

## Toward Mitigating Graduate Unemployment for Political Stability: The Role of Electronic Commerce Technology. A PLS Approach

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**Abstract:** The essence of this study is to identify the determinants of business students' perception on adopting ecommerce for political stability and national security. To achieve this, a survey was adapted and used to solicit information from the 35 undergraduate business students from Federal College of Education (Technical) Gombe, Gombe state. PLS-SEM version 3.0 was used for the analysis of the measurement model and structural model of the research. The results reveal that students' individual readiness, perceive benefits and external drive are positively related to national security and political stability. These three dimensions were used to measure the ecommerce adoption construct.

**Keywords:** students' perception, PLS-SEM version 3.0, ecommerce adoption.

### INTRODUCTION

All countries around the globe requires adequate human and material resources for the enhancement of their economic development, political stability and other societal aspirations [1, 2]. Education is often seen as single and most essential tool for the attainment of these developments. Thus, education is considered as prerequisite for a qualitative manpower development, path to wealth creation, as well as sure and secure path to success in life, service to humanity and political stability [3]. Ogunyinka, Okeke and Adedoyin [4] argued that It is obvious that economic, social and political development of any country depend on the level of their educational system; and no matter the efforts of educational planners in designing the best educational policies and government in voting the fattest sum of state revenue to education, without education, all these efforts would be in vein.

But despite this essential role of education, the sector has been bevelled by serious challenges. These challenges include inadequate funding, poor perception of teachers and teaching by the society, lack of commitment as well as acute level of unemployment by the trained graduate [5, 6]. Among these problems, graduate unemployment had been tipped to be one most

detrimental to political and security stability in developing economies like Nigeria [7, 8].

On the other hand, Ecommerce [9] and Obe [10] argued that electronic commerce, popularly known as e-commerce is one of the panaceas that could drastically reduce the problem of graduate employment in developing countries specifically Nigeria. E-commerce is defined as "the process of buying, selling, transferring, or exchanging products, services, and/or information via computer (or similar device), mostly through the Internet and intranets" [11]. Numerous types of e-commerce exist. These comprises business to- consumer (B2C), business-to-business (B2B), consumer-to-consumer (C2C), peer-to-peer (P2P), and mobile commerce, among others [12]. In this perspective therefore, e-commerce substitutes the olden ways of carrying out business transactions, because it boosts the efficiency of businesses in terms of cost reduction, limit transaction time, as well as minimize the demand for energy in carrying out businesses. Electronic commerce does not only benefit individual customers and business owners, but it also enhances the generality of country's economy through efficient utilization of its resources that guaranty national security [13].

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## Problem Statement

Education is unavoidably a tool for sustainable development, economic stability and a vehicle for advancing the frontier of knowledge [14]. The essentiality of education is more apparent on its globalization trends infused on instrumental values for nurturing law abiding and productive citizens for sustainable development and political stability [15]. But regrettably, in Nigeria, education is being bedevilled with myriad of challenges that is threatening the the countries stability. This changes ranges from poor funding, poor perception of teachers and teaching by the society, lack of commitment as well as acute level of unemployment by the trained graduate [5, 6]. Among these problems, graduate unemployment had been considered to be one of the most detrimental to political and security stability in developing economies like Nigeria [7, 8]. Generally, literature asserts that unemployment is one the causes for political instability and security breaches in Nigeria [16-19].

On the other hand, Ecommerce [9] and Obe [10] posited that electronic commerce, popularly known as e-commerce is one of the panaceas that could drastically reduce the problem of graduate employment in developing countries like Nigeria. A country that has been reported by the literature of having huge potential of e-commerce and other ICT related businesses. But despite all these benefits offered by ecommerce, Makame, Kang and Park [20] lament that developing economies including Nigeria are still yet to engage fully in tapping these noble opportunities offered by the technology.

Investigation into available literature return several empirical and anecdotal studies on problems bedevilling teacher education [21, 22, 8, 23, 24]; but none of these studies relate challenges of graduate with electronic commerce. To place our study in body of the existing literature, we empirically assessed how electronic commerce technology adoption could mitigate graduate unemployment to enhance political stability in Nigeria.

## LITERATURE REVIEW

### The Variable of Political Stability

According to Shepherd [25] political stability means specific types of stability that include, strong institutions, rule of law, an efficient and responsive bureaucracy, low corruption as well as suitable and conducive business environment. These factors of stability are very essential for countries economic growth. On the other hand, Shepherd [25] further argued that stability from political point of view connotes meaningful competition among ideologies and different visions of state responsibility and functions. In fact, government stability is key to economic growth of a country. Overtime, the essentiality and role of political economy in redefining the policies and objective and economic outcomes of countries has been

emphasized. This was proved strongly by the recent economic crisis that had a strong effect on reshaping the political context in several nations. The variable of political stability is of great importance in evolution of country since for long, its absence has been recognized as obstacle for economic growth and consequent for poor economic development [26]. The variable of political stability is measured using indicators related to rule of law, durable index and political stability index.

Chandra and Bhonsle [27] posited that the national security variable has been conservatively and narrowly refers as country's ability to safeguard its territorial integrity and sovereignty. Safeguarding national security connotes state's military competences, the effectiveness of its internal security system (i.e paramilitary, police and intelligence apparatus) as well as its ability to design a sound foreign policy that keeps external threat at bay [27]. But recent literatures suggest that the description for national security said above is inadequate, as it does not take into cognisance numerous additional factors intruding on national security, e.g. terrorism, communal clashes, unemployment etc. Such additional factors are critical for the preservation of national security [28]. A sound economy devoid of chronic graduate unemployment, enable state to attain its national security objectives using its economic, human and natural resources.

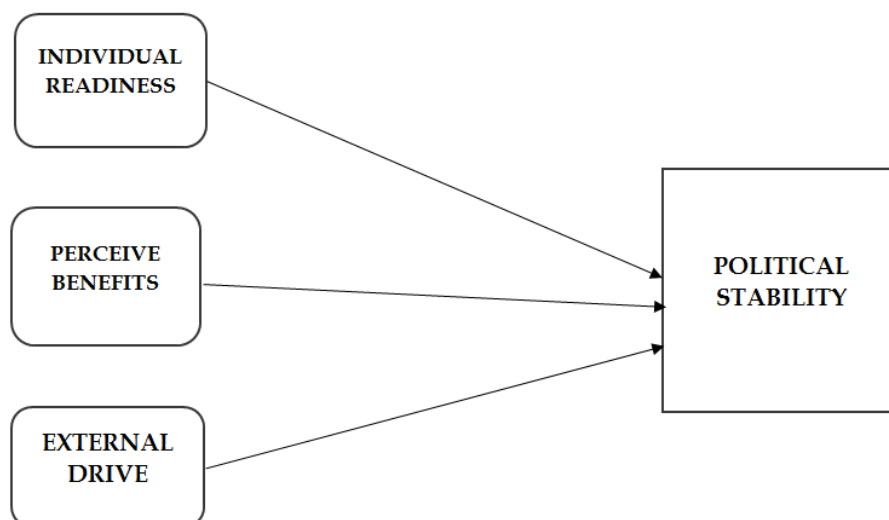
### Electronic Commerce as a Source of Employment

The Internet is dramatically boosting the opportunities for business-to-business and business-to-consumer transactions across the globe as technology leads to the expansion of consumer marketplace to an unprecedented degree [29]. Electronic commerce brings about unique opportunities to both developing and developed nations. Worldwide, millions of people use the Internet to carry out research and to purchase goods and services online. Businesses use internet to advertise their products, generate customers information, or perform other business functions. Thus, the Internet is overwhelmingly essential almost in all businesses. The global level of internet penetration among different continents of the world between 2000 to 2010, suggest that Africa has the highest level of penetration that stood at 2,357.3 % in 2010 [30]. Among these African countries, Nigeria is topping on internet penetration. Empirical evidences have found that internet usage has positive correlation with openness to trade and other business activities [30].

As e-commerce is adopted and expands, its impact on employment creation will be the result of set of interactive forces. Extant literature shows that in the United States and other European countries, ICT-related industries has resulted to employment creation in finance, business and commerce sectors that amount to almost one- third and one-fourth of the countries total employment. More notably, ICT has accounted for 28 and 35% of job creation in the 1990s in the developed

world [31]. More so, preliminary studies indicate that new technologies (e.g. ecommerce) will certainly increase the demand for skilled labour to run them [31]; and there will also be need for new managers to make decision for the ecommerce outlets [32]. Developing countries with pool of skilled labour capable of manipulating the technology of computer are best situated to gain from e-commerce by export expansion.

A typical example is India, which is already benefiting from e-exports in a big way [33]. This study therefore, intends to investigate how e-commerce adoption could mitigate the problem of graduate unemployment for the sustenance of political stability and maintenance of peace and order in Nigeria. Based on the literature above, the research model is depicted below:



**Fig-1: The Research Model**

## **MATERIAL AND METHODS**

### **Measurements**

A structured self-administered questionnaire consisting of 26 closed ended multiple choice-questions are employed for the survey. The instrument comprises 35 questions related to the five constructs of this study and three (5) questions related to demographical variables. To this end, questionnaires was administered to undergraduate Business Education students from Federal College of Education (Tech) Gombe. Electronic commerce adoption is considered by this study as multidimensional variable with three dimensions namely individual teacher graduate readiness, perceive benefits when engage in e-commerce and external drive factors to e-commerce adoption [34]. Individual readiness was measured using items adapted from Yu and Dong [35], indicators for perceive benefits are from Ozlen *et al.*, [36] and external drive dimension measures were adapted from the works of Jumairah [37] with little modification. For the dependent variable i.e political stability, measures were measured using questions adapted from Radu [26].

### **Statistical Technique for Data Analysis**

The study used SEM- PLS 3 software for the analysis of the study. The PLS method is particularly interesting when studies include scales that previous works have validated, and when dealing with complex models [38]. PLS-SEM is particularly deemed appropriate for this research because it enable the simultaneous estimation of several causal relationships between one or more independent variables and dependent variable.

### **Sample of the Study**

According to Hair, Ringle and Sarstedt [39], the rule of thumb considered appropriate for sample size when using PLS-SEM is the rule of ten, which suggests 'ten times the largest number of structural paths directed at a particular latent construct in the structural model'. Hence, in this study, the number of indicators for a construct was three and three structural paths at a time. Hence three multiplied by ten gives 30 cases; thus, our sample 102 respondents could be described as adequate [40]. The Smart PLS 3.0 software with 500 bootstrap samples was used for estimation of significance of the t-values and p-values.

## Data Analysis

**Table-1: Response Rate**

Response Rate	Frequency/Rate
No of administered Questionnaires	102
No of Returned Questionnaires	101
No of Returned Usable Questionnaires	98
No of Returned Excluded Questionnaires	3
No of Not Returned Questionnaires	1
Response Rate	99%
Valid Response	97%

Source: The Researchers

### Response Rate

Thirty- one (102) questionnaires were administered to undergraduate Business Education students from Federal College of Education (Tech) Gombe, Gombe state.

A total of 4 responses were excluded from the analysis because of both univariate and multivariate issues. Isolating such number of questionnaires is

considered essential as they do not represent the actual sample [41].

### Latent Variables Descriptive Statistics

Descriptive statistics for the latent construct used in this study were computed in the form of means and standard deviations. The statistical values of means, standard deviation, were calculated for the independent and dependant constructs.

**Table-2: Descriptive Statistics of Constructs**

Variable	N	Mean	Std. Deviation
Individual Readiness	98	3.880	1.121
Perceive Benefits	98	4.358	.911
External Drive	98	4.187	.967
National Security	98	4.160	.957
Political Stability	98	3.915	.899

Source: The Researchers

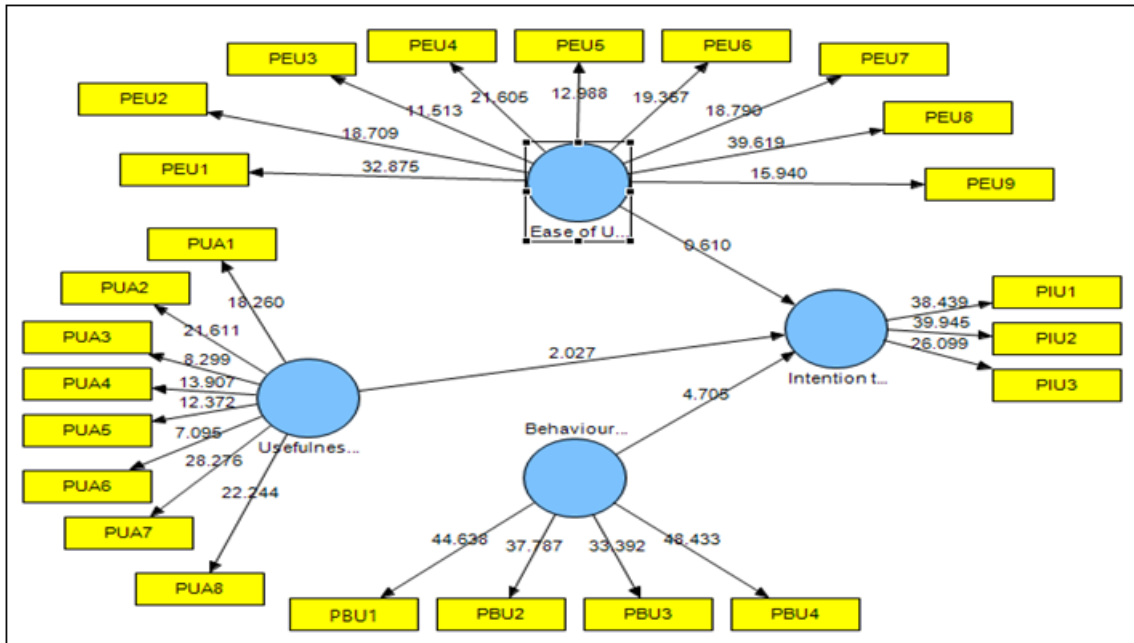
Table-2 above presents the mean and standard deviation of the entire variables used in this study. Individual readiness recorded the highest mean ( $M = 4.358$ ,  $SD = 1.121$ ) while Political stability has the lowest mean ( $M = 3.880$ ,  $SD = 1.121$ ). Conclusively, the entire variables mean were in the range of high level going by Sekaran and Bougie [42], recommendation.

### Assessing the Measurement Model

As the initial proposed theoretical model has been modified, this section presents the revised theoretical framework for clearer understanding of the

hypothesized relationships under investigation. The proposed model has been modified because of the CFA conducted. The PLS confirmatory factor analysis (CFA) has caused some changes in the earlier proposed model because of deletion of some indicators.

The proposed initial model consists of 5 constructs and 26 indicators that were adopted from Ramdaniyah [34]; Ozlen *et al.*, [34]; Jumairah [37] and Radu [26]. After deletion due low loading of some items, the adjusted structural model with 5 construct and 24 indicators is depicted below.



The revised model as shown in Figure 1 indicates the existence of a first order constructs of Perceive Individual Readiness of Use (PEU), Perceive Benefits of Use of Ecommerce (PUA), Perceived External Drive of Usage (PBU) and Perceive National Security and Political Stability (PIU).

**Converging Validity Testing**

Convergent validity for this study was examined using the average variance extracted measure as in the above table. AVE is the average variance shared between a construct and its measures and that AVE for a construct should be greater than the variance shared between the construct and other constructs in a particular model [43].

**Table-3: Items loadings Average Variance Extracted (AVE) and Reliabilities**

	Items	Loadings	AVE	Composite Reliability	Cronbachs Alpha
Perceive Individual Readiness	PBU1	.880	.768	.930	.900
	PBU2	.876			
	PBU3	.865			
	PBU4	.886			
Perceive Benefits	PEU1	.838	.566	.921	.903
	PEU2	.766			
	PEU3	.643			
	PEU4	.771			
	PEU5	.670			
	PEU6	.747			
	PEU7	.755			
	PEU8	.850			
	PEU9	.706			
Perceive External Drive	PIU1	.889	.765	.907	.846
	PIU2	.885			
	PIU3	.849			
Perceive Political Stability	UA1	.754	.506	.889	.857
	PUA2	.791			
	PUA3	.582			
	PUA4	.723			
	PUA5	.667			
	PUA6	.512			
	PUA7	.817			
	PUA8	.784			

Source: The Researchers

**Average Variance Extracted (AVE)**

Table-4 provides results of the AVE calculations with resultant coefficients that range from 0.50 to 0.77, indicating that convergence validity has been established for all of the constructs. With the results of the convergence validity that demonstrated

satisfactory item loadings, composite reliability, and satisfactory AVE coefficients for the individual items, it was evidently enough to confirm that the items/indicators represent distinct latent constructs, hence establishing their convergence validity.

**Table-4: Latent variable correlation**

Variables	1	2	3	4
1. Individual Readiness	<b>.877</b>			
2. Perceive Benefits	.690	<b>.752</b>		
3. External Drive	.675	.539	<b>.875</b>	
4. Political Stability	.755	.725	.616	<b>.711</b>

*Note:* Bold figure are the square roots of AVE

Discriminant validity, on the other hand, concerns with whether measures that should not be related are actually not related. In an attempt to assess the discriminant validity, the square root of the AVE for each construct is used [44]. The square roots of AVE coefficients are then presented in the correlation matrix along the diagonal. The squared AVE should be greater than the squared correlation estimates to provide good evidence of discriminant validity [45]. More specifically, in order to establish adequate discriminant validity, the diagonal coefficients or elements must be greater than the off-diagonal coefficients or elements in the corresponding rows and columns.

Table-4 above shows the results of the discriminant validity analysis of the constructs used in

this study. Along the diagonal, the table shows square roots of AVE for all the constructs indicating a higher square root of AVE for PBU (0.877), and lower for PUA (0.711). However, all the square roots of AVE for the constructs are greater than the off-diagonal coefficients or elements in the corresponding rows and columns, thus, establishing an evidence of discriminant validity.

Having presented the results of the measurement and structured models for this study which indicated that the measures for all the constructs are reliable and valid as seen above, next step is to present the result of the hypotheses tested in the study.

**Table-5: Hypotheses Testing**

Relationship	Beta value	Standard Error	t value	p value	Decision
Individual Readiness -> Political Stability	.235	.126	1.861	.033**	Supported
Perceive Benefits -> National Political Stability	.495	.122	4.051	.000***	Supported
External Drive -> National Political Stability	.181	.087	2.083	.020**	Supported

\*\*\*p<.01, \*\*p<.05

**Source:** The Researcher

Hypothesis 1 assumed that Individual Readiness to use ecommerce is positively related to National Security and Political Stability. The result displayed on Table-5, indicated that Individual Readiness to use ecommerce had a significant positive effect on National Security and Political Stability at ( $\beta = .235$ ,  $t = 1.861$ ,  $p < .033$ ). Hence, supporting the Hypothesis. Hypothesis 2 predicted that Perceive Benefits of ecommerce has positive effect on National Security and Political Stability. More so, Table 5 suggest the existence of positive effect of Perceive Benefits to ecommerce adoption on National Security and Political Stability ( $\beta = .495$ ,  $t = 4.05$ ,  $p < 0.00$ ), supporting Hypothesis 2. Again, Hypothesis 3 proposed that External Drive to ecommerce adoption is positively related to National Security and Political Stability. The result again supported this preposition with value of ( $\beta$

$= .181$ ,  $t = 2.083$ ,  $p < 0.020$ ). Thus, Hypothesis 3 is supported.

**Practical Implication of the Study**

The study was conducted to identify the determinants of how business education students intend to engage in ecommerce. The result of the research suggested that some selected factors i.e individual readiness, perceive benefits and external drive had a direct effect on business student's intention to engage in ecommerce activities. Hence there is potential practical application in the improvement and management electronic commerce.

First, educators and managers as well as other relevant agencies should make an effort in boosting university students' information technology (IT) usage self-efficacy. Support should be provided to build up in

IT and IT related technologies self-efficacy through a kind of seminar or workshop for the students to know more the benefits of the technology because majority of the students don't know the power that IT possess in enhancing their economic pursuit.

Second, subjective norms like readiness, perceive benefits and external drive have been found to be the important constructs that affects intention to engage in ecommerce. Therefore, it will be of good help for the institutions management and lecturers as well other relevant agencies to put more emphasis on ecommerce adoption by offering and introducing greater and variety apps that will assist the students in benefiting from the huge advantage that ecommerce possess in aiding business students learning abilities.

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