



## Technological Innovation: A Veritable Tool for Entrepreneurship Development In Ilaro, Ogun State

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### ABSTRACT

In recent times, the relevance of technological innovation to sustainable entrepreneurship development is becoming well appreciated across the globe. However, relatively few entrepreneurs in developing countries have fully taken advantage of the opportunities presented by technological innovation in improving their enterprises. This prompted the current study to ascertain the importance of technological innovation on entrepreneurship development in Ilaro, Ogun State, Nigeria. The current study adopted a survey research design to conduct an investigation on the subject matter. The study selected 35 entrepreneurs in Ilaro, Ogun State, Nigeria and a structured questionnaire was administered on the selected entrepreneurs to elicit their opinions and views on the subject matter. The data gathered was analyzed using ordinary least square method through SPSS while the hypotheses developed for the study was tested using regression analysis. The findings revealed that information technology has a significant effect on competitive advantage enjoyed by entrepreneurs in the area. Based on the findings, the study recommended that government should create an enabling environment that will facilitate the adoption of technological innovation among entrepreneurs in order to achieve macroeconomic goals.

**Keywords:** Technological innovation, IT, product innovation, employment generation, competitive advantage.

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## 1. INTRODUCTION

Technological innovation is a key factor in entrepreneurship development which has been in practice in the last decades. However, in the current Nigerian economy, only few entrepreneurs have taken advantage of the opportunities presented by innovation. The level of innovativeness among Nigerian entrepreneurs is not as vehement as compared to our western world counterparts. Entrepreneurship is the art of mobilizing and taking risks in resources (men, machines and money) to exploit an existing business opportunity or introducing an innovation to such an extent that the public needs are met, jobs are created and the entrepreneur benefits in the process (Gontur, Davireg & Gadi, 2016). In the words of Oyewale, Adeyemo and Ogunleye (2013), entrepreneurship is the art or science of innovation and risk-taking for profit in business, the quality of being an entrepreneur. Economic progress is partly tied to innovation. Innovation according to the Schumpeterian paradigm is referred to as a creative destruction which implies that new ways of production, organizational management and products are being created, thereby rendering the old methods obsolete (Okumu, Bbaale & Guloba, 2019).



There is no doubt in the reality that an increase in GDP, quality of living and societal prosperity is as a result of entrepreneurship development (Sharma, 2006; Morris, 2001). The readiness and willingness to innovate should be the greatest strength of an entrepreneur in order to foster growth in business. In an ever changing environment, innovation is regarded to be a major strategic factor for the manufacturing SMEs' competitive advantage.

However, innovation has been claimed to take different dimensions which has called for an increasing source of knowledge on the issue by entrepreneurs and all other stakeholders. However, for the purpose of this study, technological innovation is the focus. Most innovating firms have a complex web of relationship with their customers, suppliers, research institutes, industry associations and so on, which are used to solve the numerous technical, organizational and financial problems which are presented by any attempt to innovate (Oyewale, Adeyemo & Ogunleye, 2013). As a result of this, the innovation process is a complex one which requires the deployment of different kinds of scientific and technological knowledge as well as their contextual adaptation to the specific situation of the organization's operations. This calls for development of technical, research and development (R & D), organizational, and strategic competencies and learning capability (Dosi, 1998; Carlson & Eliasson, 1991).

Taking a cue from the western world, internet technology was reported to have brought about a tremendous change in the business landscape. Husameddin and Mohammad (2018) reported that in the late 1990s, internet economies generated more than \$300 billion in revenue, while e-commerce produced many of the jobs. More than 33% of the total real economy growth during this period was reported to have been as a result of the activities of the information technology producing industries.

Failure to embark on proper planning, organizing, staffing, controlling and a lack of ability to embark on commensurate risk of their capital and other resources in new business ventures from which entrepreneurs can expect substantial rewards are usually the demeanors of many Nigerian entrepreneurs. In the same vein, it has been observed that many Nigerian entrepreneurs lack prudent managerial decisions, ideas, originality and foresight about what to produce and how best to produce it in order to generate a substantial profit in the process. It is against this backdrop that the current study is embarked on to investigate the attendant effects of technological innovation and entrepreneurship development in Nigeria with focus on selected entrepreneurs in Ilaro, Ogun State.

Broadly, the objective of the study is to ascertain the effect of technological innovation on entrepreneurship development in Nigeria. In the same vein, the study seeks to achieve the following specific objectives:

1. To ascertain that product innovation has a significant effect on employment generation.
2. To determine if information technology has any effect on competitive advantage.

In light of the objectives raised above, the following hypothetical statements were synthesized:

**H<sub>01</sub>:** Product innovation does not have an effect on employment generation

**H<sub>02</sub>:** Information technology does not have an effect on competitive advantage



## 2. LITERATURE REVIEW

### 2.1 Technological Innovation

Technological innovation is the successful implementation (in commerce or management) of a technical idea new to the institution creating it. Innovations are distinguished from inventions, technology and research, but may arise from any of the three. Technological innovation is the function through which new technologies are introduced into the economic system. It entails recognizing new technological possibilities, organizing the human and financial resources needed to transform ideas into useful products or processes, and carrying out the requisite activities (typically called 'research and development'). It is important because technological advances have played a paramount role in facilitating the radically improved standards of living experienced by the inhabitants of progressive nations over the past several centuries. Innovation is responsive to economic forces and the lure of profit, but their influence is complicated by uncertainty and the difficulty innovators encounter in capturing a sufficient share of the economic benefits resulting from their contributions.

Technological innovation has been the underlying purpose for construction, design and use of Management Information System (MIS). MIS is a set of trained human elements and the mechanical elements needed to obtain and convert data into decision-making information. Information Technology (IT) has been ascribed as one of the achievements of the technological scientific revolution that has a direct and significant impact on the formation of work within organizations (Husameddin & Mohammad, 2018).

Technological innovation creates opportunities for entrepreneurs to found new organizations and establish competitive positions as incumbents' sources of advantage decay. Technological innovation also creates uncertainty and risk for incumbents because its outcomes can be only imperfectly anticipated. An innovation's impact may not be known until it is too late for incumbents using older knowhow to compete successfully with new competitors; gambling too early on a given innovation may jeopardize an incumbent's survival if that technology turns out not to become dominant. Thus, underlying technologies and technological innovation may influence organizational populations' competitive dynamics and evolution profoundly. Ecological research relating technology cycles to population dynamics, although limited in scope, yields compelling support for this assertion. Although past research typically treats technological change as exogenous, studying how ecological processes shape technological change can deepen our understanding of technology cycles by examining the dynamics of organizational support for new technologies.

### 2.2 Information Technology and Competitive Advantage

According to Kedar (2009), information technology (IT) is the use of computers to store, retrieve, transmit, and manipulate data, or information, often in the context of a business or other enterprise. The term is commonly used as a synonym for computers and computer networks, but it also encompasses other information distribution technologies such as television and telephones. Several products or services within an economy are associated with information technology, including computer hardware, software, electronics, semiconductors, internet, telecom equipment, and e-commerce (Chandler & Munday, 2011).

Competition is at the core of the success or failure of firms. Competition determines the appropriateness of a firm's activities that can contribute to its performance, such as innovations, a cohesive culture, or good implementation. Competitive advantage is the favorable competitive position in an industry held by a particular firm. Competitive strategy aims to establish a profitable and sustainable position against the forces that determine industry competition. The effective utilization of information technology (IT) can give entrepreneurs an edge over competitors due to the vast opportunities provided by IT. Successful entrepreneurs such as Mark Zuckerberg, Aliko Dangote, Linda Ikeji, Steve Jobs and a host of others have IT to thank for their success story. Upspring of social media platforms are as a result



of information technology. Entrepreneurs have been utilizing the social media platforms to promote their products and services and evidence has shown that positive results can be attributed to such endeavours. The importance of IT to entrepreneurship development cannot be overemphasized because there is an increasing realization of the need to break-away from the traditional method of growing a niche for an entrepreneur's offerings to adopting the modern approach which is facilitated by IT.

### 2.3 Product Innovation and Employment Generation

Product innovation entails the creation of an entirely new product or upgrading of an existing one. In the event that new products are created, employment opportunity is facilitated because more people will be engaged in the manufacturing of something entirely new, hence, reducing the level of unemployment in the country. An organization that has successfully designed a new product will need to analyze the manpower needed for efficient production. In the event that the available manpower will not be sufficient to execute the new plan, recruitment process is initiated; thus, people are engaged in employment.

Conclusively, the a-priori expectation of this study is that product innovation will facilitate employment generation. However, this is subject to validation.

### 2.4 Theoretical Review

This study is anchored on the Diffusion of Innovation (DOI) theory by Rogers (1995). DOI was created by to depict the procedure by which an innovation is imparted through specific passages over time in the midst of individuals from a social framework. In accordance with different past scientists, Rogers (1995) has found that people in a social framework do not at a similar period receive an innovation. Rogers (1995), distinguishes profound attributes of innovations as perceived by people. These are critical as they are presented such that potential adopters may see the advancement.

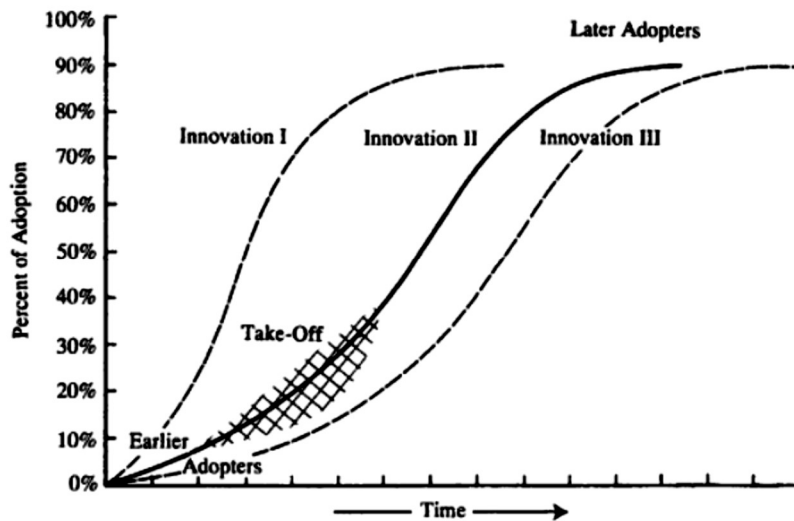


Fig 1: Diffusion of Innovation  
Source: Rogers (1995).



Another essential thought in the adoption of an innovation are the attributes of the potential adopters. Rogers (1995) certifies that these characteristics include societal position, educational level, level of cosmopolitanism and measure of ingenuity. Abrahamson and Rosenkopf (1993) offer a slight diverse position on adoption which they alluded to as 'bandwagon effect'. They demonstrate that occasionally when innovation is adopted by individuals or organizations, it is not a direct result of specialized properties but because of the sheer number of others that have effectively embraced it.

### 5mpirical Review

Okumu, Bbaale and Guloba (2019) conducted a research on innovation and employment growth with evidence from manufacturing firms in Africa. The study adopted a cross-sectional World Bank Enterprise Survey dataset where innovation was categorized as product innovation and process innovation. The findings of the research revealed that employment growth is positively associated with both product and process innovation. The study recommended that a strong business environment is necessary in complementing the potentials of innovation to enhance employment growth in Africa.

Gontur, Davireg and Gadi (2016) investigated creativity and innovation as a strategy for enhancing entrepreneurship development in Nigeria using some selected SMEs in Jos metropolis. The study adopted a survey research design and a structured questionnaire was administered on the chosen sample. The findings of the study revealed that creativity and innovation are instrumental in increasing the country's competitiveness and entrepreneurship development. The research recommended that government should create a friendly or an enabling environment for entrepreneurship and consumer goods in order to boost the economy.

Oyewale, Adeyemo and Ogunleye (2013) also carried out a study on technological innovation as a veritable tool for entrepreneurship development in Nigeria. The study adopted a survey research design and a structured questionnaire was used to collect data from 12 selected entrepreneurs in Lagos state. The result of the study showed a significant relationship between technological innovation and entrepreneurship development in Nigeria. The study recommended that government should create an enabling environment that will boost the Nigeria economy.

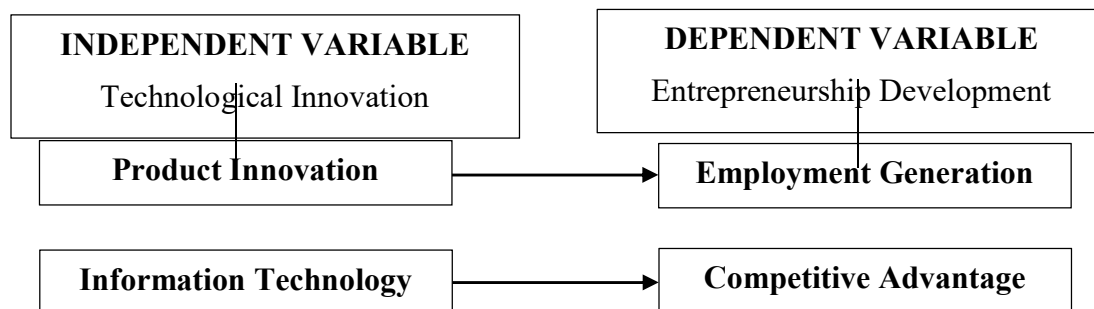


Fig. 2: Conceptual Framework  
 Source: Researchers, 2019



### 3. METHODOLOGY

#### Research Design

The current study adopted a survey research design. This method is appropriate for the current study because it allows data to be gathered and validated by the researcher.

#### Scope of the Study

The study focused on investigating the relationship between technological innovation and entrepreneurship development in Ilaro, Ogun State, Nigeria. In order to achieve this objective, the researcher selected 35 entrepreneurs in the study area which a structured questionnaire was adopted as the research instrument to obtain the relevant from the selected entrepreneurs.

#### Research Instrument

A structured questionnaire was adopted as the research instrument for the study. The questionnaire was divided into two sections; A & B. Section A was designed to capture only the demographic data about the respondents while section B focused on the variables considered for the study.

#### Validity and Reliability

The questionnaire was validated by experts in the field as well as colleagues of the researcher who were given a chance to critique the research instrument. The reliability test was achieved using Cronbach Alpha's test and the result is presented in the next section.

### 4. PRESENTATION OF RESULT

#### 4.1 Presentation of Data

Table 1: Reliability Statistics

Cronbach's Alpha	N of Items
.933	35

The Cronbach Alpha Reliability test with a value of 0.933 revealed that the research instrument was highly sufficient in gathering the relevant data from the respondents chosen for the study.

Table 2: Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	79.249	55.798		1.757	.135
Product Innovation	2.523	.158	.843	21.987	.000

#### a. Dependent Variable: Employment Generation

The table above revealed the significant of the variable as well as the relationship between the dependent variable and the predictor. The coefficient result shows that product innovation has a positive relationship with employment generation with the value of 2.523. The significance value of product innovation at .000 corroborates the conclusion that product innovation has a significant effect on employment generation.



**Table 3: Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10219.183	50128.083		-.204	.840
	Information Technology	98.531	13.822	.774	7.129	.000

**a. Dependent Variable: Competitive Advantage**

The table above revealed the significant of the variable as well as the relationship between the dependent variable and the predictor. The coefficient result shows that information technology has a positive relationship with competitive advantage with the value of 98.531. The significance value of information technology at .000 corroborates the conclusion that information technology has a significant effect on the competitive advantage enjoyed by organizations.

**4.2 Test of Hypotheses**

**Hypothesis One:**

***H<sub>01</sub>: Product innovation has no effect on employment generation***

The decision rule is to reject the null hypothesis at 5% level of significance.

Following the result presented in table 3, the result indicates a p-value of 0.000 which translates that the predictor (product innovation) is significant on the dependent variable (employment generation). Hence, the study rejects the null hypothesis and concludes that product innovation has a positive significant effect on the employment generation.

**Hypothesis Two:**

***H<sub>02</sub>: Information technology has no significant effect on competitive advantage***

The decision rule is to reject the null hypothesis at 5% level of significance.

Following the result presented in table 3, the result indicates a p-value of 0.000 which translates that the predictor (information technology) is significant on the dependent variable (competitive advantage). Hence, the study rejects the null hypothesis and concludes that information technology has a positive significant effect on the competitive advantage enjoyed by the organization.

**5. CONCLUSION**

The ongoing investigation sought to find out the impact of technological innovation on entrepreneurship development in Ilaro, Ogun State, Nigeria. In order to effectively accomplish the objectives of the study, the independent variable (Technological Innovation) and dependent variable (Entrepreneurship Development) were decomposed into product innovation and information technology as a measure of technological innovation while employment generation and competitive advantage were used as proxies of entrepreneurship development. The findings of the study revealed that the decomposed independent variables have a positive significant effect on the decomposed dependent variables at a significance level of 5%. Thus, the study concludes that technological innovation is a veritable tool for entrepreneurship development in the study area.



## 6. RECOMMENDATIONS

In light of the revelations of the current study, the following recommendations were posited:

Entrepreneurs should expedite the adoption of technological innovation so that they can enjoy the benefits that accrue to it. In the same vein, government should create an enabling environment that will facilitate the use of technological innovation among entrepreneurs in the country so that unemployment level can be reduced to a large extent.

## 7. LIMITATION OF THE STUDY

No successful research work is free from one or two limitations. However, the major limitation of this study lies in its scope as the population considered for this study which was quite small and may not sufficiently represent the view of other entrepreneurs from other parts of the country. Hence, the generalizability of this study to other regions of the country is the major limitation of the study. However, future researches can make an effort by taking a larger population into account for effective generalizability.

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