

# Technological Advancement and the Employability of Business Graduates in Nigeria

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## ABSTRACT

Technological advancement and advancement in management sciences education are both required for improved productivity and economic growth; however the progress of the former can inhibit the latter. The survey design was used for the study. Data were collected through a simple, concise and precisely constructed questionnaire sent randomly to three hundred business education graduates deployed to various offices in Kogi State for the National Youth Service Corps between 2010 -2013. Half of the respondents provided the data which were presented in descriptive tables, and the analysis of variance (ANOVA) technique was used to test the results of the four hypotheses. Results of the tests indicate that technological advancement did not affect the employability of business education graduates in private and public sectors of Nigeria. Technological advancement also had no discriminatory effects on male and female business education graduates, neither did it affect the ability of business education graduates to establish and run their own private enterprises. It was recommended that governments should improve the quality of business education so as to enhance the productivity and employability of business education graduates.

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**Keywords:** Technological, advancement, employability, graduates, business

## INTRODUCTION

Unemployment is a major problem in Nigeria: millions of graduates are roaming the streets in search of very scarcely available jobs. According to economists, unemployment may be frictional (period of search in-between two jobs), structural (a graduate is not immediately hired when entering the labour force) and cyclical (when an employee is let go by a dis-satisfied employer). Diulio (2004) posits that an individual is structurally unemployed when he or she loses a job because of a permanent decrease in demand for goods or services produced by the employing firm and/ or when technological advance necessitates that fewer individuals need to be employed.

Technological advancement is essential for companies, governments and nations. The traditional theory of economic growth divides output growth into two categories: (1) growth of factor inputs, such as labour and capital,

and (2) growth in output relative to growth in factor inputs. Thus, the theory converts the question of how to achieve faster output growth into two sub-questions: how to achieve faster growth in factor inputs, and how to achieve faster growth in output relative to inputs (Gordon, 2009). Dornbursch and Fischer (1981) identify these same factors of growth as (1) increases in the amount of capita per head, and (2) technological progress, which simply means that more output can be produced with the same inputs of land, labour and financial resources.

Graduates of management sciences significantly contribute to the well-being of any nations; therefore are an indispensable tool for national development in an era that is, characterized by globalization and driven by information and communication technology (Etonyeaku 2009). The employability of graduates of management sciences to raise an organizations' intellectual capital is not a new phenomenon. Brown and Hesketh (2004) define employability as the relative chances of engaging and maintaining different kinds of employment. This tallies with the opinion of Hillage and Pollard (1998) as cited Hind and Moss (2011) who stated that 'employability refers to a person's capability (employability skills), for gaining and maintaining employment. Graduate employability skills are set of understandings and personal attributes that will make graduates more likely to gain employment and be successful in their chosen occupations, (Yorke, 2008).

Employability of graduates depends on the attitude and demand of employers, to a very large extent. According to Pearson (2001), employers want business graduates who are primed for work, able to communicate, share their skills and appreciate their place in a wider organization and its business. Graduates want jobs that exercise their abilities, confer status and commensurate pay and a route for career development. But the demand for graduates is not seemed to be favourable at all the time. For the past ten years, educators, employers and administrators have been greatly concerned about the quality of business graduates in Nigeria because those graduates have less demand in the labour market. Some employers have being observed to complain that most of the business graduates from Nigerian universities lack necessary core skills needed to be successful at work. Such excuses are given often because of preference for foreign nationals and relatives of foreign

direct investors in the country, who prefer home-made accountants, economists, marketers, and other business professionals.

### **Statement of the Problem**

Technological advancement influences the demand for, and supply of labour, which in turn determines the level of employment and the employability of business education graduates. This is because on the demand side, technological advancement affects the production function, (that is, the capital/output ratio), the demand for inputs, the efficiency in factor utilization, and product prices. On the supply side, technological advancement affects the suitability of potential workers for available vacancies, and hence the effective supply of employable graduates in the national unemployment stock (Salvatore, 2004). With the ever-increasing stock and rate of unemployment, and a parallel increase in the gross domestic product of Nigeria, it is pertinent enquire into the role that technological advancement plays in the employability of business administration graduates in the country.

### **Objectives of the Study**

The specific objectives are:

- (i) to investigate if the use of advanced technology in business organizations in Nigeria affects the employability of graduates of management sciences.
- (ii) to investigate if the acquisition of advanced technology by business and public institutions in Nigeria affect business education graduates in their quest to own and manage personal business enterprises successfully.

### **Research Hypotheses**

$H_0^1$ : The use of advanced technology in business organizations in Nigeria does not affect the employability of business education graduates.

$H_0^2$ : The use of advanced technology by business and public institutions in Nigeria does not affect business education graduates in their quest to own and manage personal business enterprises successfully.

## The Concepts of Unemployment and Unemployment Rate

Unemployment rate according to the Business Dictionary (2014) refer to the percentage of total workforce who are unemployed and are looking for a paid job. Investing Answers (2014) adds that the unemployment rate measures the percentage of employment people in a country's workforce who are over the age of 16 years and who have either lost their jobs or have unsuccessfully sought jobs in the last month and are still actively seeking work. It is important to distinguish between the percentage of people who are unemployed and those who are simply not working. Economists categorize unemployment as frictional, structural, and cyclical. An individual is frictionally unemployed when he or she (1) quits a current job before securing a new one, (2) is not immediately hired when first entering the labour force, or (3) is fired by a dissatisfied employer. An individual is structurally unemployed when he or she loses a job because of a permanent decrease in demand for goods or services produced by the employing firm and/ or technological advance necessitates that fewer individuals need to be employed (Diulio, 2004).

The National Bureau of Statistics (NBS) defines unemployment as the proportion of the labour force that is available for work but did not work for at least 39 hours in the week preceding the survey period (Central Bank of Nigeria Annual Report, 2008). The CBN report went further to say that individual who did not fall into either of these groups, such as retired people and discouraged workers, are not included in the calculation of the labour force. Graduate unemployment refers to a situation where tertiary institution graduates, after finishing their National Youth Services Corps (NYSC), are willing and able to work but fail to secure jobs.

## Concept of Employability

Employability refers to the capability of, or suitability for being used for a particular purpose (Merriam-Websters Intermediate Thesaurus). Hillage and Pollard (1998), suggest that employability is about having the capability to gain employment, maintain employment and obtain new employment if required. This agrees with the view of Brown and Hesketh (2004) who defines employability as 'the relative chance of getting and maintaining different kinds of employment'. Fugate et al (2004) see employability as a form an active adjustment of individuals towards certain occupations until

they could identify and recognize existing career opportunities in the work place.

Employability skills are important because jobs today require flexibility, initiative and the ability to undertake many different tasks. Great batch and Lewis (2007) put forward the following reasons for acquisition of skills:

- (i) The increase in jobs in business, finance and retail sectors all require more staff with interpersonal skills to be able to explain things and solve problems related to client needs.
- (ii) Manufacturing workers are increasingly working in teams and require more internal communication.
- (iii) The use of standardization of computer based packages in many insurance, banking and call centres highlights the significance of communication skills and attitudes such as confidence, judgement and personal organization.

Increasingly, employers look for an understanding of appropriate behaviour and relationships in the labour market, self-management skills, team working to solve problems, balancing group work with the ability to get on an argument and persuading others. Valued attribute commitment, dependability, imagination, creativity, getting on with people and willingness to learn.

### **Scourge of Unemployment in Nigeria**

Over one million graduates are churned out annually by well over 300 universities, polytechnics and colleges of education in Nigeria, with many people expressing fears that the country's economy is at the moment not robust enough to absorb even 20 percent of the products of the institutions (Ene, 2013). As if to make matters worse, more companies in a bid to cut cost are downsizing their workforce thus sending thousands of their employees back to the labour market. The telecoms sector is also hit as telecom companies are laying off their workers after out-sourcing most of their operations. Many of the workers who have been sacked are bread winners and their lives and that of their families and dependants are hanging in the balance. The minister of finance and co-ordinating minister of the economy, Dr Ngozi Okonjo-Iweala also admitted that the spate of unemployment was really alarming. Quoting the NBS, she declared that 1.8 million young

Nigerians enter into the labour market. It is very instructive to note that, Nigeria was ranked 153 out of 186 countries in the 2013 United Nations Human Development Index (Akadoro, 2014).

Obike (2014), describes the menace of unemployment in the following words:- effects of unemployment are well-known. They include kidnapping, armed robbery, prostitution, militancy, insurgency, street begging, hawking, cyber crimes and proliferation of baby manufacturing dens just to mention some of the escalating social vices. Unemployment in Nigeria has become phenomenal.

### **Concept of Technological Advancement**

Technology as defined by the English Dictionary is a device, material or sequence or mathematically coded electronic instruction(s) created by a person's mind that is built, assembled, or produced and which is not part of the natural world. Technological advancement is the process of combining and re-organizing knowledge to generate new ideas. The development has an impact on firm performance (Mumford, 2000).

### **Technological Innovation and Organizational Performance**

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

Organisations in the competitive global economy require managers that can combine neatly organization and individual interests for the common good. Present day workers want to participate in drawing up of management plans, in decision making and desire to be recognized and appreciated for their contributions. Continuous organizational improvements require managers and team leaders that are capable of bringing out new ideas. Drucker (1985) argues that innovation comprises of both hard work and inspiration. Managers should not be rigid in managing their employees but allow them to use their initiatives. According to him, severe and inflexible rules can be easily circumvented.

In spite of the changing conditions that characterised the work place of the 21st century, man's domination in the society and organisational settings remain the same. Many aspects of management may have changed, but the changes have not altered or removed the dominating position of human resources. Technology, most especially information technology has only expanded man's minds and intellect but has not replaced him. Human resource capability to manage other resources and to adapt to the changing conditions makes his position dominant. Human resource management theories and practices could therefore be useful to provide effective methods of managing all other aspects of the organisation for the achievements of its objectives. Accordingly, technological advancement complements, but does not displace employable labour.

It is the realizations of these that have made many organisations to consistently promote the relevance of human resource management to technological innovation. In spite of the dynamic technological changes, human resource still needs to apply his skills and intellect in practical ways for improved technological innovations. Human resource management provides managers with adequate tools for improving technology innovation (Boyd, 1984).

### **Empirical Review**

Maqbool et al (2014) conducted a study on the impact of technological advancement on employee performance in the banking sector. Primary data was used in this paper to check the impact of technological advancement on employee performance. Regression analysis was used to check the impact of

technological advancement on employee performance. It was found out that technological advancement had a significant impact on motivation and training of employees. They also found out that motivation had significant impact on employee performance but training has no significant impact on employee performance, but that there was significant relationship between technological advancement and employee performance.

Imeokparia and Kennedy (2012) researched on the employability of business education graduates. The Human Capital Theory, developed by Prof. Schultz (1965, 1968) made important contributions in the study of agriculture and growth in developing countries. The main purpose of their work was to ascertain the mean ratings of employability skills. Three hypotheses were formulated and case study design adopted for their study. Systematic technique was used in the study. SPSS was used in carrying out tests for mean, mean deviation, t-test and analysis of variance (ANOVA). A major recommendation made was that shorthand and typing teachers should be encouraged to be more active in imparting these skills.

Ibrahim and Dandago (2013) conducted a research on the effects of technological advancement on the employability of business education graduates in the Nigerian labour market. Descriptive survey design method was adopted for the study. Data was sourced primarily from students who participated in 2012/2013 post-graduate entry examination. Pearson Moment Correlation Coefficient was used to test hypothesis one, Chi-square for hypothesis two, ANOVA for hypothesis three and four. The analysis reveals, among other findings, that business education curriculum contents in Nigeria do not equip students with generic skills required for their employability in the Nigerian labour market in this present advanced technological era. It was recommended among others, that all the major skills in the modern technologies needed by the Nigerian labour market be integrated into the curriculum of business education programme in Nigerian universities.

Malaolu *et. al.*, (2013) researched on training and manpower development, employee productivity and organizational performance in Nigeria: an empirical investigation. The study investigated the effects of training and manpower development on employee's productivity and organizational



performance in Nigeria, using First Bank of Nigeria Plc as a case study. Simple random sampling was used in conducting the research. Data generated was analyzed using descriptive statistics. Findings showed that majority that training and manpower development enhanced the efficiency and job productivity of employees. It was recommended that organizations should conduct training needs assessment to ensure that the right training is given; ensure that training programmes be on a continuous basis; and motivate staff who performed exceptionally well during training sessions so that other staff will in turn aspire to excel.

Samson and Gungul (2013) conducted a research on effects of human resource training and development on productivity in Nigerian hospitality industry to critically ascertain the extent to which training and development has improved productivity in the hospitality industry. Data was elicited from both secondary sources and primary sources. The paper concluded that the hospitality industry in Nigeria could be improved through training and development of human resources and as such recommended that the hospitality industry prioritize the training and development of their employees by injecting more funds into such human resource programmes so as to ensure improved productivity.

### **Theoretical Framework**

The Human Capital Theory has much in common with the ideas presented in the works of Ibrahim and Dandago (2013). Here technological innovation is seen to be the driving force of social change as suggested by Kerr et al (1973). According to this theory, employability highlights the democratisation of capitalism. Previously, power and control exclusively were in the hands of employers who owned the plant, the technical skills and controlled the flow of information, which employers lacked. This ensured a high degree of dependency on the company, established by investors as career progression depended on long term loyalty to the company. However, employability represents a power shift because intellectual capital is no longer under the exclusive control of organizations, increasing in the economic power of knowledge professionals.

## Research Design

The research design of this study is the survey research, which entails obtaining primary data about the study population with the use of an appropriate sampling technique. The technique used in this case is the stratified random sampling technique.

## Population and Area of Study

The population of this study consists of graduates engaged in the compulsory youth service corps scheme in various public and private institutions in Kogi State in the period of 2015 to 2016, which is within the period of this study.

## METHOD OF DATA ANALYSIS

The collected data will be analyzed with the use of the analysis of variance (ANOVA), which follows from the F distribution. The F ratio measures the variance among treatment groups in relation to the variance of the error term. The analysis of variance is used to test the null hypothesis that the means of two or more populations are equal versus the alternative that at least, one of the means is different. The population of the respondents are assumed to be normally distributed and of equal variance.

## Data Presentation

The essential data sourced from the population through the use of questionnaire and used for the analysis are presented in Tables 1 and 2.

## Data on Perception of Business Education Graduates on Their Employability Prospects

**Table 1:** Perception of Business Education Graduates According to Their Degrees as to Whether the Use of Advanced Technology Affects Their Employability Prospects

	Accounting	Banking/Finance	Business Management	Economics
Strongly Agree	1	0	1	0
Agree	2	2	3	1
Disagree	5	6	4	7
Strongly Disagree	16	17	20	20

Researcher's field survey (2014)

## Data on Perception of Business Education Graduates on Establishment and Management of Own Business Enterprises

**Table 2:** Ratings of Business Education Graduates on if the Use of Advanced Technology by Business and Public Institutions in Nigeria Affects Business Education Graduates in Their Quest to Own and Manage Personal Business Enterprises Successfully

	Accounting	Banking/Finance	Business Management	Economics
<b>Strongly Agree</b>	18	18	19	20
<b>Agree</b>	4	5	6	5
<b>Disagree</b>	1	2	1	1
<b>Strongly Disagree</b>	2	0	1	1

Researcher's field survey 2014

### Data Analysis

The p-value approach is used for the ANOVA tests of the hypotheses. The decision rule is: If the p-value is less than or equal to the stated level of significance of 5%, reject  $H_0$  otherwise, do not reject  $H_0$ .

The result of the ANOVA test of the first hypothesis of this research is presented in Table 5.

Test for Equality of Means Between Series

Date: 07/02/15 Time: 10:35

Sample: 1 4

Included observations: 4

Method	df	Value	Probability
Anova F-statistic	(3, 12)	0.015962	0.9971

### Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	3	3.187500	1.062500
Within	12	798.7500	66.56250
Total	15	801.9375	53.46250

Category Statistics

Variable	Count	Mean	Std. Dev.	Std. Err. of Mean
ACCOUNTING	4	6.000000	6.879922	3.439961
BANKING	4	6.250000	7.588368	3.794184
BUSINESS	4	7.000000	8.755950	4.377975
ECONOMICS	4	7.000000	9.201449	4.600725
All	16	6.562500	7.311806	1.827951

Source: E Views calculations based on Table 5

INTERPRETATION OF RESULT

The calculated ANOVA F Statistic is 0.015962. Since the probability of the F Statistic is 0.9971, and is greater than 0.05, the null hypothesis that the use of advanced technology in business organizations in Nigeria does not affect the employability of business education graduates cannot be rejected at the 5 per cent level of significance.

The result of the ANOVA test of the second hypothesis of this research is presented in Table 4.

Test for Equality of Means Between Series

Date: 07/02/15 Time: 14:36

Sample: 1 4

Included observations: 4

Method	Df	Value	Probability
Anova F-statistic	(3, 12)	0.004723	0.9995

Analysis of Variance

Source of Variation	Df	Sum of Sq.	Mean Sq.
Between	3	1.000000	0.333333
Within	12	847.0000	70.58333
Total	15	848.0000	56.53333

Category Statistics

Variable	Count	Mean	Std. Dev.	Std. Err. of Mean
ACCOUNTING	4	6.250000	7.932003	3.966001
BANKING	4	6.250000	8.098354	4.049177
BUSINESS	4	6.750000	8.500000	4.250000
ECONOMICS	4	6.750000	9.032349	4.516175
All	16	6.500000	7.518865	1.879716

## CONCLUSION

The cardinal goal of full employment cannot be achieved if technological advancement in the production of goods and services in Nigeria is inversely related to the employability of university graduates of business education. The finding that the inverse relationship does not exist in the perception of such graduates lays credence to quality and relevance of the education that they had received from various universities. The findings of Oduma and Ile (2011) that an employer of labour desired soft skills is relevant here. The curricula approved by the National Universities Commission for degree programmes in accounting, business administration, economics and other business studies, include computer and entrepreneurship studies, which prepare students for active employment in business organizations, in public institution and to establish and operate partnership business units.

Oyelola (2011) on the subject of entrepreneurship and technological advancement, recommended that government should focus more on capacity building, improved infrastructure, judicious utilization of oil wealth, and provision of enabling environment for sustainable economic growth. This complements the finding in this study that technological advancement poses no restraint to the creation and management of private enterprises by graduates of business education in Nigeria.

## RECOMMENDATIONS

i) Since the study found that technological advancement has no significant effect on the employability of business education graduates in Nigeria, what is desired then is further development and application of technological advancement and improved business education. The fundamental causes of unemployment in the country should be fully investigated and appropriated macroeconomic policies. Fiscal and monetary policies should be devised to tackle it.

ii) The conclusion concerning technological advancement and entrepreneurship practice by business education graduates is an important one for the country. The recommendation in this respect is further development of entrepreneurship, taking advantage of growing level of computer technology and increasing opportunities for vocational training facilities being provided by government and private institutions.

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