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Factors Affecting Use of Computer Statistical Applications among Undergraduate Students of Economics in Ambrose Alli University, Ekpoma

Akinlosotu, N. T.
Department of Economics
Ambrose Alli University, Ekpoma
Edo State-Nigeria
P.O Box 884 Ekpoma, Edo State
E-mail: akintoyosi123@yahoo.com
Tel: +2349037700370

Abstract

This study investigated factors affecting use of computer statistical applications among undergraduate students of Economics in Ambrose Alli University, Ekpoma. The study was concerned with determining the relationship between predictor variables (performance expectancy, effort expectancy, social influence and facilitating conditions) and use of statistical applications. 400 students were drawn by stratified random sampling technique from the population of 808 regular students in the Department of Economics. Instrument used for the collection of data was a survey questionnaire adapted and modified from the work of Abdulwahab & Dahalin (2010). Linear regression technique was used to establish the relationship between the dependent and independent variables at 0.05 level of significance. Findings showed that performance and effort expectancy have no significant relationship with students' statistical application usage ($p>0.05$) while social influence and facilitating conditions are significantly related with students' use of the applications ($p<0.05$). R-square (R_2)

was 0.76 depicting that 76.0% change in students' use of computer statistical applications was determined by the predictors (performance expectancy, effort expectancy, social influence and facilitating conditions). It was recommended for the faculty to create a social forum where students can meet to share knowledge on data analysis and computer statistical application usage.

Key Words: Statistical Applications, Performance expectancy, Effort expectancy, Social influence, facilitating conditions

Introduction

Tertiary institutions are established as a formal agency of education where learning and teaching takes place. According to Federal Republic of Nigeria (FRN) (2013), tertiary education is the education given after post Education in institutions such as Universities and Inter-University Centers such as the Nigeria French Language Village, Nigeria Arabic Language Village, National Institute of Nigerian Languages, Institution such as Innovation Enterprise Institution (IEIs), Colleges of Education, Polytechnics, Monotechnics and other specialized institutions such as Colleges of Agriculture, Schools of Health and Technology and the National Teachers' Institutes (NTI). The goals of tertiary education are to:

a. contribute to national development through high level manpower training;
b. provide accessible and affordable quality learning opportunities in formal and informal education in response to the needs and interests of the Nigerians;
c. provide high quality career counseling and lifelong learning programmes that prepare student with knowledge and skills for self-reliance and the world of work;
d. reduce skill shortages through the production of skillful manpower relevant to the needs of the labour markets;
e. promote and encourage scholarship, entrepreneurship and community service;
f. forge and cement national unity; and
g. promote national and international understanding and interaction (FRN, 2013).

In other to reduce skill shortages through the production of skilful manpower relevant to the needs of the labour market and also promote entrepreneurship and community service, among other goals, the Post-Basic Education curriculum (curriculum for Senior Secondary Education) as stated in the national policy on education (FRN, 2013) consists of four fields of study namely: Science and Mathematics, Technology, Business Studies and Humanities. These fields of studies encompass several subjects that are designed to raise morally upright and well-adjusted individuals who can think independently and rationally, respect the views and feelings

of others and appreciate the dignity of labour, for instance, Humanities among other fields of study encapsulates: Visual Arts, Music, History, Geography, Government, Literature-in-English, French, Arabic, Nigerian Language, Christian Religious Studies, Islamic Studies and Economics.

Economics is one of the non-vocational subjects that is taught at the Senior Secondary School (SSS) level and studied as a Social Science in higher institutions of learning. The word (Economics) originates from the Greek word '*Oikonomikos*' which can be divided into two parts: '*Oikos*', which means 'Home' and '*Nomos',* which means 'Management'. Thus, the epistemological definition of Economics means 'the management of the home or household'. These words were coined from the general household problem that requires every breadwinner to manage the unlimited wants of members within the limited family income. This 'economic truth' could be extended to a nation or society if we consider the society as a 'universal set' while individual families are the 'subset'. Thus, members of the society also face the problem of tackling unlimited wants with the limited resources at their disposal.

In line with this economic problem of limited resources (scarcity), Robbins (1932) in his book titled: '*Essays on the Nature and Significance of the Economic Science',* gave a definition which has become one of the most popular definitions of Economics today. According to him, "Economics is a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses." This definition shows that Economics is a discipline that is concerned with the study of human behaviour in response to how they make choices between or among alternatives on a daily bases-at home, at work and around their immediate environment; in satisfying their numerous wants with limited available resources. Thus, it is a science and like any science subject, the reasoning procedures are methodological while its various theories are scientifically testable for validation.

Conducting a scientific test for a social subject like Economics is quite different from the physical or natural sciences where laboratory tests with test tubes, calibrated glass cylinders, reagents and specimens are used and manipulated under controlled conditions to test hypotheses and conduct experiments. However, due to the erratic and unpredictable nature of humans, Economists rely on data, facts and figures collected from economic units –individual(s), family(ies), business firm(s), the government and the international community. This implies that statistical data from secondary sources and facts collected from surveys are the laboratory items used by students of Economics. Although, analyzing data using non-electronic mediums could make one get in-depth knowledge of the step-by-step procedures to solve economic equations and models. However, collating, sorting and analyzing some data with calculators, pen and paper could be very tedious and cumbersome when a student for instance, is confronted with the challenge of regressing several economic variables say: foreign reserve, exchange rate, external debt and interest rate on gross domestic product

(GDP) over a period of three decades. Hence, the use of computer statistical applications has been a welcome idea among undergraduate students of Mathematics, Statistics and Economics among significant others.

Computer statistical applications refer to programmes or software packages that are designed to solve users' computational problems with the aid of electronic devices that can collect and process data into useful information. Some of these applications as used in the Social Sciences include but are not limited to: Microsoft Excel (Ms-Excel), Gretl, MATLAB, STATA, SAS, E-view (Econometric view) and SPSS (Statistical Package for Social Sciences). Since these applications are software programmes, they do not work independently but need to be integrated into hardware components or computer devices like tablets, desktop and notebook computers, Personal Digital Assistants (PDAs), laptops and smartphones to mention a few. This has to be ensured for every user to utilize the programme effectively.

In Edo State, the use of statistical applications like E-view, Gretl, and SPSS among undergraduate students of Economics in Ambrose Alli University Ekpoma, is not limited to final year students that are undertaking one research or the other but also utilized by students in lower study levels for presenting statistical data in charts, estimating equations, determining the predictive power of economic models and making forecasts. Some of this academic exercises are carried out by students personally or as assigned to them by their course lecturers. However, observation has shown that many of these students avoid going through the 'rigors' of using statistical packages to: input data, analyse them and print out the result for interpretation but rather implore their friends, course mates or the 'big brains' in class to do it for them for little or no reward. Some even pay some money to computer operators and business centre owners within and outside campus, to code their survey data, run regressions and interprete the result for them; even when they have prior knowledge of how to do these things on their own.

Venkatesh, Morris, Davis, and Davis (2003) tried to advance reasons for use or non-use of technological facilities in their theory popularly known as Unified Theory of Acceptance and Use of Technology (UTAUT). In their theory, they argued that the factors affecting the use of technical resources or applications are: performance expectancy, effort expectancy, social influence, facilitating conditions and other indirect determinants like age, gender, and voluntariness. According to Venkatesh *et al.,* (2003), performance expectancy explains how a user can be influenced by how he/she expects an ICT facility to work, over and above his effort. Effort expectancy on the other hand, explains how a user can be influenced by the effort he/she perceives to exert in making use of the facility or application. They defined social influence as external factors in an environment that could influence ones' acceptance or utilization of a technological gadget, while facilitating conditions was described as the

circumstances or situations that permit or resist the use of technological facilities in an environment.

Literature Review

Literature on computer resources usage among undergraduates abound in studies (Attuquayefio and Addo, 2014; Ayankunle and Alan, 2013; Venkatesh, Thong & Xu, 2012; Van-Schaik, 2009; Marchewka, Liu, & Kostiwa, 2007). However, five among them are germane in this study. Their method of study and findings are empirically discussed in this section. Attuquayefio and Addo (2014) used the Unified Theory of Acceptance and Use of Technology (UTAUT) model to determine the strength of predictors for students' intention to accept and use ICT for learning and research. Questionnaires were administered to 400 students in the Social Studies and Business Administration Faculties of Methodist University College, Ghana, with 345 returned (86% return rate). Analysis of Moments Structures (AMOS) 20 and Statistical Package for the Social Sciences (SPSS) 16 were used to analyze the data collected. The measurement and structure model was appraised using Structural Equation Modeling. Effort Expectancy (EE) (0.4, $p < .05$) significantly predicted Behavioural Intention (BI) to use ICT, while Social influence (SI) and Performance Expectancy (PE) were statistically insignificant, as Behavioural Intention (BI) was on Use Behaviour (UB). However, Facilitating Conditions (FC) ($\beta = .26$, $p < .01$) significantly influenced Use Behaviour (UB).

Ayankunle and Alan (2013) in a meta-analytic review of empirical findings on UTAUT analysed 37 selected empirical studies in order to harmonize their empirical evidence. The outcome of the study suggested that only the relationship between performance expectancy and behavioural intention is strong while the relationships between effort expectation, social influence and behavioural intention are weak. Similarly, the relationship between facilitating condition, behavioural intention and use behaviour is also weak. Furthermore, the significance of the relationship between facilitating condition and use behaviour did not pass the fail safe test while the significance of the relationship between behavioural intention and use behaviour did not pass the fail safe test satisfactorily.

Venkatesh, Thong & Xu (2012) extended the unified theory of acceptance and use of technology (UTAUT) to study acceptance and use of technology in a consumer context. The proposed UTAUT-2 (the modified model) incorporated three constructs into UTAUT: hedonic motivation, price value, and habit. Individual differences—namely, age, gender, and experience were hypothesized to moderate the effects of these constructs on behavioural intention and technology use. Results from a two-stage online survey, with technology use data collected four months after the first survey, of 1,512 mobile internet consumers, supported the model. Compared to UTAUT-1, the

extensions proposed in UTAUT2 produced a substantial improvement in the variance explained in behavioural intention (56 percent to 74 percent) and technology use (40).

Van-Schaik (2009) explored the application UTAUT to websites used by students in higher education. Both prescribed websites and user-selected sites were studied using a non-experimental research design and questionnaire-based measures. The results support direct and moderated effects of technology-acceptance variables on acceptance outcomes in the research model, supporting UTAUT. As predicted, the research model—based on UTAUT—was more successful in explaining the acceptance of a prescribed library site than that of a prescribed virtual learning environment. The model was also successfully applied to user-selected websites. User-selected sites were especially intrinsically motivating. The effect of intrinsic motivation on performance expectancy, mediated by effort expectancy was confirmed. The results demonstrate the broad scope of applicability of UTAUT and motivate its recommended wider use.

Marchewka, Liu & Kostiwa (2007) applied the UTAUT model for understanding student perceptions using course management software. An online survey was developed based on the instrument developed by Venkatesh *et al.* (2003). Data were collected from October 2006 through April 2007. The subjects were undergraduate (50%) and graduate (50%) business school students at a large Midwestern university in the United States where the use of Blackboard® (a course management software) was strongly encouraged. One hundred thirty-two students from the university's college of business participated in the survey. The survey form was designed using ASP.Net in the Visual Studio 2005 platform. The respondents filled in the answers by clicking appropriate boxes and submitted their responses to a Web server, which was used to administrate the survey. Descriptive and inferential statistics including percentages and spearman brown correlation was used to analyse the correlation in the study. In their study, mixed support for this UTUAT model was found in terms of the reliability of the scale items representing the UTAUT constructs and the hypothesized relationships. From the foregoing, the results are quite unequivocal with mixed support for UTUAT constructs. Hence, this study investigates the applicability of the UTUAT model in explaining use of computer applications for data analysis among Economics undergraduates in Edo State, Nigeria.

Theoretical Framework

Venkatesh, Morris, Davis, and Davis (2003) proposed the unified theory on acceptance and use of technology (UTAUT) by integrating eight famous models/theories from diverse disciplines. The models/theories were integrated in terms of their conceptual differences as well as empirical resemblances (Yi, Jackson, Park & Probst, 2006 cited in Abdulwaha, & Dahalin, 2010). The idea behind the unification of these models/theories is to arrive at a unified view of user acceptance of IT (Venkatesh

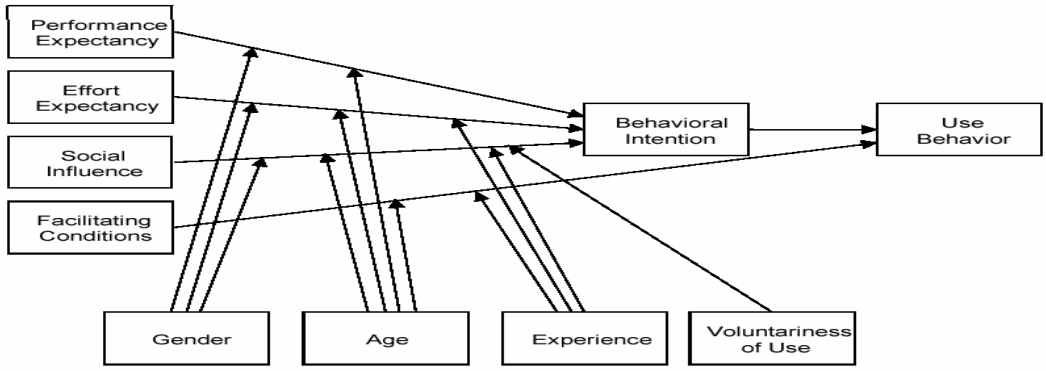
et al. 2003). The eight models/theories used include: The Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975); Technology Acceptance Model (TAM) by Davis (1989); the Theory of Planned Behaviour (TPB), Ajzen (1991). The Combined TAM and TPB (C-TAM-TPB), Taylor and Todd (1995), the Diffusion of Innovation (DOI) Theory, Rogers (2003); the Social Cognitive Theory (SCT), Bandura (1986), the Motivational Model (MM) by Davis, Bagozzi and Warshaw (1992) and the Model of PC Utilization (MPCU) by Thompson, Higgins & Howell (1991) (Abdulwaha, & Dahalin, 2010).

The Unified Theory on Acceptance and Use of Technology (UTAUT) focuses on why people accept to use information and technological resources and media. The theory aims to explain user intentions to use computers and technological facilities and their subsequent usage behaviour. The major tenet of the theory is founded on four key constructs:

- Performance expectancy;
- Effort expectancy;
- Social influence, and
- Facilitating conditions

Venkatesh *et. al* (2003) noted that the above mentioned constructs, are direct determinants of computer and technological resources acceptance, usage intention and behaviour while gender, age, experience, and voluntariness of use, only moderate the impact of the four key constructs on usage intention and behaviour. Therefore, adoption and utilization of technological resources depend largely on the: performance expectancy, effort expectancy, social influence, and facilitating conditions rounding the intending user. This is diagrammatically illustrated in Figure 1 below.

Figure 1: Diagram/Schematic of UTAUT Theory



Source: Venkatesh *et al.* (2003), p.447

Conceptual Framework

The conceptual model of this research was adapted from UTAUT theory (see, Figure 2). UTAUT has been utilized in previous studies (Abdulwaha, & Dahalin, 2010; Van-Schaik, 2009; Marchewka, Liu & Kostiwa, 2007). Abdulwaha, & Dahalin (2010) modified it by putting forward a model with management effectiveness and program effectiveness constructs towards user acceptance of tele-centre. Therefore, they included other variables (anxiety, management and programme effectiveness) to the four major constructs of UTAUT-performance expectancy, effort expectancy, social influence and facilitating conditions. However, Venkatesh *et al.* (2003) noted that the four aforementioned constructs are the major determinants of technology use behaviour among prospective users. Consequently, the conceptual model of the study is diagrammatically shown in Figure 2 below:

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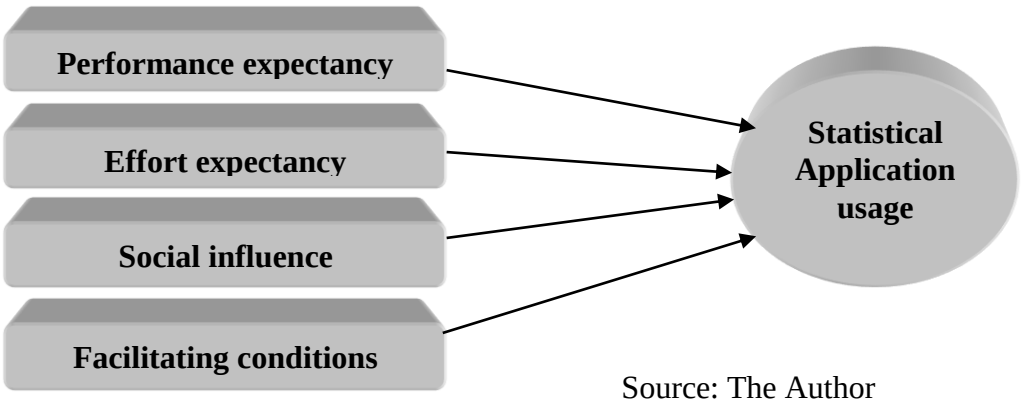
Figure 2: Conceptual Model



Source: The Author

Hypotheses

Based on the theoretical and conceptual framework, the hypotheses of the study are given below:

1. Ho: Performance expectancy does not significantly predict statistical application usage among undergraduate students of Economics in Ambrose Alli University, Ekpoma
2. Ho: Effort expectancy does not significantly predict statistical application usage among undergraduate students of Economics in Ambrose Alli University, Ekpoma
3. Ho: Social influence does not significantly predict statistical application usage among undergraduate students of Economics in Ambrose Alli University, Ekpoma
4. Ho: Facilitating conditions does not significantly predict statistical application usage among undergraduate students of Economics in Ambrose Alli University, Ekpoma

Methods

This study adopted the ex-post facto research design to examine the factors affecting use of statistical application among undergraduate students of Economics in Ambrose Alli University, Ekpoma. The ex-post facto research design was considered appropriate because the study was concerned with determining the causal-relationship between a set of predictor variables (from the UTUAT) and use of statistical applications among undergraduate students in an institution. The population of this study covers all the 808 undergraduate students in the department of Economics from 100 to 400level in the 2014/2015 academic session. Stratified random sampling technique was adopted for the study. 100 regular students per stratum (100 to 400level) were drawn as sample, thereby making the sample size 400 participants (approximately 50% of the population).

The instrument used for the collection of data was a survey questionnaire adapted and modified from the work of Abdulwahab & Dahalin (2010). The questionnaire was titled: Statistical Application Usage Questionnaire-SAPUQ. The questionnaire was divided into: Section A and B. Section A contains questions dealt with demographic characteristics of the respondents: their gender and study level while Section B contains twenty (20) items. Four items were raised each to collect data on statistical application usage among undergraduates and the predictor variables from UTUAT (performance expectancy, effort expectancy, social influence and facilitating conditions). The items on the predictors were adapted and modified from the work of Abdulwahab & Dahalin (2010) titled: "a conceptual model of Unified Theory of

Acceptance and Use of Technology (UTAUT) modification with management effectiveness and program effectiveness in context of telecentre". The modifications were done to suite the study. For instance, one of the items on performance expectancy - "Using ICTs in Telecentre help in accomplishment of job more quickly," was changed to: "Using statistical applications will help to analyse a data more quickly." However, all the items on Statistical Application usage were self-developed. All the items in Section B were rated and coded on a four point likert scale: Strongly Agreed (SA) _4, Agreed (A) _3, Disagreed (D) _2 and Strongly Disagreed (SD) _1.

The construct validity of the instrument was carried out by two experts in the Department of Economics and Statistics (University of Benin, Ugbowo). After that, the test-retest method was used to determine the reliability of the instrument with 25 Economics students on part-time studies in Emaudo campus of Ambrose Alli University, Ekpoma. The instrument was administered to them and re-administered after a few days to the 25 students in the pilot study. Their responses in the first and second test were correlated using the Kendall's tau-b correlation technique. A reliability test yielded an r-value of 0.82; depicting that the instrument is reliable. The linear regression technique was used to establish the relationship between the dependent and independent variables using the Statistical Package for Social Science (SPSS) 20. The test was performed at 0.05 level of significance.

Results

The result from the test of hypotheses is presented in this section

Table 1: Summary of the linear regression result on the relationship between students' statistical application usage and predictors

coefficients[a]

model	unstandardized coefficients		standardized coefficients	t	sig.	95.0% confidence interval for b	
	b	std. error	beta			lower bound	upper bound
(constant)	.425	.107		3.990	.000	.216	.635
performance.expectancy	-.028	.031	-.028	-.892	.373	-.089	.033
effort.expectancy	.057	.039	.048	1.459	.145	-.020	.133
social.influence	2.093	.088	1.713	23.670	.000	1.919	2.267
facilitating.conditions	-1.298	.108	-1.039	-12.016	.000	-1.510	-1.085

a. dependent variable: students.statistical.application.usage

Source: Author's computation on SPSS

Result in Table 1 shows that performance and effort expectancy has no significant relationship with students' statistical application usage (p >0.05). However,

social influence and facilitating conditions are significantly related with students' use of statistical applications ($p<0.05$). Therefore, the result shows that social influence and facilitating conditions are significant predictors of statistical application usage among undergraduate students of Economics in the institution.

Table 2: Model Summary on the relationship between students' statistical application usage and predictors

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df_1	df_2	Sig. F Change
1	.876[a]	.767	.764	.313	.767	313.533	4	382	.000

a. Predictors: (Constant), Facilitating. conditions, Performance. Expectancy, Effort Expectancy, Social Influence

Source: Author's computation on SPSS

Result in Table 2 shows that the coefficient of determination (R-square) is 0.767. This R-square value indicates that 76.7% change in the use of computer statistical application among Economics students is explained by the predictors (performance expectancy, effort expectancy, social influence and facilitating conditions). The f-change (313.53) is significant ($p <0.05$); depicting that the model is statistically significant. This further implies that the theory (UTAUT) is relevant and applicable in explaining factors affecting use of computer statistical applications among undergraduate students of Economics in Ambrose Alli University, Ekpoma.

This result concurs with the findings of Van-Schaik (2009) who explored the application UTAUT to websites used by students in higher education. Although, he confirmed the effect of intrinsic motivation on performance expectancy, mediated by effort expectancy which is not consistent with the result of the study. However, his result demonstrates the broad scope of applicability of UTAUT and motivates its recommended wider use. Similarly, Marchewka, Liu & Kostiwa (2007), exploring the UTAUT model for understanding student perceptions using course management software, found mixed support for the UTUAT model in terms of the reliability of the scale items representing the UTAUT constructs and the hypothesized relationships.

Conclusion

Social influences and facilitating conditions engender interest of Economics students in Ambrose Alli University in employing statistical applications for various academic and research exercises that are in partial fulfillment of the requirements for the award of a Bachelor of Science degree in Economics. It is concluded that social influences which could arise from using what everyone is using, "keeping up with the joneses;" or testimonies of friends about the use of statistical applications; play a crucial role in sensitizing students towards the use of computer applications for data analysis.

Recommendations

The following recommendations are made:

1) Lecturers in the Department of Economics (Ambrose Alli University Edo State), that teach Econometrics, Micro-Economics, Macro-Economics, Statistics and Mathematical Economics among other courses, should endeavour to make their lessons understandable and applicable to contemporary situations in the economy. This could be done by using prevailing economic problems to validate or criticise long existing theories.
2) A social forum (where undergraduate students can meet to discuss on a regular basis) should be created by executive members (EXCOs) of the Nigerian Economics Students Association (NESA) in the department, to promote knowledge sharing on data analysis and use of statistical applications in facilitating research development in the institution.

References

Abdulwahab, L. & Dahalin, Z. M. (2010). A conceptual model of Unified Theory of Acceptance and Use of Technology (UTAUT) modification with management effectiveness and program effectiveness in context of Telecentre. *African Scientist Journal,* 11(4): 267-275.

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Process,* 50(1):179-221.

Attuquayefio, S.N. & Addo, H. (2014). Using the UTAUT model to analyze students' ICT adoption. *International Journal of Education and Development using Information and Communication Technology (IJEDICT),* 10(3):75-86.

Ayankunle, A. T. & Alan, G. D. (2013). The theory of user acceptance and use of technology (UTAUT): A meta-analytic review of empirical findings. *Journal of Theoretical and Applied Information Technology,* 49(1): 48-58.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliff, NJ: Prentice Hall.

Davis, F. D., Bagozzi, R. P. & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology,* 22:1111-1132.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly,* 13(3):319-340.

Federal Republic of Nigeria (2013). *National policy on education.* (6th Edition). Yaba-Lagos: NERDC Press.

Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research.* Reading, MA: Addison-Wesley.

Marchewka, J. T. Liu, C. & Kostiwa, K. (2007). An application of the UTAUT model for understanding student perceptions using course management software, *Communications of the IIMA,* 7(2):93-104.

Robbins, L. (1932). *An essay on the nature & significance of Economic Science.* St. Martin's Street, London: Macmillan and Co., Limited.

Rogers, E. (2003). *Diffusions of innovations*, New York: The free press.

Taylor, S. & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research,* 6(2): 144 -176.

Thompson, R. L. Higgins, C. A. & Howell, J. M (1991). Personal computing toward a conceptual model of utilization. *MIS Q quarterly,* 15(1): 125-143.

Van-Schaik, P. (2009). Unified theory of acceptance and use for websites used by students in higher education. *Journal of Educational Computing Research,* 40(2): 229-257.

Venkatesh, V. Morris, M. G, Davis, G. B & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(4): 425-478.

Venkatesh, V. Thong, J. Y. L. & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly,* 36(1): 157-178

Yi, M. Y, Jackson J. D, Park, J. & Probst, J. C (2006). Understanding IT acceptance by individual professionals: Toward an integrated view. *Information Management View*, 43(3): 350-363.

Survey Items: Statistical Application Usage Questionnaire-SAPUQ

This questionnaire is designed for undergraduate students of Economics in Ambrose Alli University (A.A.U), Ekpoma. Respondents are required to fill both Section A and Section B parts of this questionnaire.

SECTION A: [demographics]

Gender: Male [ ] Female [ ]

Study level: 100level [ ] 200level [ ] 300level [ ]400level [ ]

SECTION B:

Instruction: Below are several personal statements about the use of statistical applications. We are only interested in knowing your opinion about each statement. Please indicate your level of agreement or disagreement with each statement using the scales below

S/N	ITEMS	Strongly Agree	Agree	Disagree	Strongly Disagree
	Statistical application usage				
1	I make use of statistical applications like E-views or Gretl for estimating economic models				
2	I use spreadsheet applications like Microsoft excel (Ms-Excel) for summing up data				
3	I use the Statistical Package for Social Science (SPSS) for coding and analyzing data				
4	I use draw charts with statistical applications to illustrate data myself				
	Performance expectancy				
5	Computer statistical applications would perform better than calculators				
6	Using statistical applications will help to analyse a data more quickly				

7	Using statistical applications will enhance my knowledge on statistics				
8	Using statistical applications will help to present a data more orderly				
	Effort expectancy				
9	I find using statistical applications easy.				
10	Using statistical applications can be very flexible				
11	Using statistical applications does not take so much effort				
12	Operating statistical applications for data analysis is not stressful				
	Social influence				
13	My lecturers think I should use statistical applications				
14	My course mates who are important to me think I should use statistical applications				
15	My friends in other institutions encourage me to use statistical applications				
16	My school mates tell me about the benefits of using statistical applications				
	Facilitating conditions				
17	I have books that can teach learners how to use statistical applications				
18	I have been taught how to use statistical applications.				
19	I have a personal computer to use statistical applications				
20	I have access to get any statistical data that I need for analysis				