimberlee, 2018).

2.1.6 Employee Retention

Employee retention is an organization's ability to keep its employees. Employee retention is usually represented as a percentage. Employee retention matter because keeping track of employee retention is important because disengaged employees and turnover costs are wildly expensive. Employee retention refers to the various policies and practices which let the employees stick to an organization for a longer period of time. Every organization invests time and money to groom a new joinee, make him a corporate ready material and bring him at par with the existing employees. The organization is completely at loss when the employees leave their job once they are fully trained. Employee retention takes into account the various measures taken so that an individual stays in an organization for the maximum period of time (Juneja, 2018).

Employee Retention refers to the techniques employed by the management to help the employees stay with the organization for a longer period of time. Employee retention strategies go a long way in motivating the employees so that they stick to the organization for the maximum time and contribute effectively. Sincere efforts must be taken to ensure growth and learning for the employees in their current assignments and for them to enjoy their work. Employee retention has become a major concern for corporates in the current scenario. Individuals once being trained have a tendency to move to other organizations for better prospects. Lucrative salary, comfortable timings, better ambience, growth prospects are some of the factors which prompt an employee to look for a change. Whenever a talented employee expresses his willingness to move on, it is the responsibility of the management and the human resource team to intervene immediately and find out the exact reasons leading to the decision (Juneja, 2018).

2.1.7 Importance of Employee Retention

Robins(2015) assert that employee retention is incredibly important, especially in tough times. Companies need to be constantly looking for ways to improve their retention rates. However, the following are the importance of retention of an effective organization:

Hiring is not an easy process: The HR professional shortlists few individuals from a large pool of talent, conducts preliminary interviews and eventually forwards it to the respective line managers who further grill them to judge whether they are fit for the organization or not. Recruiting the right candidate is a time consuming process.

An organization invests time and money in grooming an individual and make him ready to work and understand the corporate culture: A new joinee is completely raw and the management really has to work hard to train him for his overall development. It is a complete



wastage of time and money when an individual leaves an organization all of a sudden. The HR has to start the recruitment process all over again for the same vacancy; a mere duplication of work. Finding a right employee for an organization is a tedious job and all efforts simply go waste when the employee leaves.

When an individual resigns from his present organization, it is more likely that he would join the competitors: In such cases, employees tend to take all the strategies, policies from the current organization to the new one. Individuals take all the important data, information and statistics to their new organization and in some cases even leak the secrets of the previous organization. To avoid such cases, it is essential that the new joiner is made to sign a document which stops him from passing on any information even if he leaves the organization. Strict policy should be made which prevents the employees to join the competitors. This is an effective way to retain the employees.

It is essential for the organization to retain the valuable employees showing potential: Every organization needs hardworking and talented employees who can really come out with something creative and different. No organization can survive if all the top performers quit. It is essential for the organization to retain those employees who really work hard and are indispensable for the system.

However, the management of any organization must understand the difference between a valuable employee and an employee who doesn't contribute much to the organization. Sincere efforts must be made to encourage the employees so that they stay happy in the current organization and do not look for a change (Robins, 2015).

2.2 Theoretical Review

2.2.1 Marxism Theory

Marxism is basically worried about methods of generation, social exploitation through out of line conveyance, and social liberation through the amazing quality of private enterprise. Marx himself foreseen the development of globality that 'capital by its temperament drives past each spatial hindrance to overcome the entire earth for its market'. As needs be, to Marxists, globalization happens in light of the fact that trans-world availability improves opportunities of benefit making and surplus collection. Marxists dismiss both radical and political pragmatist clarifications of globalization. It is the result of truly explicit motivations of entrepreneur advancement. Its lawful and institutional frameworks serve the rationale of surplus collection of a worldwide scale. Liberal discuss opportunity and vote based system make up a legitimating belief system for exploitative worldwide industrialist class relations. The neo-Marxists in reliance and world-framework hypotheses inspect industrialist amassing on a worldwide scale on

lines of center and fringe nations. Neo-Gramscians feature the criticalness of underclass battles to oppose globalizing free enterprise by conventional worker's organizations, yet in addition by new social developments of customer advocates, preservationists, harmony activists, laborers, and ladies. Nonetheless, Marxists give an excessively confined record of intensity.

2.2.2 Constructivism Theory

Globalization has likewise emerged due to the manner in which that individuals have rationally developed the social world with specific images, language, pictures and elucidation. It is the aftereffect of specific structures and elements of awareness. Examples of generation and administration are second-request structures that get from more profound social and socio-mental powers. Such records of globalization have originated from the fields of Anthropology, Humanities, Media of Studies and Sociology. Constructivists focus on the ways that social performing artists 'develop' their reality: both inside their own personalities and through between emotional correspondence with others. Conversation and emblematic trades lead individuals to develop thoughts of the world, the guidelines for social association, and methods for being and having a place in that world. Social geology is a psychological encounter just as a physical certainty. They structure 'in' or 'out' just as 'us' and they' gatherings.

They imagine themselves as occupants of a specific worldwide world. National, class, religious and different characters react to some degree to material conditions yet they likewise rely upon between emotional development and correspondence of shared self-comprehension. In any case, when they go excessively far, they present an instance of social-mental reductionism overlooking the hugeness of financial and natural powers in forming mental experience. This hypothesis disregards issues of basic disparities and power chains of command in social relations. It has worked in unopinionated propensity.

2.3 Empirical Review

2.3.1 Global technological speed affect the rate productivity of the manufacturing firms in South East Nigeria

Ikemefuna and Abune (2015) conducted a study on technological environment and some selected manufacturing industry in Enugu State. The study is based on reviewing the effect of technological environmental performance on the manufacturing industries aiming at some selected industries in Enugu State, Nigeria. The study revealed its problem statement as to effectively and efficiently train and adequately fund organizational equipment which will help in quick and better production. Primary and Secondary source of data were used as means of data collection. Ten (10) selected manufacturing industry were randomly selected across Enugu State while the Pearson Product Moment Correlation was used as the statistical tool for this study. The study was finally summarized with major findings which revealed that most manufacturing

industries do not conduct training for their workers to meet up with this digital era. It is concluded that environment significantly affect the growth and performance of manufacturing industries in Enugu State. Based on this, the study recommends that staff training which enables better and efficient operation of machines and equipments, cost efficiency and investment in quality management are to be deliberately promoted in order to improve the performance of manufacturing industries.

Ibeawuchi and Okwara (2016) conducted a study on technological factors for improved productivity of manufacturing projects in the South-East Geopolitical Zone of Nigeria. The objectives of the study was to examine the technological factor and productivity. Multiple regression analysis result showed that all the identified technological factors except the level of waste reduction are significant to the level of productivity of manufacturing projects. The result also show that the size and capacity of plant is a major technological factor for improved productivity in manufacturing projects, while waste reduction level is the least factor in the prediction of productivity level of manufacturing projects in the South-east geopolitical zone of Nigeria. In view of these findings, the study recommends increased size and capacity of plant and training of the project staff to guaranty improved productivity of the manufacturing projects.

Mbah, Ukwuani and Okonkwo (2017) conducted a study on the effect of globalization on entrepreneurship development in South- East, Nigeria. The study was on the effect of globalization on entrepreneurship development in South-East, Nigeria. The specific objectives include to determine the impact of globalization on exchange rates on the entrepreneurship development in South- East, Nigeria The research survey design was used. The result showed that globalization on exchange rates has no positive effect on the entrepreneurship development in South- East, Nigeria. The study recommended that government should reposition its policies to monitor the activities of these agents of globalization and exchange rates as it affects entrepreneurship development.

2.3.2 Effect Technological Changes have on the Market Shares

Kashan and Monir (2013) conducted a study on the effect of new technology on firms business objectives: A Case Study of Pak-Suzuki Company (Karachi, Pakistan).The objective of the study was to evaluate how IT is linked with the organization's core competencies and fundamental strategies. The study is descriptive in nature, as sampling technique in the study is convenient as the company has not provided the sampling framework. The findings shows that all the variables have strong correlations with new technology and firm business objectives. Moreover, inferential analysis indicates that majority of employees believe that the performance of the company has tremendously increased with the use of new technology. The study recommends that employees' perception towards impact of technology on business objectives should be conducted at a wider level.

Sultan and Christian (2014) carried out a study on the technological factors to improve performance of marketing strategy. The purpose of the study is to offer a review of literature on how information and communications technology is developing and improving marketing practices and strategies. The study uses a theoretical modeling. The study shows that internet has allowed wide and extensive collaboration. The study concludes that advances propositions that differentiate and integrate marketing strategy processes and recast them into a model to demonstrate how technology affects each process. The study recommends that that technology has a positive impact on marketing strategy where it is integrated with marketing elements of positioning, selection of target segments, segmenting the market, understanding consumer behavior, managing sales, managing marketing campaigns, and understanding the market.

Richard (2017). The Impact of Technological Change on a Competitive Industry in Nebraska, Lincoln. The objective of the study was to examine the impact of technological change on a competitive industry. The study adopted coherent and comprehensive method. The study shows that technology-induced shift in industry supply is shown to equal the rate of technological change plus the share-weighted induced change in input prices. The study concludes that technological change is approximated in terms of parameters representing the rate of change, the size bias of change, and a vector of input biases. The study recommends that comparative statics analysis isolates the impact of technological change on input prices and, thus, clarifies analytically the contributions of the separate components of technological change (rate of change, size bias, and input bias) with and without input price effects.

2.3.3 Effect of Introduction of New Equipment on Employee Retention

Stephen, Ochieng, Samuel, Odhiambo and Akerele(2013) conducted a study on the effects of succession planning programs on staff retention. The purpose of this study was to establish the effects of succession planning programs on staff retention in the sugar companies of Western Province, Kenya. Management staff members were purposively selected, stratified and simple randomly sampled. Data collection was done by use of questionnaires. Descriptive and inferential statistical methods were employed to analyze the data. Findings of the study indicate that more employees had high job satisfaction because of going through the succession planning process with the hope of being next in line of management. This had a positive effect on the retention of staff in the sugar firms under study.

Matindo, Shaun and Mahomed (2015) carried out an investigation on factors affecting the retention of employees at Kitwe Central Hospital (KCH) – Zambia. The main aim of this study is to investigate on the factors affecting the retention of employees at Kitwe Central Hospital, a Public Hospital in a town called Kitwe in Zambia. The study adopted survey research design. The study shows that the retention rate at KCH is increasing considerably as shown by the highest number of respondents who have served between one to ten years. The study



recommends that proper training and induction must be given to employees prior to work commencement to ensure clarity in the work task as well as effectiveness in task performance.

In the study of Madueke and Emerole (2017) examine organizational culture and employee retention of selected Commercial Banks in Anambra State. The study examined the nature of relationship that exists between organizational culture and employee retention with particular reference to three selected commercial banks in Awka, Anambra State. Descriptive survey research design was adopted and the research hypotheses were tested using the Pearson Moment Correlation Coefficient. The study worked with a population of 35 employees. The finding revealed that there is a significant positive relationship between innovative culture and the employee commitment in commercial banks. In conclusion, Idea generation, capability and risk taking are essential to high retention organization. It was recommended that banks need to adapt their innovative strategies in order to meet the pressure set by competitors.

The empirical studies reviewed focused on the related topics of the study. Some of the empirical studies were on the nexus between globalization and economic growth in Nigeria from 1970 to 2008, the Causes of Persistent Inflation in Nigeria, exchange rate depreciation and government policies in Nigeria: empirical evidence, the Impact of Globalisation on Nigeria Manufacturing Sector: A Study of Selected Manufacturing Firms in Enugu and Globalization and Performance of Manufacturing Firms in Port Harcourt. However, none of the reviewed empirical reviews was dealt on the effect of globalization on entrepreneurship development in South-East, Nigeria. It is against this background that the present study the impact of globalization on entrepreneurship development in South-East, Nigeria is being carried out to fill the existing gap of the study.

3.0 Methodology

The study adopted a survey design. The design is appropriate to the trend in global technological speed and its effects on organizational performance. The scope of the study is the manufacturing firms in South East Nigeria. The study utilized primary and secondary sources of data. Information on globalization was obtained from CBN Statistical Bulletin while questionnaire were used to gather information from the staff of the sampled manufacturing firms. The population consists of 562 workers of selected manufacturing firms South Eastern Nigeria. The study used the survey approach. The primary sources used were used to administer 288 copies of questionnaire to the sampled staff, 282 were returned and accurately filled. The validity of the instrument was tested using content analysis and the result was good. The reliability was tested using the Pearson correlation coefficient (r). It gave a reliability co-efficient of 0.87 which was also good. The hypotheses were analyzed using f-statistics (ANOVA).



4.0 Data Presentation and Analysis

Table: 4.1: Response on the extent global technological speed affects the rate productivity of the manufacturing firms in South East Nigeria

	Frequency	Percent	Valid Percent	Cumulative Percent
VGE	96	34.0	34.0	34.0
GE	98	34.8	34.8	68.8
UD	3	1.1	1.1	69.9
LE	27	9.6	9.6	79.4
VLE	58	20.6	20.6	100.0
Total	282	100.0	100.0	

Source: Field Survey, 2019

Table 4.1, 96 respondents representing 34 percent opined that global technological speed affects the rate productivity of the manufacturing firms in South East Nigeria to a very great extent. 98 respondents representing 34.8 percent said to a great extent, 3 respondents representing 1.1 percent were undecided, 27 respondents representing 9.6 percent low extent while 58 respondents representing 20.6 percent were of the view that global technological speed affects the rate productivity of the manufacturing firms in South East Nigeria to a very low extent.

Table 4.2: Responds on the effect technological changes on the market shares of the manufacturing firms in South East Nigeria

	Frequency	Percent	Valid Percent	Cumulative Percent
SA	100	35.5	35.5	35.5
A	89	31.6	31.6	67.0
UD	4	1.4	1.4	68.4
D	32	11.3	11.3	79.8
SD	57	20.2	20.2	100.0
Total	282	100.0	100.0	

Source: Field Survey, 2019

Table 4.2, 100 respondents representing 35.5 percent strongly agree that technological changes affect the market shares of the manufacturing firms in South East Nigeria. 89 respondents representing 31.6 percent agree, 4 respondents representing 1.4 percent were undecided, 32 respondents representing 11.3 percent disagree while 57 respondents representing 20.2 percent strongly disagree.

Table 4.3: Responds on the effect of introduction of new equipment on employee retention

	Frequency	Percent	Valid Percent	Cumulative Percent
SA	118	41.8	41.8	41.8
A	96	33.0	33.0	74.7
UD	20	7.1	7.1	81.9
D	33	11.8	11.8	93.7
SD	15	6.3	6.3	100.0
Total	282	100.0	100.0	

Source: Field Survey, 2019

Table 4.3, 118 respondents representing 41.8 percent strongly agree that the introduction of new equipment affects employee retention in manufacturing firms in South East Nigeria. 96 respondents representing 33 percent agree, 20 respondents representing 7.1 percent were undecided, 33 respondents representing 11.8 percent disagree while 15 respondents representing 6.3 percent strongly disagree.

4.0 Test of Hypotheses

Hypothesis one

Ho1: The extent of Global technological speed on the rate of productivity of manufacturing firms in South East Nigeria is significantly low.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.988(a)	.976	.976	.23643

a Predictors: (Constant), Global technological speed (GTS)

b Dependent Variable: Rate of Productivity (ROP)

ANOVA(b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	648.720	1	648.720	11604.746	.000(a)
	Residual	15.652	280	.056		
	Total	664.372	281			

a Predictors: (Constant), Global technological speed (GTS)

b Dependent Variable: Rate of Productivity (ROP)

Coefficient of multiple determinants { r^2 }

The R^2 {R-Squared} which measures the overall goodness of fit of the entire regression, shows the value as .976. This means that R^2 accounts for 97.6 percent approximately 98 percent. This indicates that the independent variables accounts for about 98 percent of the variation in the dependent variable. Which shows goodness of fit? From the result, f-calculated {11606.746} is greater than the f-tabulated {2.7858}, that is, $f_{cal} > f_{tab}$. Hence, we reject the null hypothesis { H_0 } and accept alternative hypothesis which means that the overall estimate has a good fit which also implies that our independent variables are simultaneously significant. We now concluded from the analysis that extent of global technological speed on the rate of productivity of manufacturing firms in South East Nigeria is significantly to a great extent.

Hypotheses Two

Ho2: Technological changes on market shares of the manufacturing firms in South East Nigeria is significantly low

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.915(a)	.836	.836	.64484

a Predictors: (Constant), Technological changes (TCHC)

ANOVA(b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	595.188	1	595.188	1431.372	.000(a)
	Residual	116.429	280	.416		
	Total	711.617	281			

a Predictors: (Constant), Technological changes (TCHC)

b Dependent Variable: market shares (MKTS).

Coefficient of multiple determinants { r^2 }

The R^2 {R-Squared} which measures the overall goodness of fit of the entire regression, shows the value as .836. This means that R^2 accounts for 83.6 percent approximately 84 percent. This indicates that the independent variables accounts for about 84 percent of the variation in the dependent variable. Which shows goodness of fit? From the result, f-calculated {1431.372} is greater than the f-tabulated {2.7858}, that is, $f_{cal} > f_{tab}$. Hence, we reject the null hypothesis { H_0 } and accept Alternative hypothesis which means that the overall estimate has a good fit

which also implies that our independent variables are simultaneously significant. We now concluded from the analysis that technological changes on the market shares of the manufacturing firms in South East Nigeria is significantly high.

Hypotheses Three

Ho3: The introduction of new equipment does not have significant effect on employee retention

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.990(a)	.986	.986	.33643

a Predictors: (Constant), Introduction of New Equipment (INE)

b Dependent Variable: Employee Retention (EMPR)

ANOVA(b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	648.720	1	648.720	11604.746	.000(a)
	Residual	15.652	280	.056		
	Total	664.372	281			

a Predictors: (Constant), Introduction of New Equipment (INE)

b Dependent Variable: Employee Retention (EMPR)

Coefficient of multiple determinants {r²}

The R² {R-Squared} which measures the overall goodness of fit of the entire regression, shows the value as .986. This means that R² accounts for 98.6 percent approximately 99 percent. This indicates that the independent variables accounts for about 99 percent of the variation in the dependent variable. Which shows goodness of fit? From the result, f-calculated {11606.746} is greater than the f-tabulated {2.7858}, that is, f-cal > f-tab. Hence, we reject the null hypothesis {H0} and accept alternative hypothesis which means that the overall estimate has a good fit which also implies that our independent variables are simultaneously significant. We now conclude from the analysis that the introduction of new equipment influences employee retention.

5. Conclusion

The study has established that globalisation had great effects on the performance of manufacturing firms in South East Nigeria. From the study analysis and hypotheses above, the

study concludes that Global technological speed has significant effect on the rate of productivity of manufacturing firms in South East Nigeria. It was also observed that technological changes has significant effect on market shares of the manufacturing firms in South East Nigeria. The study further shows that the introduction of new equipment has significant effect on employee retention.

6. Recommendations

Thorough environmental scanning is necessary whenever a company plans to enter into a new territory. This allows for smooth operations of the company and standardized service delivery.

The companies should maintain quality service delivery and corporate values which guide its operations so as to protect its integrity and credibility of its work. This would be one way of maintaining and / or even expanding the market share of a given company as the current customers remain content and willing to pay more for added value and may even refer more customers to the firm.

The careful efficiency of the process of production and capacity utilization should be adopted by industries to sustain competitive advantage over other competing firms.

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