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(L-R) ANAN Chief Executive Officer, Dr. Nuruddeen Abba Abdullahi, FCNA, ANAN President, Prof. Benjamin Chuka Osisioma, FCNA, and the Deputy Governor of Ekiti State, Otunba Bisi Egbeyemi at the Opening Ceremony of the 6th Session of the MCPD Programme held at Ekiti State in December, 2021

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Editorial

The editorial board welcomes you once again into the fourth quarter of Volume 29 No.4. edition of the Certified National Accountant. We urge our readers to make good use of the articles applicable to their areas of interest or sectors they are involved in to improve their practice as well as the general improvement of enterprise, be it government or private.

This journal in particular is an indispensable resource for accountants and other researchers, along with the exploratory and innovative works in the tracks. It offers valuable insights into the development of Accounting Profession, Financial institutions and related fields, such insights can be found in the following articles:

* Evaluation of firms' financial statement figures under Nigerian GAAP and IFRS reporting regimes across economic sectors in Nigeria
* Ownership Structure and Directors' Tunneling of Listed Non-Finance Firms in Nigeria
* Effect of employee cost on the financial performance of commercial Banks in Nigeria
* Innovation and sustainability of small and medium scale enterprises in Enugu metropolis
* Impact of economic governance on socio economic development in Nigeria
* The relationship between internet and entrepreneurship: Information system perspective in Nigeria

Once again, we, the board members, welcome you to this volume as you navigate through the educative articles presented to further broaden your knowledge and improve professional competencies.

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CALL FOR PAPER

The Certified National Accountant Journal (CNAJ) invites unpublished, original, empirical, professional and high quality research work written in English from interested and related scholars, researchers and practitioners for publication on quarterly basis. The research areas of the papers for publication include among others: Current Challenges and Emerging Issues in the Accounting Profession, Financial Accounting and Reporting, Forensic Accounting and Internal Control Systems, Cost and Management Accounting and Management Information System. Financial Management and Control. Energy Finance and Renewable energy. Taxation, Tax Policy and Implementation. Corporate Governance and Economic Development, Corporate Social Responsibility and Financial Reporting, Accounting Theory and Disclosure. Electronic Accounting, Environmental, Petroleum and Solid Minerals Accounting, Human Resource Accounting. Public Sector Accounting and Reporting. Budgeting System and Implementation Crisis, Contemporary Issues in Accounting. Auditing and Accounting Standards and Institutions. Accounting Ethnics, The Position of IFRS in the Nigerian Accounting Practice, Financial Reporting and the Nigerian Financial Regulations and any other accounting related areas.

FORMAT OF THE MANUSCRIPT

Manuscript should be written in English (if it is written in French, English translation must be included). The Manuscript should not be more *than 16 pages on A4 type paper with 1 inch margin for the top and bottom while the right and left hands margin should* take 1.25 inches each. The reference should be in the current APA style. Times New Roman with 12 font size of one and half line spacing are to be adopted. There should be separate cover page to contain the title of the work, the author(s)' full names and titles, addresses, institutional affiliation, phone number and e-mail address and abstract of the work should not be more than 300 words. The keywords of four to six words should also be included in alphabetical order. Microsoft words should be used. The work should be structured into Introduction, Literature review. Methodology, Results, Discussion and Conclusion, References and Appendices (where applicable). The manuscript should be numbered consecutively on the bottom centre. Manuscript that does not conform to these guidelines may be returned to the author for compliance before review. All manuscripts are subjected to blind review by experts in the specialized area to ensure relevance, contribution, acceptance or otherwise before final necessary action by the Editorial Board of CNAJ.

ONLINE SUBMISSION

All manuscripts should be submitted electronically as attachment to our e-mail: anandpubcommittee2021@gmail.com. The journal is quarterly: submission of manuscript shall be acknowledged within two days. Authors should note that publication in CNAJ is free of charge as contribution of ANAN to the development of accounting research in Nigeria.

Evaluation of Firms' Financial Statement figures under Nigerian GAAP And IFRS reporting regimes across economic sectors in Nigeria

Ogechi Eberechi Alpheaus, PhD *

Abstract
The objectives of this paper are to provide a cross-sector assessment of the level of IFRS implementation in Nigeria, and compare financial statement figures of listed entities prepared using the Nigerian Generally Accepted Accounting Principles(NGAAP) with their IFRS-restated equivalents. An implementation disclosure checklist was used to determine the implementation level on eighteen IAS/IFRS standards using content analysis. Financial statements of twenty-one listed entities from ten sectors in the Nigerian economy were analyzed for the period 2012 to 2018. Paired samples of NGAAP-based financial statement figures and IFRS-restated equivalents for the year preceding the year of IFRS adoption were also obtained and tested for significant differences. Results indicated high level of IFRS implementation across economic sectors in Nigeria; with the financial services sector recording the highest index of 0.925 while the agricultural sector had the least compliance index of 0.658. The paired samples t-test results revealed significant mean differences between NGAAP-based and IFRS-restated financial statement figures on Return on Assets(ROA) and Net Income(NI), whereas the mean differences in Earnings Per Share(EPS), Total Assets(TA), Book Value of Equities(BVE), and Property, Plant and Equipment(PPE) were not statistically significant. The paper concludes that while the level of IFRS implementation by firms in Nigeria is generally high across the sectors, observable differences between NGAAP-based and IFRS-restated financial statement figures are not uniform but varied with accounting figures. The paper therefore recommended that corporate bodies, governments and financial reporting regulators should strengthen compliance through capacity building opportunities, setting implementation targets and granting fiscal and other compliance incentives to sustain high compliance to set standards and enhance the attractiveness of corporate entities at global investment markets.

Keywords: Financial reporting standards, Implementation level, NGAAP-based reporting, IFRS-restatement, Financial statement figures.

Introduction
International Financial Reporting Standards (IFRS) is a principle–based accounting standard issued by the IFRS Foundation and the International Accounting Standards Board (IASB) to provide a common language for business affairs across international boundaries. Its implementation is not just about changing accounting policies of corporate entities; its influence covers all aspects of a company, including financial reporting systems, internal controls, treasury, management compensation, taxes, and cash management, among others.

Prior to 2001, the IASB existed as the International Accounting Standards Committee (IASC) – the first international standard setting body which was formed in 1973 by sixteen (16) professional accountancy bodies across the globe (Abata, 2015). The IASC originally published IAS, many of which were adopted by the IASB on its inception in 2001. As at August 2019, there are 16 IFRS and 29 IAS, and it is expected that IAS will be replaced with IFRS once it is finalized and issued by IASB (https://www.wikiaccounting.com/list-ifrs-ias/).

The origin of IFRS adoption is traced to the agreement in 2002 by members of the European Union (EU) that starting from January 1, 2005, IFRS would be applied

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for consolidated accounts of the EU listed companies. It was an attempt to harmonize accounting reporting and practice across the European Union, but the benefit of the harmonization stimulated interest on the concept around the world. It was designed to serve as a common global language for business affairs to enable accounts prepared by companies to be comparable and understandable across international boundaries. The standard therefore emerged in response to growing international shareholding and trade, and are fast replacing many different domestic/national accounting standards. IFRS set common rules so that financial statements can be consistent, transparent and comparable around the world.

Before the agreement by EU member countries, individual countries adopted their domestic accounting standards. Following globalization of business and increase in cross border transactions among nations, justifications were made for the global economy to adopt a common set of financial reporting rules that can be consistent, transparent and comparable around the world. The standard was intended to enhance access to international markets, offer comparability, lower transaction costs, reduce information asymmetry, and opportunities for accounting manipulation and stimulate greater international investment with positive impacts on firms' stock returns and financial performance measures (Ibanichuka & Asuquo, 2018; Epstein, 2009; Ahmed, 2010 and Madawaki, 2012). More importantly, for the Nigerian government, joining other countries of the world to embrace the new accounting standard is expected to enhance financial reporting quality and make entities in Nigeria to be more attractive and accessible to capital from both local and foreign investors. Consequently, government approved a three-phased transitional arrangement for the adoption of IFRS in the country beginning from January 1, 2012 for three consecutive years.

Following the approval for the commencement of IFRS adoption by Nigerian Government, a number of reservations were expressed by many stakeholders. There were agitations that bothered on political/sovereignty considerations, while others were concerned with economic factors as to whether a single set of reporting standards can truly meet the needs of economies at different stages of development. It was further argued that capacity building to unlearn reporting rules previously acquired under the domestic accounting standards and the training resources needed to adapt to the new standards may not be readily available at affordable costs in developing/emerging economies like Nigeria, just as upgrading of information reporting technology to align with the new accounting standards may constitute serious setbacks for entities in such jurisdictions (Akinyemi, 2012). It was equally argued that the adoption will depress financial statement figures when compared with the NGAAP-based financial statements, and thus create no economic advantage or inducement for adopting entities in Nigeria. These concerns were speculated to inhibit the level of implementation of IFRS by listed entities across economic sectors in the Nigerian Stock Exchange (NSE).

Many researchers have sought and found explanations for low level of compliance to IFRS in different parts of the world and thus provide policy direction on the factors that should be targeted for mitigation if appreciable progress should be achieved in the level of IFRS adoption. For instance, Obazee (2007) reviewed the principal factors affecting the implementation of IFRS in Europe, America and the rest of the world and noted that cultural issues, mental models, legal impediments, educational needs and political influences were more prevalent than the most widely perceived technical issues. Cairns, (2001) linked the problem to the failure of auditors to express opinion on IFRS compliance or non-compliance and concluded that the major challenge for implementation of IFRS centred on enforcement mechanisms of IFRS especially in jurisdictions with weak institutions and enforcement agencies. Ball (2006) evaluated the challenges faced by countries in implementing IFRS and reported that changing culture and hindrances in developing systems of regulation and accountability are major deterrents. He reported the existence of cultural, language, regulatory/legislative challenges as well as increasing demands for greater accountability and wider political participation by countries as impediments to IFRS adoption.

Rong-Ruey (2006) identified implementation challenges of IFRS to include timely interpretation of standards, continuous amendment to IFRS, accounting knowledge and expertise possessed by financial statement users, preparers, auditors and regulators.

UNCTAD, (2008) reported the challenges of adopting IFRS to include the gap between education in Kenya and the requirements of IFRS, the lack of training and inability of accountants and professional bodies in Kenya to remain abreast of the standards issued by IASB and lastly, lack of Kenya's representative in the standard setting process. Presenting the position as it affects African continent, Katto (2010) equally noted that the lack of professional accountants, lack of awareness of the value of audit and professional accounting bodies and stock exchanges do not exist in all African countries to promote financial reporting. South Africa is not left out as some of the challenges they will face relate to high cost of convergence and implementation, the realization that the complexity around the standards was greater than anticipated.

In Nigeria some of the challenges of the implementation of IFRS as posited by Abdulkadir (2012) include poor enlightenment campaign, shortage of manpower for IFRS implementation, associated problems in higher institutions, lack of training resources, the tax implication, Another problem inherent with the adoption of IFRS is the universal tendency to resist change (NASB 2010). Gambari (2010) stated that successful adoption of IFRS entails assessing technical accounting, tax implications, internal processes, and statutory reporting, technology infrastructure, and organizational issues. Adejoh and Hasnah (2014) reported that IFRS implementations possess major challenges for tax practice in Nigeria advising that implementation of IFRS should not be a rushed decision because of the daunting effects it could have on the economy.

These reasons however should not form basis for major decisions because what good will a financial statement be if being reported under the IFRS standard becomes irrelevant, untimely, costly, incomprehensive, unreliable, does not give faithful representation to the stakeholders. Therefore, developing countries should pursue international harmonization of these accounting standards as far as they do not hamper the local accounting needs, laws and regulations. Also one of the main objectives for proposing the IFRS is to achieve a globalized capital market whereas most developing countries, Nigeria inclusive, possess weaker or no capital, then surely adopting these standards can be disastrous to some degree (Ayuba, 2012).

However, assessment of progress towards the global adoption of IFRS around the world indicates that out of 166 jurisdictions monitored/profiled by IFRS Foundation and IASB, about 144 countries including Nigeria have complied with IFRS as at September, 2019. The jurisdictions profiled represent over 98% of the world's GDP, and so provide an accurate picture of global IFRS adoption. Analysis of the profiles by the number of listed companies indicate that of the approximately 49,000 domestic listed companies on the 93 major securities in the world, over 29,000 use IFRS, and only three countries are yet to have entities that adopted IFRS (IASB Guide to IFRS Adoption). These progress reports provide impressive global perspective to the compliance level of IFRS by jurisdictions. However, within individual countries, and in particular in Nigeria, there is need to determine the commitments to IFRS (level of compliance by listed entities and by sectors) in the economy, and thus identify entities and sectors that require greater monitoring and supervisory controls to induce greater compliance. There is also need to ascertain whether NGAAP-based financial statement figures differ significantly from their IFRS-restated equivalents. These constitute the central problems which the present study investigated. Specifically, the objectives of this paper are to:

1. Ascertain the distribution of IFRS implementation level by listed entities across different economic sectors in Nigeria
2. Evaluate the difference between NGAAP-based financial statement figures and IFRS-restated equivalents of listed entities in Nigeria.

The paper tested six sub hypotheses derived from one main hypothesis. The main hypothesis is stated viz:

H0: There is no significant difference between the means of NGAAP-based financial statement figures and their IFRS-restated equivalents of listed entities in Nigeria.

The remaining pages of this paper are devoted to the methodology adopted in collecting the required data for meeting the stated objectives and for testing for the problems as hypothesized, and on the basis of which policy recommendations were made.

Methodology

Ex-post facto research design was adopted in extracting pre-existing financial statement figures of 21 listed entities purposively selected from ten sectors of the Nigerian economy based on specified criteria. Paired samples of financial statement figures on Earnings Per Share (EPS), Return on Assets (ROA), Net Income (NI), Total Assets (TA), Book Value of Equities (BVE), and Property, Plant and Equipment (PPE) under the two financial reporting treatments (NGAAP and IFRS) for the year preceding the year of adoption of the new standard were extracted and compared. Also, an IFRS Implementation Disclosure Checklist was drawn and used in constructing the proxy for IFRS implementation. The Checklist contains relevant and applicable question items on eighteen (18) IAS/IFRS standards, all totaling eighty-seven (87) item questions based on sufficient and adequate coverage of reporting/disclosure requirements in each of the standards.

Each item question in the Checklist was scored based on the assumption that each item implemented is equally important and provides a neutral assessment of the items, while reducing subjectivity (Cooke, 1989). The scoring process is dichotomous and followed the procedure used by Wallance and Naser (1995), Shehata, et. al., (2014) and Tapang (2016). Thus, each item on the Checklist was assigned a value of '1' if implemented and '0' if the item is assumed relevant but not implemented. Items that are not applicable and items that are unknown to the researchers were coded 'NA' (Not Applicable). The score (index) for each standard is the ratio of actual disclosure of that standard divided by applicable disclosure of the standard; excluding non-applicable items of the standard.

The index was computed for the 18 IAS/IFRS for each year that the standard was adopted by an entity. The yearly IFRS Implementation Index (IFRSII) for a company was then computed by dividing the number of items that was implemented on the Checklist by the number of possible items. Thus:

$$IFRSII = \frac{TI}{(TI+TNI)}$$

Where,

IFRSII = IFRS Implementation Index for an entity in a particular year.

TI = Total Implemented question items with scores of "1" on the Checklist in a particular year.

TNI = Total Not Implemented relevant question items with scores of "0" on the Checklist in a particular year.

The resulting index was used as data for assessing the level of disclosure on IFRS implementation by listed entities in each of the ten sectors studied.

Validation of IFRS Implementation Disclosure Checklist

The Disclosure Checklist was validated by five experts in the field of accounting (two senior academics, two practicing Accountants, and one experienced staff of Financial Reporting Council of Nigeria) to ascertain the appropriateness of the item questions in the Checklist. Their comments and corrections on the question items were reflected. Fifteen (15) financial statements of some companies that were not included in the sample used for the study were sourced, marked IFRS-1 to IFRS-15 and given to each of the five validators for scoring using the IFRS Implementation Disclosure Checklist. The rating scores are shown in Appendix 1. Kendall's Coefficient of Concordance (Kendall's W) was used to determine the degree of agreement among the scorers. With Kendall's W = 0.913 as reported in Appendix 2, the test statistic shows high level of agreement among the raters, and thus affirms that the instrument is reliable.

Descriptive statistics were used to describe the data while the Paired Samples T-test was used to determine whether there is any statistical evidence to show that the mean differences between paired observations (NGAAP-based and IFRS-restated accounting figures on specified outcomes) significantly differed.

Results and discussions

Results from the data analyzed are reported in two sub sections.

a) Level of IFRS Implementation in Nigeria

A cross sector overview of the level of IFRS implementation in Nigeria based on the Index obtained using IFRS Implementation Disclosure Checklist is presented in table 1.

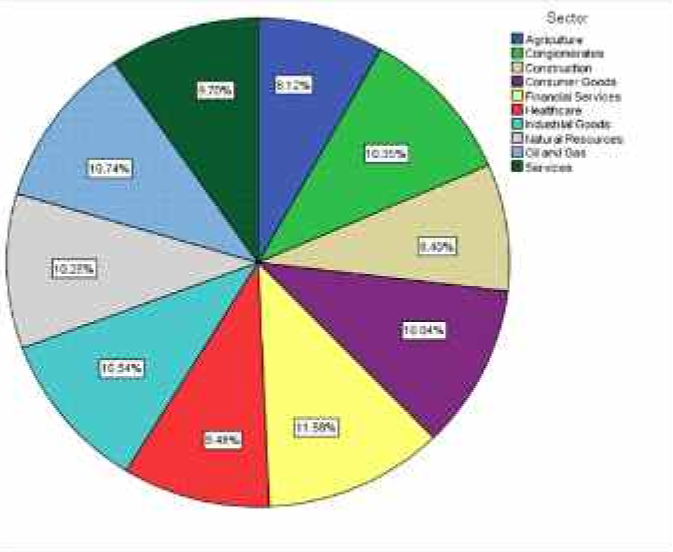
Table 1: IFRS Implementation level in different economic sectors.

	No of Financial Statements	Min	Max	Mean	Ranking on IFRSII	Std. Deviation
Agriculture	7	.65460	.73250	.6637571	10	.06336647
Conglomerates	7	.76540	.87960	**.8454857**	**5**	.05418045
Construction	7	.66120	.72670	.6865000	9	.02686503
Consumer Goods	21	.76558	.98570	**.8857429**	**2**	.07548755
Financial Services	14	.87130	.98970	**.9458929**	**1**	.05473143
Healthcare	14	.65980	.98680	.7749786	8	.09919868
Industrial Goods	21	.76850	.90940	**.8610381**	**4**	.04896744
Natural Resources	14	.65640	.98930	**.8373286**	**6**	.11113170
Oil and Gas	21	.76580	.98730	**.8772857**	**3**	.04919377
Services	21	.65480	.98960	.7928190	7	.11966416
Grand Total / Mean	**147**			.817073		

Source: Computed with IFRS Implementation Disclosures Index based on content analyses of published financial statements of selected companies.

A total of 147 financial statements published by the 21 selected entities were scored using the Disclosure Checklist. With a grand mean of .817, table 1 indicates that the level of IFRS implementation by listed entities across the ten economic sectors investigated is generally high. Six (6) sectors as highlighted under the mean column in the table, have mean implementation indices that are above the grand mean figure. The Financial Services sector had a mean implementation index of .946 to lead firms in other sectors in complying with IFRS. This may not be unconnected with the high reporting requirements imposed on banks and other financial institutions that operate within the sector by the supervisory authorities. The Consumer Goods, Oil and Gas, Industrial Goods and Conglomerates sectors followed in that sequence with mean implementation indices of .886, .877, .861, and .845. The Agricultural sector took the rear with .664 as the mean IFRS implementation index by entities in that sector. A pictorial representation of the mean scores by sector is shown in the pie chart in figure 1.

Figure 1: Pie Chart of IFRS Implementation Level by Economic Sectors in Nigeria



b) Differences in Mean NGAAP and IFRS-restated Financial Statement Figures

One of the speculations that surrounded the introduction of IFRS was that the new financial reporting standard (IFRS) could yield accounting figures that are materially different from the equivalent figures that could have resulted from the application of the old standard (NGAAP), and thus create different/wrong impressions on the true financial performance and position of the reporting entity to users of the financial statements. This work tried to provide evidence to affirm or nullify this speculation by addressing the question:

What are the differences between NGAAP-based and IFRS-restated financial statement equivalent figures of listed entities in Nigeria?

In answering this question, paired samples of financial statement figures under the two financial reporting treatments (NGAAP and IFRS) for the year preceding the year of adoption of the new standard were obtained and compared. The paired samples of NGAAP-based and the IFRS-restated numbers on EPS, ROA, NI, TA, BVE and PPE were compared and the statistics shown in table 2.

Table 2: Paired sample statistics of selected financial statement figures

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	EPSIFRS	137.2986	21	740.79898	161.65559
	EPSNGAAP	22.6719	21	1244.04989	271.47394
Pair 2	ROAIFRS	17.3629	21	13.60569	2.96901
	ROANGAAP	6.9658	21	14.73212	3.21481
Pair 3	NIIFRS	92563121.95	21	173699469.658	37904331.804
	NINGAAP	11068198.43	21	31940716.569	6970035.782
Pair 4	TAIFRS	274844027.67	21	547501189.875	119474554.556
	TANGAAP	280280328.33	21	549318608.550	119871147.825
Pair 5	BVEIFRS	54621863.95	21	103604895.865	22608441.794
	BVENGAAP	61715071.52	21	101336760.730	22113494.130
Pair 6	PPEIFRS	62935349.62	21	103143246.760	22507701.700
	PPENGAAP	66929989.90	21	111124734.495	24249405.114

Source: Computed with data extracted from published financial statements of the selected entities.

Table 2 shows six pairs of financial statement figures with their corresponding means and standard deviations. In three (3) out of the six pairs (EPS, ROA, and NI), the means for IFRS were found to be greater than the NGAAP equivalents, while the reverse is the case for TA, BVE and PPE where NGAAP means were greater than their IFRS equivalents. The main hypothesis (H0) formulated to evaluate the significance of the mean differences is restated here as follows:

H0: There is no significant difference between the means of NGAAP-based and IFRS-restated financial statement equivalent figures of listed entities in Nigeria

This hypothesis was divided into sub hypotheses to fit into the six specified financial statement figures (EPS, ROA, NI, TA, BVE and PPE) they are stated as follows:

H01: There is no significant difference between the means of NGAAP-based and IFRS-restated equivalent figures for Earnings Per Share (EPS) of listed entities in Nigeria.

H02: There is no significant difference between the means of NGAAP-based and IFRS-restated financial statement equivalent figures for Return on Assets (ROA) figures of listed entities in Nigeria.

H03: There is no significant difference between the means of NGAAP-based and IFRS-restated financial statement equivalent figures for Net Income (NI) figures of listed entities in Nigeria.

H04: There is no significant difference between the means of NGAAP-based and IFRS-restated financial statement equivalent figures for Total Assets (TA) of listed entities in Nigeria.

H05: There is no significant difference between the means of NGAAP-based and IFRS-restated financial statement equivalent figures for Book Value of Equity (BVE) of listed entities in Nigeria.

H06: There is no significant difference between the means of NGAAP-based and IFRS-restated financial statement equivalent figures for Plant Property and Equipment (PPE) of listed entities in Nigeria.

Each of the paired means was tested for possible statistical difference and the results are reported in table 3.

Table 3: Paired Samples T-Test Results of Selected Financial Statement Figures

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	EPSIFRS - EPSNGAAP	114.62667	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	20	[illegible]
Pair 2	ROAIFRS - ROANGAAP	10.39710	22.23433	4.85205	.35734	20.42706	2.162	20	.043
Pair 3	NIIFRS - NINGAAP	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.383	20	.032
Pair 4	TAIFRS - TANGAAP	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	20	.407
Pair 5	BVEIFRS - BVENGAAP	-7093207.571	[illegible]	[illegible]	[illegible]	[illegible]	-.924	20	.366
Pair 6	PPEIFRS - PPENGAAP	-3994640.286	17567380.231	[illegible]	[illegible]	[illegible]	-1.030	20	.313

Source: Computed with data extracted from published financial statements of the selected entities.

The paired samples t–test on EPS indicate that the mean figures are not significantly higher for the IFRS-restated mean numbers (M = 137.299, SD = 740.799) than for the NGAAP-based mean figures (M = 22.672, SD = 1244.050), $t(20) = .920$, $p = .368 > .05$. Similarly, the results on TA, BVE, and PPE show that IFRS-restated figures are not significantly higher than the NGAAP figures with respective p-values of .497, .366 and .313 being > 0.05. However, the paired samples t-test results on ROA and NI provide statistical evidence that the resulting mean differences between paired NGAAP-based and IFRS-restated figures are significant. The t-test results on ROA indicate a significantly higher IFRS-restated mean figures (M = 17.363, SD = 13.606) than for the NGAAP-based mean numbers (M = 6.966, SD = 14.732), $t(20) = 2.162$, $p = .043 < .05$. Also, the test results on Net Income (NI) show that IFRS restated mean figures (M = 92,563,121.95, SD = 173,699,469.66) were significantly higher than the NGAAP-based equivalent mean figures (M = 11,068,198.43, SD = 31,940,716.57), $t(20) = 2.303$, $p = .032 < .05$.

The summary of the test results on the series is shown in table 4:

Table 4: Summary of T-Test Results on differences between the means of NGAAP-based and IFRS-restated financial statement figures of listed entities in Nigeria

Accounting Figure Restated	F	Sig.	Decision	Conclusion
EPS	.920	.368	Accept $H0_1$	No significant difference exists between the means of NGAAP-based & IFRS-restated Earnings Per Shares (EPS) figures
ROA	2.162	.043	Reject $H0_2$	Significant difference exists between the means of NGAAP-based & IFRS-restated Return on Assets (ROA) figures
NI	2.303	.032	Reject $H0_3$	Significant difference exists between the means of NGAAP-based & IFRS-restated Net Income (NI) figures
TA	.693	.497	Accept $H0_4$	No significant difference exists between the means of NGAAP-based & IFRS-restated Total Assets (TA) figures
BVE	-.924	.366	Accept $H0_5$	No significant difference exists between the means of NGAAP-based & IFRS-restated Book Value of Equities (BVE) figures
PPE	-1.036	.313	Accept $H0_6$	No significant difference exists between the means of NGAAP-based & IFRS-restated Property, Plant and Equipment (PPE) figures

Source: Extracted from results in the table 3

Table 4 summarized the conclusions on each of the six sub hypotheses evaluated. Test results show that no significant differences exist between the NGAAP-based accounting figures for EPS, TA, BVE and PPE and their IFRS-restated equivalents in Nigeria, while the test results for ROA and NI indicate that significant differences exist between the NGAAP-based and IFRS restated equivalents of the accounting numbers.

Based on the test results, Null Hypotheses, H01(a), H01(d), H01(e) and H01(f), were accepted with the conclusion that there is no significant difference between the means of NGAAP-based and IFRS-restated financial statement equivalent figures for Earnings Per Shares (EPS), Total Assets (TA), Book Value of Equities (BVE), and Plant, Property and Equipment (PPE) of listed entities in Nigeria. However, two Null Hypotheses, H01(b) and H01(c), were rejected with the conclusion that significant differences exist between the means of NGAAP-based and IFRS-restated financial statement equivalent figures for Return on Assets (ROA) and Net Income (NI) of listed entities in Nigeria. Accordingly, the significances of the differences between NGAAP-based and IFRS-restated financial statement figures of listed companies in Nigeria are not uniform but varied with accounting figures being considered.

Discussion of findings

The high compliance indices observed across the sectors are coming against a priori expectations based on the numerous concerns initially expressed by stakeholders at the commencement of the implementation roadmap. As an emerging economy with a number of economic challenges facing corporate entities, it was agued that a single set of global reporting standards could undermine developing economies that may not be able to adjust and establish sustainable training frameworks to manage the changes which the new standards could demand (Odia & Ogiedu, 2013 and Abdulkadir, 2012). These challenges combined with cultural, legal, political and economic issues to raise fears on the capacity of listed entities in Nigeria to implement the global standards. Thus, the a priori expectation of IFRS adoption level in Nigeria was predicted to be low.

However, the general high compliance level reported across the sectors may not be unconnected with greater commitment by regulators and other stakeholders in the financial reporting process. For instance, listed entities in the financial services sector have a tradition of strict compliance to guidelines prescribed in statutes establishing them coupled with close monitoring by the Central Bank of Nigeria (CBN), Nigerian Deposit Insurance Corporation (NDIC), the Nigerian Insurance Commission (NIC) as regulators of operational standards in the sector. Thus, the experiences gathered and the effective controls instituted and sustained by the supervisory authorities may have accounted for their lead in complying to the new financial reporting standards among listed entities in Nigeria.

The high IFRS implementation index recorded in the financial services sector accords with findings by Nwoye, et. al., (2017) who investigated the IFRS compliance impact and global ranking of Nigerian banks and concluded that the level of compliance of the banks to IFRS disclosure guidelines had significantly improved the acceptability of their financial reporting practices globally. The obvious implication of this collaborative evidence from the sector is that other regulatory agencies for corporate entities in other sectors should take a que from the Central Bank of Nigeria (CBN), Nigerian Deposit Insurance Corporation (NDIC), the Nigerian Insurance Commission (NIC) for the high financial reporting practices in the sector and step up their enforcement mechanisms over compliance issues by entities in their sectors. In particular, greater surveillance by the Financial Reporting Council of Nigeria (FRCN), and the Securities and Exchange Commission (SEC) over listed entities with low compliance indices in Nigeria is needed to ensure steady improvements in compliance with set standards in line with their statutory mandates.

Again, the comparison of NGAAP-based and IFRS-restated financial statement figures of listed entities in Nigeria provided evidence for resolving the speculations that the adoption of IFRS by economic entities in Nigeria could result to financial statement figures that are materially lower than equivalent figures computed under the NGAAP reporting regime. Six NGAAP-based financial statement figures were compared with their IFRS-restated equivalents and the test results in tables 3 and 4 provide evidence that the significance of the differences between equivalent figures computed using the two financial reporting treatments are not uniform but varied, depending on the accounting numbers under consideration.

Consistent with a priori expectation for this work, IFRSs yielded higher profitability figures on ROA and NI than NGAAP. Similar findings had earlier been reported by Nengzih (2015) and Donwa, et al (2015) in Indonesia and Nigeria respectively. Sochima and Iyafesche (2018) also investigated the phenomena with banks in Nigeria and reported that profitability ratios significantly increased under IFRS reporting regime. However, Elosiuba and Okoye (2018) used t-test to analyse data collected from Nigerian banks and concluded that IFRS adoption significantly reduced the profitability of the selected banks.

Comparisons on earnings per share (EPS), total assets (TA), book value of equities (BVE) and property, plant and equipment (PPE) indicate that no significant differences exist between equivalent pairs of financial statement figures obtained using the two sets of standards. Although this result is contrary to our a priori expectation, it accords with Ironkwe and Oglekwu (2016) who found no significant difference in pre and post IFRS adoption values of EPS of selected companies in Nigeria. The result however is inconsistent with Eluyela, et. al., (2019) and Eriki, et. al., (2017) both of who found significant difference between pre and post IFRS adoption financial statement figures of SME in Nigeria.

It should be noted that the works of Elosiuba and Okoye (2018) and Eluyele et. al., (2019) whose findings are inconsistent with the result of this study are sector specific, and their results may have been affected by peculiarities associated with those sectors. The present work used enlarged data series that cut across 91% of the economic sectors in Nigeria to yield more robust and reliable results. Accordingly, findings from this study provide better guides for initiating polices for regulating and monitoring the implementation of IFRS by entities across all economic sectors in Nigeria.

Again, results on earnings per share (EPS), total assets (TA), book value of equities (BVE) and property, plant and equipment (PPE) have implications for management of listed entities in Nigeria. EPS is an important index for assessing the proportion of net profit that is attributable to ordinary shareholders, based on the number of shares held. It therefore serves as a major parameter for rating economic entities for investment decisions. IFRS offers management the opportunity to exercise judgment under its fair value principle as against the rule-based approach under NGAAP. From this study, the resulting IFRS-restated financial statement figures on EPS, TA, BVE and PPE are not significantly different from their equivalents under NGAAP as shown in table 4.3. This finding therefore is instructive for management to always scrutinize their financial reporting practices to ensure that while exercising judgment granted under IFRS, the accounting numbers used to calculate these ratios/figures are not unduly sacrificed in the measurement process. Wrong exercise of judgment under IFRS 13 on Fair Value Measurement, (including IAS 2 on Inventory, IAS 16 on Property, Plant and Equipment (PPE), IAS 33 on Earnings Per Share (EPS) and IAS on Impairment of Assets), will affect the resulting accounting figures and reduce investors' ratings for the entities and thereby make the company unattractive to both local and foreign investors. This caution to management to exercise care and professionalism in financial reporting is informed by the evidence from this study which confirms that differences between NGAAP-based financial statement figures and IFRS-restated equivalents are not uniformly significant but varied across financial statement numbers.

Concluding remarks

Based on the results and tests conducted, the following findings were made:

1. The level of IFRS implementation in Nigeria varies across economic sectors with very high compliance recorded by entities in the financial services sector. Although low implementation indices were reported within the agricultural and construction sectors, compliance levels across all the sectors are generally high.
2. There were observable differences between NGAAP-based financial statement figures and IFRS-restated equivalents among listed entities in Nigeria. However, the paired samples t–test results showed that the observable differences between NGAAP and IFRS equivalents for EPS, TA, BVE and PPE were not statistically significant while the mean differences for ROA and NI were significant.

On the strength of the above findings, the work concludes that remarkable progress has been made by listed entities in Nigeria in complying to the global financial reporting standards and that the transition to the new standard does not have uniform influence/impact on reported financial statement figures of entities in Nigeria. In line with these findings and conclusion, the following specific recommendations are made:

1. Entities in economic sectors with low levels of IFRS adoption should be encouraged and/or persuaded to enhance their compliance to the new standard. The agricultural and construction sector entities in particular need to strengthen compliance through human capacity building opportunities. The Federal government, Financial Reporting Council of Nigeria (FRCN) and other regulatory bodies should provide incentives and enabling environments for business corporations to thrive because mere switch to international best practices does not automatically guarantee continuous future higher corporate performance. For instance, Government may provide IFRS compliance incentives in the form of tax shields for entities that satisfied set implementation targets. Such incentives could be by giving a tax waiver of a certain percentage to companies that adopted and fully implemented the global standard. Penalties for non-compliance or compliance below a certain minimum threshold should be imposed by regulation.

2. The Federal Government, through the FRCN and Securities and Exchange Commission (SEC), should strengthen their data base on IFRS implementation on entities and improve their monitoring and supervisory control mechanisms

on IFRS compliance issues. Evidence from this study tends to support the existence of positive correlation between supervisory role for entities and IFRS implementation level. The high compliance level by the financial services sector, where regular periodic supervision by the monetary authorities has become a major part of the sectors operating and reporting tradition, makes it essential for the government, FRCN and SEC to develop compliance rating and monitoring systems for listed entities in Nigeria. The IFRS Implementation Disclosure Checklist constructed and used for this study should be suitably adapted on all issued IAS/IFRS to serve as an instrument for evaluating compliance to already set standards as well as on compliance to any future reviews on the standards.

3. The constructed IFRS Implementation Disclosure measurement instrument developed in this study should be adapted and used by regulators in determining IFRS implementation indices on each standard and the aggregate index for each firm and sector in Nigeria. Such data base will provide needed information for further research, and serve as input to guide for future amendments in standards targeted at enhancing financial reporting disclosure and accounting quality.

4. There is need to provide sustainable capacity building measures in Nigeria to match new challenges for compliance arising from frequent updates/changes in IFRS. There should be coordinated efforts for ensuring that information on new standards or adjustments to existing ones are widely published and continuous enlightenment campaigns mounted by standard setters and regulatory bodies. Training programmes and workshops should be regularly mounted not only for corporate financial managers, but for educators and researchers in educational institutions to get them acquainted with new rules and principles needed to apply the standards. Governments, professional accountancy bodies, educational institutions, Regulatory bodies and management of corporate entities should be active in sponsoring research and studies in this emerging and dynamic area of accounting. The syllabi of accounting programmes in institutions of higher learning should be urgently and regularly reviewed to align the curricula with current IFRSs in practice. These capacity building measures will enhance sustainability in the knowledge of compliance to IFRSs.

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Appendix 1:
Kandall's Coefficient of Concordance (Kendall's) Reliability & Validity Test Results

(a) Descriptive Statistics of Raters' Scores of IFRSI Instrument

NPar Tests   Descriptive Statistics

Financial Statement Code	No. of Raters	Mean	Std. Deviation	Minimum	Maximum
IFRS -1	5	.773540	.0561383	.7131	.8480
IFRS -2	5	.809720	.0342804	.7539	.8402
IFRS -3	5	.692320	.0239676	.6588	.7243
IFRS -4	5	.710300	.0165330	.6986	.7352
IFRS -5	5	.897940	.0250004	.8677	.9326
IFRS -6	5	.898120	.0191274	.8732	.9218
IFRS -7	5	.663280	.0320481	.6135	.7001
IFRS -8	5	.842940	.0273236	.7976	.8861
IFRS -9	5	.896100	.0239683	.8688	.9263
IFRS -10	5	.756320	.0341487	.7152	.8011
IFRS -11	5	.730840	.0176068	.7112	.7572
IFRS -12	5	.866440	.0127312	.8515	.8832
IFRS -13	5	.903820	.0134063	.8883	.9216
IFRS -14	5	.753860	.0312642	.7014	.7841
IFRS -15	5	.835640	.0214295	.8136	.8647

(b) Kendall's W Test Results

Ranks

Financial Statement Code	Mean Rank
IFRS -1	6.80
IFRS -2	7.80
IFRS -3	2.40
IFRS -4	3.40
IFRS -5	13.20
IFRS -6	13.60
IFRS -7	1.00
IFRS -8	9.40
IFRS -9	12.80
IFRS -10	5.40
IFRS -11	4.60
IFRS -12	10.80
IFRS -13	14.00
IFRS -14	5.60
IFRS -15	9.20

Test Statistics

N	5
Kendall's W[a]	.913
Chi-Square	63.940
df	14
Asymp. Sig.	.000

a. Kendall's Coefficient of Concordance

Ownership structure and directors' tunneling of listed non-finance firms in Nigeria

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Abstract

Tunneling is especially dangerous in emerging nations because of weak corporate governance frameworks that fail to protect minority shareholders and corporate ownership arrangements that encourage expropriation. The study investigated the effect of ownership structure on directors' tunneling in Nigeria, drawing samples from listed non-finance firms on the floor of the Nigerian Stock Exchange. Data set employed in this study span through the periods between 2011 and 2020. The study employed a panel regression estimation technique to test our hypotheses. From the analysis, it was found out that out of the three independent variables adopted in this study, only ownership concentration seemed not to significantly affect directors' tunneling of non-finance firms in Nigeria. The study found out that CEO ownership and managerial ownership significantly affect directors' tunneling. Thus, it was recommended that regulatory agencies should formulate policies that regulate concentrated equity holding as this will reduce the incentive to tunnel. It was also recommended that companies should institute strong corporate governance structure to protect the minority shareholders.

Keywords: Directors' Tunneling, Ownership Concentration, CEO Ownership, Managerial Ownership, Panel Regression

1.0 Introduction

Tunneling is the process of transferring assets and profits from a subsidiary company to the parent company for the benefit of the parent company. According to Gunarsih, (2017), companies use tunneling as one of their incentives for conducting related party transactions. This is supported by empirical research, which shows that related party transactions can be leveraged by businesses to profit from tunneling operations (Aharony, Wang & Yuan, 2010; Juliarto, Tower, Van der Zahn, & Rusmin., 2013; Hamid, Ting, & Kweh, 2016). Tunneling is especially dangerous in emerging nations because of weak corporate governance frameworks that fail to protect minority shareholders and corporate ownership arrangements that encourage expropriation (Aharony, Wang, & Yuan, 2010). Despite the fact that numerous tunneling strategies have been proposed, much empirical study has focused on related party transactions (RPT). RPTs have a lot of potential to be a convenient vehicle for expropriating firm wealth from minority shareholders due to weak corporate governance systems and existing corporate structures in many countries throughout the world (Cheung et al 2009). RPTs are thought to be a high-risk factor for investors. According to OECD (2009), abusive RPTs are rapidly posing a threat to capital market's credibility. Providing high volumes of receivables or long credit terms to connected parties is one type of tunneling technique used by businesses. Receivables given to a related party can be viewed as a sell option if the related party exercises it by refusing to pay the receivables when the company is in terrible shape (Atanasov, Black & Ciccotello, 2014).

The decline in net income of the tunneled company will be impacted by giving and writing down related party loans. Majority and minority shareholders are formed as a result of the ownership structure. The existence of majority shareholders produces agency conflict, which is defined as the tendency for majority shareholders to have more authority and information to transfer the company's assets for personal advantage despite minority shareholders' rights (Marfuah & Azizah, 2014). The majority shareholders in a company own more than 50% equity shares and that give them controlling power over the activities of the controlled entities. As a result of this

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circumstance, tunneling tactics emerge, which favor the majority shareholders (Susanti & Firmansyah, 2020). One of the causes of tunneling is a lack of legal protection for minority shareholders as they don't have controlling interest and cannot affect the financial and operating policy decisions of the controlled entities.

The aim of this study is to analyse the effect of ownership structure on directors' tunneling of listed non-finance firms in Nigeria. A review of some empirical studies shows that most of the studies concentrated on the effect of tunneling on corporate governance, corporate performance, assets utilization and only a few focused on the variable of ownership structure. Also most of these researchers are done in more advanced countries with different economic and perhaps more sophisticated institutional and legal background. Furthermore, most of those researches concentrated on banks and other financial institutions, ignoring the non-financial sectors. (Chizema et.al, 2020; Trisninik & Doddy 2021; Nnubia & Fabian, 2018). It is against this gap that this research was undertaken to ascertain the effect of ownership structure on directors' tunneling of non-financial firms in Nigeria.

2.0 Conceptual literature

Directors' tunneling

Expropriation activity carried out by the controlling owners of a corporation at the lower level (subsidiary) to the upper level (parent company) is known as tunnelling (Johnson et al., 2000). According to them, tunnelling refers to asset appropriation by large shareholders who move assets and profits for themselves, either legitimately or unlawfully. Tunneling is accomplished in several ways, according to Johnson et al. (2000): transferring growth opportunities from listed companies to themselves or their subsidiaries; transferring profits from listed companies to other subsidiaries they own or control via intra-group transactions; using listed company assets or capital as collateral or guarantees for their financing activities; and capital operations aimed at diluting the interests. Tunneling was first employed in this form in the Czech Republic during the first half of the 1990s, according to Henemana and Schwab (2018), when numerous significant, previously privatized banks and companies abruptly liquidated. Later, it was discovered that the executives of these corporations were transferring companies, property and real estate into their own private businesses, some of which were located abroad. Among Czechs and Slovaks, the phrase became a frequent designation for this type of illegal action. Big loans with no prospect of return, massive overpayments for outsourced services, or simply selling businesses real estate for a fraction of its market value were all used to shift corporate resources.

Directors's remuneration

The term "executive compensation" refers to top executives' gross earnings in the form of monetary rewards and benefits (Nwaorgu, Odesa & Nzoegbu, 2019). Qualification, experience, attitude, and current rates in the labor market or industry are all factors in these compensation structure. Executive remuneration, according to Hamid, Ting and Kweh (2016) consists of money compensation and various other non-monetary awards received by the executives from their firm in exchange for their services to the organization. It is often a mix of pay, bonuses, company stock shares or call options, benefits, and perquisites, all of which are optimally set to take into consideration government regulation, tax law, the organization's and executive's wishes, and performance rewards.

Ownership concentration

According to Atanasov et.al (2014), ownership concentration is the sum of squares of the fraction of total equity held by each large shareholder. Accordingly, Hamid et.al (2016) define ownership concentration as the portion of shares held by top shareholders of the firm. Gunarsih (2017) sees ownership concentration as the percentage of ownership shares of the largest shareholders. Aharony et. al (2010) define ownership concentration as the percentage of the largest and the second largest managerial block holders who own at least 10% of the total shares in a firm. Chizema et.al (2020) describe ownership concentration as the percentage of share held by the largest shareholder. According to Chen et.al (2017) ownership concentration is seen as the percentage of top five shareholders of the firm. The central premise of arguments regarding ownership concentration is the potential trade-off between two effects: the monitoring (alignment) and the expropriation (entrenchment) effect of ownership concentration (Masuli & Mobbs, 2013). In fact, dispersion of ownership makes controlling difficult and also contributes to creating potential free-riding problems. Thus, ownership concentration has a disciplinary effect on managers because it is easier for large shareholders to monitor managers (Nnubia & Fabian, 2018). Therefore, from agency theory perspective, ownership concentration is regarded as the key and efficient component of corporate governance mechanism to reduce agency problems arising out of the separation of ownership and control (Henemana & Schwab, 2018; Santiago et. al, 2011).

Managerial shareholding

The percentage of a company's shares owned by its directors is known as managerial shareholding. According to Chen et.al (2017), several problems arise when directors do not control a significant amount of the company's share capital. In the first case, directors' incentives to seek the interests of shareholders will be lessened, which will have an impact on the financial health of companies (Masuli & Mobbs, 2014). Firms should use share ownership to match the interests of the directors with the firm. According to Guo et.al, (2019) Managerial ownership is the highest share ownership structure owned by corporate management, which consists of directors and commissioners, as measured by the proportion of shares owned by management. The agency method and the imbalance approach can both be used to explain the managerial ownership structure. The agency approach considers the structure of managerial ownership as an instrument or tool used to reduce agency conflict among several claims against a company.

CEO Ownership

In both theory and reality, CEO ownership is considered as a good source of power (Chen, Li & Chen). The ownership of the corporation is a fundamental driver of the agent-principal relationship in agency theory. According to Guo et.al (2019), CEO ownership in a firm is linked to crucial board decisions such as member selection, salary determination, and many others. The agency interest alignment hypothesis states that when an owner-manager leads a company, he is more likely to work toward the company's goals. While some studies supported this prediction, empirical evidence contradict it. In today's world, many companies are governed by managers, the most significant of whom is the CEO, who are not the (most of the) owners of the company. Given that shareholders may not always have comprehensive access to information indicating whether the CEO is maximizing shareholder wealth or not, agency issues are likely to arise if the CEO has objectives other than maximizing shareholder wealth (Susanti & Firmansyah, 2020). It is consequently critical to match the CEO's interests with those of the shareholders, because if this is not the case, firm performance may suffer as a result of conflicting interest (Gunarsih, 2017). CEO compensation becomes relevant in this context because it can be utilized to achieve this alignment.

Theoretical review

Agency theory

The general view of the agency theory stipulates that conflicts of interest emerge due to shifts in the interest of managers from that of the shareholders. Chen et.al (2017) observe that managers do act in their own interest, contrary to the interest of the organization and the shareholders due to poor monitoring. In this (agency) theory, corporate governance principles are vital in ensuring that the interest of the principal and the agent along with the overall value of the organization are protected. This theory also stipulates that manager use their discretionary powers as a cover to decide on issues that suit their interest. They are usually more interested in short-term gains at the detriment of long-term goals of the shareholders. The principal–agency problem can be greatly reduced through close monitoring and supervision alongside the creation of better incentives to motivate managers. This has become very necessary because firms operate in a highly competitive environment which influences the perception of managers to take decisions that are complex and risky to remain relevant. In corroborating this view, Gunarsih (2017) observed that agency issues have greatly influenced managers in taking risky decisions and hedging in the field of corporate risk management. The theory further highlights the likely conflict of interest that may arise between the management and other stakeholders due to asymmetries in income sharing which can affect the firm's investment potentials (Masuli and Mobbs, 2014).

Empirical literature and hypotheses development

Ownership concentration and directors tunneling
Nnubia and Fabian, (2018) studied the effect of director's tunneling on firm performance of quoted companies in Nigeria. A sample of 15 Nigerian consumer goods firms listed on Nigerian Stock Exchange for a period of 8 years (from 2010-2017) was selected. This study applied ex post facto research design. The data collected were analyzed using Ordinary Least Square Method. The results show that for the Nigerian listed consumer goods firms, the explanatory variables- Chairman's pay and Director's equity holding have negative significant effect on the dependent variable – asset utilization (Performance); whereas Board of director's pay is positive and has no significant impact on the asset utilization (Performance). In the context of emerging markets, Gunarsih (2007), in her study, found that large domestic institutional investors tend to represent their own interests, while Khanna and Palepu (2000) found that foreign institutional investors provide better monitoring functions when interacting with the emerging markets in the global economy compared to domestic institutional investors. Khanna and Palepu (2000) also found that corporate performance is positively related to foreign institutional ownership and is negatively related to domestic institutional ownership. In a company with a concentrated ownership structure, the controlling shareholder could control the company's resources and implement policies that benefit them at the expense of the non-controlling shareholders (La Porta, LopeZ-de-Silanes & Shleifer 2000). Futhermore, Guo et.al, (2019) suggest that a concentrated ownership structure could facilitate asset expropriation in a company as the major shareholders could not only dominate the board of directors and the shareholders' meetings, but also determine the company's daily operation including influencing contractual policies with related parties and appointing their own candidate as the CEO (Hamid, et.al, 2016).

Companies with a high concentration of ownership allow the dominant shareholder to exert control over management and even become a part of it. The majority shareholders can benefit from their policy control in two ways: first, through the company's operational policy, which includes providing high salaries and allowances, bonuses, and large compensation to the majority shareholders. The second method is to use contractual policies with third parties, such as tunneling (Marfuah & Azizah, 2014). Hence, it was hypothesized that:

H01: Ownership concentration has no significant effect on directors' tunneling of listed non-finance firms in Nigeria

Managerial Ownership and Directors' Tunneling
Djankov and Murrell (2002) find in their research on transition economies that when investment funds managers, and other outsiders become influential owners, ten times as much restructuring takes place in former SOEs. Thomes (2013) studied executive tunneling and executive compensation design using selected listed firms in the United State of America between 2000 and 2005. The study was based on ex post facto design. Thomes developed new model in which resource diversion, director compensation and corporate performance are simultaneously and endogenously determined. The finding reveals that director's compensation directly reduces director's tunneling tendency. Ridwan, Fitri and Berto (2015) studied director's tunneling using firms quoted in Indonesia Stock Exchange. The study examined the relationship between corporate governance variables and tunneling activities using 2216 listed firms between 2005 and 2012. The study was based on longitudinal design and made use of board size, outsider's directors, group and big five ownership were used as independent variable. The data were analysed using multiple regressions. The finding reveals that firms with family and state ownership experience more tunneling activities than others. The study also finds that family, state and leverage ownership structure has positive effect on tunneling.

Gibson (2003) also suggests that minority investors in emerging markets controlled by a large shareholders should be aware that managers may favour the large shareholders at the expense of the minority shareholders. Hence, it was hypothesized that:

H02: Managerial ownership has no significant effect on directors' tunneling of listed non-finance firms in Nigeria

CEO ownership and director's tunneling

Kun and Xing (2012) examined controlling shareholders' tunneling and executive compensation, using quoted firms from China. The study used 6,670 listed nonfinancial firms in China between 1999 and 2005. The study was based on cross sectional regression using levels specification and changes specification to examine the relationship between executive compensation and firm performance. The study finds that if directors incentives scheme are adopted, controlling shareholders who obtain private benefit from companies will have less incentive to do so. Ridwan et.al, (2015) documented that higher CEO stock ownership helps alleviate some of the agency problems that arise in corporation by aligning the interest of managers and shareholders. As long as managers are minority shareholders, their ownership role might also mitigate the danger of tunnelling (Gao & Kling 2008; Liu & Lu 2007). On the other hand, Klein (2002) finds a positive correlation between CEO shareholdings and earnings management, which is consistent with recent events and accounting scandals. If the CEO manages earnings to increase his overall compensation, then there will be a positive relation between CEO shareholdings and earnings management (Klein 2002). This indirectly indicates the possibility of expropriation. Chen et.al, (2017) suggest that high shareholding by top managements may cause moral hazard and information asymmetry problems between the insider (management and directors) and outside investors. In a similar vein, Santiago-Castro, and Brown (2011) find a positive association between CEO ownership and the potential for expropriation of minority shareholders' rights. Hence, it was hypothesized that:

H03: CEO ownership has no significant effect on directors' tunneling of listed non-finance firms in Nigeria

3.0 Methodology

The research design adopted in this study is expo-facto because data employed for analysis were all secondary. The study is longitudinal covering a period of ten (10) years. That is, from 2011 to 2020 employing listed non-finance firms on the floor of the Nigerian Exchange Group (NGX). The sampling technique employed is purposive since firms were included in the sample on certain selection criteria. These criteria were based on the view that the firms are listed on the Nigerian Exchange Group (NGX) market from 2011-2020; there was access to their annual financial reports within the period. Newly listed firms and delisted firms were excluded from the study. Thus, only non-finance firms that had all relevant data due to continuous existence were included in the sample. The final sample size consists of 30 non-finance firms that was arrived at based on the availability of data for ten years for all the research variables. The study expresses our econometric model as: $DRSA_{it} = \beta_0 + \beta_1 BLOW_{it} + \beta_2 CEOO_{it} + \beta_3 MAOW_{it} + \beta_4 REAT_{it} + \mu_{it}$

Where:

DRSA	=	Director's Remuneration
BLOW	=	Ownership Concentration
CEOO	=	CEO Ownership
MAOW	=	Managerial Ownership
RETA	=	Return on Asset (Control Variable)
$\beta 0$	=	Constant
$\beta 1$- $\beta 4$	=	Slope Coefficient
μ	=	Stochastic disturbance
i	=	i^{th} firm
t	=	time-period

Thus, the apriori expectations are stated as; X1-X3>0: which means that a rise in the determinant variables of ownership concentration, CEO ownership and board ownership will lead to a rise in tunneling of listed non-finance firms in Nigeria. The econometric techniques adopted in this study are the panel fixed and Random effect regression techniques. The rationale for its usage is based on the following justifications: the data that will be collected may have time and cross-sectional attributes; panel data regression provides better results since it uses large observation and reduces the problem of degree of freedom (Muhammad, 2012); it avoids the problem of multicollinearity and helps to capture the individual cross-sectional (or firm-specific) effects that the various pools may exhibit with respect to the dependent variable in the model.

Variable measurement

The study proxies directors tunneling by the ratio of directors' remuneration to revenue in line with the studies of Thomes, (2013) and Kun and Xing, (2012). Furthermore, the explanatory or independent variables are ownership concentration (measured in percentage as the share ownership concentration of all the block shareholders with 5% and above controlling interest); CEO ownership (percentage of CEO shares to total outstanding shares); and managerial ownership (ratio of directors' direct and indirect shares to outstanding shares). The study adopted profitability to control our model. Profitability is proxied in terms of return on asset (measured as the ratio of profit after tax to total asset).

4.0 Empirical results and discussion

Descriptive analysis

In this section, the study examines the descriptive statistics for both the explanatory and dependent variables of interest. Each variable is examined based on the mean, standard deviation, maximum and minimum. Table 1 below displays the descriptive statistics for the study.

Table 1
Descriptive Statistics

VARIABLES	MEAN	SD	MIN	MAX	NO OBS
DRSA	0.73	0.81	0.01	4.30	298
BLOW	56.13	20.38	8	95	300
CEOO	2.94	9.01	0	40.89	300
MAOW	16.32	24.16	0	94.35	300
RETA	5.74	11.01	-52.56	53.96	299

Source: Author's computation (2022)

Table 1 shows the summary of the descriptive statistics of the study. From the table it is observed that directors' remuneration (DRSA) on the average is 0.73 with a standard deviation of 0.81. Ownership concentration (BLOW) on the average is observed to be 56.13 with a standard deviation of 20.38. The study also found that CEO ownership (CEOO) has a mean of 2.94 with a standard deviation of 9.01. The descriptive statistics results also show that Managerial ownership (MAOW) has a mean of 16.32 with a standard deviation of 24.16. For the control variable, the table reveals that profitability (RETA) had a mean of 5.74 and a standard deviation of 11.01.

Correlation analysis

In examining the association among the variables, the study employed the Spearman correlation coefficient (correlation matrix) and the results are presented in table 2 below;

Table 2
Correlation analysis

	DRSA	BLOW	CEOO	MAOW	RETA
DRSA	1.00				
BLOW	-0.41	1.00			
CEOO	0.35	-0.42	1.00		
MAOW	0.29	-0.26	0.43	1.00	
RETA	-0.17	0.20	-0.24	-0.21	1.00

Author's computation (2022)

In the case of the correlation between the variables of interest, the above results show that there exists a negative and moderate association between directors' tunneling and ownership concentration (-0.41). There exists a positive and moderate association between directors' tunneling and CEO ownership (0.35). There exists a negative and moderate association between directors' tunneling and managerial ownership (0.29). In the case of the control variable, there exists a negative and weak association between directors' tunneling and profitability (-0.17).

Regression results

In order to examine the cause-effect relationships between the dependent variables and independent variables as well as to test the formulated hypotheses, the study presents a panel data regression and an OLS pooled results in table 3 on page 23.

Table 3
Regression Result

	DRSA Model (Pooled OLS)	DRSA Model (FIXED Effect)	DRSA Model (RANDOM Effect)
C	1.00 [0.000] ***	0.30 [0.113]	0.49 [0.024] **
BLOW	-0.01 [0.002] **	0.00 [0.370]	0.00 [0.565]
CEOO	-0.00 [0.632]	0.09 [0.000] ***	0.04 [0.000] ***
MAOW	0.01 [0.000] ***	0.00 [0.054] **	0.00 [0.049] **
RETA	-0.01 [0.007] **	-0.01 [0.001] **	-0.01 [0.005] **
F-statistics/Wald Statistics	11.35 (0.00) ***	12.61 (0.00) ***	32.31 (0.00) ***
R- Squared	0.13	0.16	0.15
VIF Test	1.17		
Heteroscedasticity Test	11.77 (0.0006) **		

HAUSMAN TEST Prob>chi2 = 48.47 (0.0000) ***

Note: (1) bracket [] are p-values
(2) **, ***, implies statistical significance at 5% and 1% levels respectively

In table 3, the study observed from the OLS pooled regression that the R-squared value of 0.13 shows that about 13% of the systematic variations in directors tunneling proxied by directors' remuneration in the pooled non-finance firms over the period of interest was jointly explained by the independent and control variables in the model. The unexplained part of directors tunneling can be attributed to exclusion of other independent variables that can impact on directors tunneling but were captured in the error term. The F-statistic value of 11.35 and its associated P-value of 0.00 shows that the OLS regression model on the overall is statistically significant at 1% level, this means that the regression model is valid and can be used for statistical inference. Table 3 above also shows a mean VIF value of 1.17 which is within the benchmark value of 10, this indicates the absence of multicollinearity, and this means no independent variable should be dropped from the model. Also, from table 3 above, it can be observed that the OLS results had heteroscedasticity problems since its probability value was significant at 5% [11.77 (0.0006)]. The presence of heteroscedasticity clearly shows that our sampled firms are not homogeneous. This therefore means that a robust or panel regression approach will be needed to capture the impact of each firm heteroscedasticity on the results. In this study we adopted the panel regression method using both fixed and random effect models.

The F-statistic and Wald-statistic value of 12.61 (0.00) and 32.31 (0.00) for fixed and random effect models respectively shows that both models are valid for drawing inference since they are both statistically significant at 1%. In the case of the coefficient of determination (R-squared), it was observed that 16% and 15% systematic variations in directors tunneling proxied by directors' remuneration was explained jointly by the independent and control variables in both models respectively. This therefore implies that less of the variation in directors tunneling was explained when compared to the OLS pooled regression. In selecting from the two panel regression estimation results, the Hausman test was conducted, and the test is based on the null hypothesis that the random effect model is preferred to the fixed effect model. A look at the p-value of the Hausman test (0.0000), implies that we should reject the null hypothesis and accept the alternative hypothesis at above 5% or 1% level of significance. This implies that we should adopt the fixed effect panel regression results in drawing our conclusion and recommendations. This also implies that the fixed effect results tend to be more appealing statistically when compared to the random effect regression. Following the above, the discussion of the fixed effect results became imperative in testing our hypotheses.

Discussion of findings

From the above analysis, we found that ownership concentration (Fixed effect regression = 0.00 (0.370)) as an independent variable to director's tunneling appears to have a positive and insignificant influence on directors tunneling. This therefore means we should accept the null hypothesis {H01: Ownership concentration has no significant effect on directors tunneling of listed non-finance firms in Nigeria}. This suggests that an increase in ownership concentration will insignificantly increase director's tunneling. This result agrees with prior empirical results which show that ownership concerntration insignificantly increases directors tunneling (Hamid et.al, 2016). However, we fail to agree with the studies of Santiago-Castro and (Brown 2011) who concluded that ownership structure significantly causes directors tunneling. Our results also show that CEO ownership (Fixed effect regression = 0.09 (0.000)) as an independent variable to director's tunneling appears to have a positive and significant influence on directors tunneling. This therefore means we should reject the null hypothesis {H02: CEO ownership has no significant effect on directors tunneling of listed non-finance firms in Nigeria}. This suggests that an increase in CEO ownership will significantly increase directors' tunneling. This result agrees with prior empirical results which show that CEO ownership significantly increases directors' tunneling (Mohammad 2015). More specifically, the study negates the studies of Ridwan et.al (2015) who document that higher CEO share ownership helps alleviate some of the agency problems that arise in companies by aligning the interest of managers and shareholders. It also provides evidence that managerial ownership (Fixed effect regression = 0.00 (0.054)) as an independent variable to directors' tunneling appears to have a positive and significant effect on directors tunneling. This therefore means it should reject the null hypothesis {H03: managerial ownership has no significant effect on directors tunneling of listed non-finance firms in Nigeria}. This suggests that an increase in managerial ownership will significantly increase directors' tunneling. This result agrees with prior empirical results which show that managerial ownership significantly increases directors' tunneling (Thomes, 2013). However, it fails to agree with the studies of Susanti and Firmansyah, (2020) who concluded that managerial ownership significantly reduces directors tunneling.

5.0 Conclusion and recommendations

Controlling owners' exploitation of minority shareholders has piqued the interest of academics. When majority shareholders control the company, the agency problem becomes how to prevent dominant shareholders from abusing minority shareholders, rather than a conflict of interest between management and shareholders. Tunneling is not only harmful to minority shareholders' interests, but it also hinders the development of the capital market. In the light of this, the empirical result of this study leads to the conclusion that out of the three independent variables adopted in this study, only ownership concentration seems not to significantly affect directors' tunneling of non-finance firms in Nigeria. However, the study supports evidence that an increase in CEO ownership and managerial ownership will significantly increase directors' tunneling. Based on this findings, the study recommends that regulatory agencies should formulate policies that increase and regulate concentrated equity holding as this will reduce the incentive to tunnel. It also recommends that companies should institute strong corporate governance structures to protect the minority shareholders.

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APPENDIX

```
Variable |     Obs      Mean   Std. Dev.      Min      Max
---------+------------------------------------------------
    drsa |     298   .7295836   .8057565    .0062   4.2994
    blow |     300   56.12667   20.38453        8       95
    ceoo |     300   2.944704   9.006275        0  40.8759
    maow |     300   16.31556   24.15867        0    94.35
    reta |     299   5.741526   11.00539 -52.5597  53.9594
```

```
         |   drsa    blow    ceoo    maow    reta
---------+----------------------------------------
    drsa |  1.0000
    blow | -0.4070  1.0000
    ceoo |  0.3527 -0.4150  1.0000
    maow |  0.2864 -0.2593  0.4323  1.0000
    reta | -0.1735  0.2030 -0.2365 -0.2092  1.0000
```

```
  Source |       SS       df       MS      Number of obs =    298
---------+------------------------------   F(4, 293)     =  11.35
   Model |  25.8758993     4  6.46897482   Prob > F      = 0.0000
Residual |  166.949412   293  .569793217   R-squared     = 0.1342
---------+------------------------------   Adj R-squared = 0.1224
   Total |  192.825312   297  .649243474   Root MSE      = .75485

------------------------------------------------------------------
    drsa |      Coef.  Std. Err.      t   P>|t|  [95% Conf. Interval]
---------+--------------------------------------------------------
    blow |  -.0070025   .0022049  -3.18  0.002   -.011342   -.002663
    ceoo |  -.0026123   .0054453  -0.48  0.632  -.0133292   .0081045
    maow |   .0103828   .0020628   5.03  0.000    .006323   .0144426
    reta |  -.0070312   .0040965  -1.72  0.087  -.0150936   .0010311
   _cons |   1.003626   .1310655   7.66  0.000   .7456769   1.261575
------------------------------------------------------------------
```

```
Variable |    VIF     1/VIF
---------+------------------
    maow |   1.29   0.774012
    ceoo |   1.26   0.792913
    reta |   1.06   0.941690
    blow |   1.05   0.954533
---------+------------------
Mean VIF |   1.17
```

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of drsa

         chi2(1)      =    11.77
         Prob > chi2  =   0.0006
```

```
Fixed-effects (within) regression          Number of obs      =    298
Group variable: croid                      Number of groups   =     30

R-sq:                                      Obs per group:
   within  = 0.1604                                   min =      9
   between = 0.0213                                   avg =    9.9
   overall = 0.0265                                   max =     10

                                           F(4,264)           =  12.61
corr(u_i, Xb) = -0.7185                    Prob > F           = 0.0000

------------------------------------------------------------------
    drsa |      Coef.  Std. Err.      t   P>|t|  [95% Conf. Interval]
---------+--------------------------------------------------------
    blow |   .0029591   .0032937   0.90  0.370  -.0035261   .0094443
    ceoo |   .0874262   .0142362   6.14  0.000   .0593952   .1154572
    maow |   .0037407   .0019299   1.94  0.054  -.0000593   .0075406
    reta |  -.0106706   .0030371  -3.51  0.001  -.0166507  -.0046906
   _cons |   .3048939    .191994   1.59  0.113  -.0731405   .6829283
---------+--------------------------------------------------------
 sigma_u |  1.0232493
 sigma_e |  .39506945
     rho |  .87027064   (fraction of variance due to u_i)
------------------------------------------------------------------
F test that all u_i=0: F(29, 264) = 27.78           Prob > F = 0.0000
```

```
Random-effects GLS regression              Number of obs      =    298
Group variable: croid                      Number of groups   =     30

R-sq:                                      Obs per group:
   within  = 0.1474                                   min =      9
   between = 0.0301                                   avg =    9.9
   overall = 0.0357                                   max =     10

                                           Wald chi2(4)       =  32.31
corr(u_i, X)  = 0 (assumed)                Prob > chi2        = 0.0000

------------------------------------------------------------------
    drsa |      Coef.  Std. Err.      z   P>|z|  [95% Conf. Interval]
---------+--------------------------------------------------------
    blow |   .0017388   .0030183   0.58  0.565   -.004177   .0076546
    ceoo |   .0449053   .0103301   4.35  0.000   .0246585    .065152
    maow |   .0037595    .001912   1.97  0.049    .000012    .007507
    reta |  -.0085094   .0030228  -2.82  0.005  -.0144339  -.0025849
   _cons |   .4879123   .2161025   2.26  0.024   .0643591   .9114655
---------+--------------------------------------------------------
 sigma_u |  .66446467
 sigma_e |  .39506945
     rho |  .73881919   (fraction of variance due to u_i)
------------------------------------------------------------------
```

```
            ---- Coefficients ----
         |    (b)          (B)           (b-B)     sqrt(diag(V_b-V_B))
         |    fe           re         Difference          S.E.
---------+----------------------------------------------------------
    blow |   .0029591     .0017388      .0012202        .0013183
    ceoo |   .0874262     .0449053      .0425209        .0097958
    maow |   .0037407     .0037595     -.0000188        .0002621
    reta |  -.0106706    -.0085094     -.0021612         .000295
--------------------------------------------------------------------
               b = consistent under Ho and Ha; obtained from xtreg
   B = inconsistent under Ha, efficient under Ho; obtained from xtreg

 Test:  Ho:  difference in coefficients not systematic

          chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                  =       48.47
        Prob>chi2 =      0.0000
```

Effect of Employee cost on the Financial Performance of Commercial Banks in Nigeria

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Abstract

The study examined the effect of employee cost on the financial performance of listed commercial Banks in Nigeria. To achieve the objective of the study, ex-post facto research design was adopted. The study population was made up of fifteen (15) commercial banks listed on the Nigeria Stock Exchange as at April 2021 out of which ten (10) banks were selected. Secondary data sourced from the annual reports and accounts of the selected banks were employed in the study. Data were analysed using descriptive statistics and ordinary least squares regression technique. Findings from the study revealed that employee cost has a positive and significant effect on the profit after tax of listed commercial banks in Nigeria. Hence the study concluded that employee cost has significant effect on financial performance of listed commercial banks in Nigeria. The study recommended amongst other things that commercial banks need to recognize that costs expended on employees are investments that will yield future returns if not in the short run then over the long run both for the employee and for the wellbeing of the bank.

Keywords: Commercial banks, Profit after tax, Employee cost, Human capital, Performance

Introduction

A key contributory factor to organizational performance is the human resources of an organization. Human resource refers to a set of individuals who make up the workforce of an organization or a business entity. Human resources play a significant role in coordinating all organizations' activities, towards the achievement of the corporate goals and objectives. With machines, materials and money little or nothing could be achieved without human contributions (Olaniyan & Lucas, 2008). This confirms the extent of importance of human resources in organizations. Akintoye & Adidu (2016) also affirm the importance of human resources to the success of organizations. They stated that human resource is a key factor in the determination of measurable growth of any nation. Human resource is an important component of an organisation. It is made up of the active agents that harness and combine other resources towards the accomplishment of organization goals. Consequently, organizations must have competent employees who are able to carry out assigned tasks for the purpose of attaining organizational goals. This is reiterated by Oke (2015), who asserts that successful and effective organizations understand that their success is directly related to the quality of their human capital. Thus, there is an indication that the importance of human intellectual capability is indispensable in the assessment of corporate performance.

Organizations including commercial banks make a lot of investments on their employees. These investments constitute employee cost which could be in the form of salaries or wages, training and development, health care services, retirement benefits and pensions and the like. These investments are made due to the fact that the growth of tangible capital stock of a firm and even a nation depend to a considerable degree on human capital development (Sowunmi, Eleyowo Salako and Oketokun, 2015). However, the possibility of growth in organisations might be minimal without adequate investment in developing human capital which involves the process of increasing knowledge, skills

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and capacities of people, Consequently, in the current business environment, human capital is regarded as a key source of competitive advantage. With the knowledge agenda, companies view their employees as an important resource and invest heavily in them. Nevertheless, information on human capital and its development is important to financial analysts and fund managers, who need to assess the future direction, potential and values of companies. Sharma (2012) suggests that it is the stock of human capital that predominantly determines the earnings of individuals and by extension the firm. Hence, assessing corporate performance may not be conclusive without the consideration of the contribution of investment in employee.

The unpredictable nature of the Nigerian business environment and the many reforms introduced by government and its regulatory agencies, have brought to fore the need for commercial banks to substantially invest in manpower in order to attract, recruit and retain the best possible hands to ensure their continued existence. This is due to the fact that commercial banks belong to one of the most dynamic and strategic sector of the economy and any neglect of the workforce could be very costly.

Performance can be described as the achievement of a target at the work place. Corporate financial performance (CFP), defined by Karaye, Ishak & Che-Adam,(2014), is achievement of organizational objectives or as being both productive and efficient. Corporate financial performance is anything which contributes to ameliorate value-cost couple and not only which contributes to cost decrease or value increase (Karaye et al., 2014). It also refers to the economic status of a firm such as profitability, sales growth, return on assets etc (Palagolla & Wickramasinghe, 2016). There are different parameters from which financial performance of commercial banks can be evaluated. Total assets, total shareholder equity and profitability are commonly used indicators. Literature on bank performance describes financial organizations' objectives as that of earning acceptable returns and minimizing the risk taken to earn this return. Studies on human capital cost (employee cost) and financial performance in banking sector in Nigeria are scanty and those that have attempted to examine such links have given conflicting results. This study therefore seeks to fill this gap and also to enrich existing literature on the effect of employee cost on financial performance of commercial banks in Nigeria. The study examined the effect of employee cost on the profit after tax of listed commercial banks in Nigeria.

Theoretical framework and literature review

The classical economists propounded that land, capital and labour are the basic factors of production. Labour is usually associated with the human being and qualifies him as a resource, implying that it is the "principal" source of wealth or income of a country or institution" (Chambers, 1996). Land would remain uncultivated, and capital would lie idle and perhaps, would never even have been invented or accumulated, but by and for the utilization of labour" (Yesufu, 2000) hence Labour occupies prime place in production. The human capital theory one on which this study hinges further expounds on the above assertion. The theory proposed by Seth (2009) and extensively developed by Ratti (2012) has its root in labour economics which is a branch of economics that focuses on general work force in quantitative term. The human capital theory contends that education or training raises the productivity of workers by imparting useful knowledge and skills, thus raising workers' future income through increase in their lifetime earnings. It further explains that expenditure on education or training and development is costly, and should be considered as investment since it is undertaken with a view to increasing personal incomes. Human capital approach is used to explain or support occupational wage differential. However, it is reiterated that education or training and development will not only increase employee personal income, it will also serve as a means of achieving corporate competitive advantage which reflects ultimately in organisational performance.

According to Flamholtz (2014), human capital theory distinguished between general skills and firms' specific skills of human resources. General skills are skills possessed by individuals which provide value to a firm and are transferable across a variety of firms. On the other hand, specific skills provide value only to a particular firm, and such skills are of no value to competing firms. Human capital is not substitutable and not transferable like land, labour or fixed capital. The relevance of the theory to this study is that it considered the cost of education, training, development and even workers' medical treatment as investments towards improved performance of individual workers and also creates a sort of competitive advantage which ultimately could result in improved organizations performance.

Furthermore, the relationship between employee cost and performance is further explained by the resource based theory and the expectancy theory. The resource-based theory postulated by Wernerfelt (1984) states that the possession of resources is valuable, difficult to imitate, rare and cannot be substituted. The theory suggests that organizations should look inwards to find the sources of competitive advantage through the use of their resource. Resource-based theory prescribes that organizations position themselves strategically based on their resources and capabilities rather than their products and services. While the expectancy theory given by Vroom (1964) suggests that individuals are motivated to perform if they know that their extra performance is recognised and rewarded. The theory states that employee's motivation is an outcome of how much an individual wants a reward (Valence), the assessment that the likelihood of the effort will lead to expected performance (Expectancy) and the belief that the performance will lead to reward (instrumentality)

The concept of employee cost and financial performance

Employee cost otherwise known as human resource cost means different things to different authors. It represents the aggregate sum of the individual employee's wages and salary in addition to other employee related expenses including allowances and incentives, social security, medical, insurance, training and development, retirement benefits and other subsidies or benefit. It represents that sacrifice that was incurred today in order to train and develop employee (Manukaji, Osisioma & Okoye., 2019). Employee costs constitute an important part of the organization's cost. As such, organization needs to have a clear plan in line with achieving its strategies for success while still satisfying employees at a minimal cost possible. Although employee costs are regarded as reward to employees for efforts exerted into work, they could create a sense of on-going employer appreciation in the long run manifested often in improved organizational performance.

Performance on the one hand is seen as the most important aspect of the organization. It is the ultimate variable of interest to those concerned with management, accounting, productivity, operations finance, customer satisfaction, market share, profits efficiency and the likes. This is because performance is viewed as the success of an organization in achieving valuable outcomes in terms of high returns (Memon & Tahir, 2012). Literature summarily holds that performance is the ability of an organization to meet or be able to achieve its desired result or set objectives and goals according to a time frame. In this paper performance is measured using profit after tax.

Empirical review

This section reviews some researchers thoughts on the issue under consideration. Onyekwelu and Ironkwe (2021) examined the effect of human resource accounting (Human resource accounting disclosure Index, Training cost, Number of staff and Increment in staff salaries) on corporate financial performance (return on assets and return on equity) of insurance companies quoted on the Nigerian Stock Exchange for the period 2012 to 2017. Secondary data of 12 quoted insurance companies were collected. A non-experimental causal (Ex post facto) research design was adopted to address the research objectives of the study. The lease square regression analysis, (with the aid of E-views 10) to empirically answer eight research questions raised in the study. The results showed that human resource accounting disclosure and training cost significantly affect Return on Asset and Return on Equity positively while number of staff and increment in staff salaries has a statistically significant negative effect on Return on Asset. Based on these results, it was recommended that insurance firms should do more in terms of building the culture of capacity building training, developing and motivating the personnel to put in their best for the financial growth of their organizations and enhancing their capacity to improve organizational performance. In the same vein, Nangih, Obuah, Wali and Turakpe (2020) assessed the interconnectedness between staff cost and firm profitability using Nigeria's Oil and gas industry. Specifically they examined the effects of staff salaries, medical expenses and training costs on the profit margin of listed oil and gas firms. Data of five (5) firms were collected from annual financial reports for the period 2013-2018 and analysed using descriptive correlation and regression analysis tool. The result indicated that both salaries and training cost impacted positively on profit margin whereas medical expenses had negative effect on profitability with only training cost being significant. They therefore recommended that the management of oil and gas firms in Nigeria should pay greater attention to staff training and development while ensuring that health hazards within the workplace are minimised as much as possible.

Bankole (2020), examined the influence of human resource cost on financial performance of consumer goods companies in Nigeria. The objective was to factor out the degree to which financial performance is influenced by investments in human resource, measured by Return on Asset (ROA) of Nigerian Consumer Goods Company. Secondary data were sourced from published annual financial statements of the selected consumer goods company for the period of ten years (10) spanning 2009-2018. Data analysis was done using Static Panel Estimation techniques which consisted of Pooled Ordinary Least Square (POLS) Estimator, Fixed Effect Model (FEM), and Random Effect Model (REM). The result of the study showed that pension cost (PEC), director's emolument (DCM) and gratuity cost (GRT) exert positive and statistically significant impact on ROA while salary and wages (SLW) exert positive but insignificant impact on ROA with coefficient value of .017615 ($p = 0.2905$). It is therefore concluded that investment in human resource significantly influenced financial performance and growth of Nigerian consumer goods company, and it is recommended that greater commitment to manpower development, and relevant retirement packages should be designed towards positive performance improvement.

Yetunde and Idowu (2020), assessed the impact of Human Resource Accounting (HRA) on the performance of Nigerian firms (2012 – 2016) using secondary data, sourced from ten (10) purposively selected annual report and financial summary of oil and gas companies from 2012 to 2016. Ordinary least squares analysis were carried out. Findings show that both gross staff cost and training and development cost have a positive significant impact on the performance of oil and gas companies in Nigeria. Futhermore, the study revealed that there is no significant relationship between health and safety cost and organizational performance. It was concluded that although health and safety cost alone has no significant impact on firm performance, generally, human resource accounting has a positive significant effect on firms' performance. They therefore recommend that organization should invest more in the training and development of staff and that there should be a uniform standard for identification and measurements of human capital assets.

In their study Inua and Oziegbe (2018), investigated the effect of human resource accounting attributes on the performance of quoted banks in Nigeria. The study examined the annual reports of 18 quoted commercial banks from 2009-2017 financial years and the research design adopted was the ex-post facto research design. Using regression analysis, the effect of certain human resource accounting attributes such as staff cost, director remuneration, number of staff and firm size was examined. The results confirm that there is a significant relationship between staff cost, staff strength, and firm size and financial performance. Director's remuneration had no significant relationship on financial performance. They therefore recommended that a better system of communicating employee benefits to the employees of the organization should be adopted. Furthermore, unfair performance appraisal should be discouraged since it diminishes employees' motivation.

Boudreau (2017), conducted a study on the relationship between human capital on bank performance in Korea. The data covered the period of 10 years ranging from 2005 to 2014. The population of the study is made up of 33 banks in Korea while the sample is made up of 5 selected banks in Korea. The study was carried out using secondary data. The variables include employees' salaries, director's remuneration and profit after tax. The study was conducted using secondary data and analyzed the data using simple regression analysis. According to him, the result of the study shows that human capital significantly affects organizational performance. The study recommends for effective account of human capital for increase in performance.

Welbourne (2016), examined the effect of human resource accounting on the performance of banks in Nigeria. The population of the study is made up of 20 banks while the sample size is made up of 10 banks. The study was carried out using secondary data and was analyzed using regression analysis. The variables used in the study are staff cost, ROA, ROE and NPM. The result revealed that human resource accounting significantly affects bank performance. The study recommends that banks should appraise the performance of their employees time to time for the purpose of enhancing the entire performance of the bank.

Methodology

This section describes the methodology adopted in examining the effect of employee cost on the financial performance of commercial banks in Nigeria. The research design adopted is ex-post facto research design. This design was used because the researcher has no control over the exogenous variable and whatever happens occurred before the research. Furthermore, ex-post facto design is used when researchers are trying to ascertain the causal effect of the relationships that exist between two variables. The study evaluates the effect of employee cost on the financial performance of listed commercial banks in Nigeria from 2014 to 2018. Judgemental sampling was employed in selecting ten (10) banks and secondary data from their annual reports and accounts were used for the period of the study. The variable of employee cost used in this study is an aggregate figure of selection cost, recruitment cost, training cost and pension contributions. The study data were analysed using descriptive and regression analysis.

Model specification

Afiouni (2017) model was adopted by this study

PAT = βo + β1ECit + eit …………………..eq1

Where

PAT = profit after tax

EC = Employee cost

The model was modified to suit the present objectives

Results and discussion

Table 1: Descriptive statistics of the variables

	LOGEC	LOG PAT
Mean	6.9919	7.1848
Maximum	8.99	8.22
Minimum	5.34	5.03
Std. Dev.	0.95536	0.83968
Skewness	-413	-930
Kurtosis	-.771	-246
Jarque-Bera	2.696402	7.451484
Probability	0.025970	0.024095
Observations	50	50

Source: Authors' Computation Using E-views 9.0

The results shown above regarding the selected variables depict a general average level of spread over the selected years. PAT has a maximum level of 8.2225 and a minimum of 5.031 and a mean of 7.2 at a standard deviation of 0.8398. Employee cost produced the minimum of 5.338789 and maximum of 8.992111 with the mean value of 6.9919 respectively. The Jarque-Bera (JB) test measures the difference of the skewness and kurtosis of the series with those from the normal distribution. The null hypothesis for the JB statistics is that the series is normally distributed. The result in table 1 the JB values of 2.696402 and 7.451484 with their respective p-values of 0.025970 and 0.024095 respectively for EC and PAT. This is significant at 5% level of significance showing that the data is normally distributed.

Table 2: Regression results

	LOGEC
Coefficient	0.572
Std. Error	0.096
t- Statistics	4.686
Probability	0.000
R-squared	0.424
Adj R-squared	0.412
F-Statistic	35.316
Prob(f-stat)	0.000

Source: Authors' Computation Using E-views 9.0

The result in table 2 shows the effect of employee cost on the financial performance (PAT) of commercial banks in Nigeria. The coefficient of determination R-square of 0.424 implies that 42.4% of the sample variation in the dependent variable profit after tax (PAT) is explained or caused by the explanatory variable (employee cost) while the remaining variation is explained by factors not captured in the study model. Consequently, the value of the adjusted R2 is 0.412. This shows that the regression line which captures 41.2% of the total variation in PAT is caused by variation in the explanatory variable specified in the model with 59.8% accounted for the stochastic error term. Table 2 shows that a percentage increase in employee cost would increase profit after tax by 57%. The F-statistic was also used to test the overall significant of the model. The F-value of 35.316 with p-value of 0.0000 is an indication that the model is statistically significant and can be used for inferences.

Test of Hypothesis

H0: Employee cost has no significant effect on profit after tax of Commercial Banks in Nigeria.

To test the hypothesis:

From the result the t-statistic of 4.686 has probability of 0.0000 at 5% level of significance. Since the probability of the T- statistics is less than 0.05, we reject the null hypothesis (H0) and therefore conclude that staff cost has a significant effect on profit after tax of Commercial Banks in Nigeria.

Discussion

The study investigated the effect of employee cost on performance of commercial banks in Nigeria. Findings revealed that employee cost has a positive and significant effect on profit after tax of Commercial Banks in Nigeria. This result is consistent with the findings of Abubukar (2007), which revealed that human resource accounting has significant effect on corporate profitability. It also agrees with the findings of Yetunde and Idowu (2020) where both gross staff cost and training and development cost have a positive significant impact on the performance of oil and gas companies in Nigeria. It is however contrary to the findings of Boxall and Purcell (2015), where it was revealed that human resource accounting has no significant effect on firms' profitability. With this empirical evidence, it is noted that cost expended on employees has a significant effect on the performance of commercial banks in Nigeria. Commercial banks are enjoined not to relent in investing in their employees as this would yield positive returns in terms of value added either for the short run or otherwise.

Conclusion and Recommendation

This study examined the effect of employee cost on financial performance of commercial banks in Nigeria with a sample size of ten (10) banks judgementally drawn from 15 listed banks. The data were extracted from annual financial accounts of the banks on staff cost made up of induction cost, recruitment cost, training and development cost and pension contributions to ascertain its effect on commercial banks financial performance proxied by profit after tax. The findings reveal that employee cost had a positive and significant effect on financial performance of listed commercial banks in Nigeria. The study therefore concludes that employee cost has significant effect on financial performance of commercial banks in Nigeria. The study recommends amongst other things the need for commercial banks to recognize that cost expended on employees are investments that will yield future returns if not in the short run then over the long run both for the employee and for the wellbeing of the bank.

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APPENDIX 1

BANKS	YEAR	PAT	EMPLOYEE COST
GTB	2018	166,919,765	23,681,401
GTB	2017	158,727,705	22,354,351
GTB	2016	126,836,792	20,704,772
GTB	2015	94,308,123	20,727,835
GTB	2014	89,170,777	21,036,543
ZENITH	2018	165,480,000	56,657,000
ZENITH	2017	153,003,000	55,672,000
ZENITH	2016	119,285,000	62,235,000
ZENITH	2015	98,784,000	62,428,000
ZENITH	2014	92,479,000	67,848,000
STAMBIC	2018	151,499,000	1,662,000
STAMBIC	2017	25,165,000	590,000
STAMBIC	2016	609,000	500,000
STAMBIC	2015	9,871,000	429,000
STAMBIC	2014	13,136,000	455,000
UBA	2018	41,047,000	41,537,000
UBA	2017	42,438,000	42,343,000
UBA	2016	47,541,000	43,501,000
UBA	2015	47,642,000	42,033,000
UBA	2014	40,083,000	42,082,000
FIRST	2018	9,342,000	904,000,000
FIRST	2017	9,275,000	982,000,000
FIRST	2016	50,072,000	63,391,000
FIRST	2015	37,000,000	63,672,000
FIRST	2014	79,361,000	63,011,000
ACCESS	2018	73,596,295	40,425,816
ACCESS	2017	51,335,460	41,773,512
ACCESS	2016	64,026,135	42,153,587
ACCESS	2015	58,924,754	35,699,471
ACCESS	2014	19,950,154	12,781,215
FCMB	2018	3,552,392	336,181
FCMB	2017	1,524,886	265,056
FCMB	2016	3,730,260	218,167
FCMB	2015	2,523,055	238,360
FCMB	2014	5,396,908	306,667
UNION	2018	18,438,000	32,324,000
UNION	2017	11,239,000	27,545,000
UNION	2016	15,885,000	29,628,000
UNION	2015	18,035,000	28,755,000
UNION	2014	20,486,000	28,754,000
ECO	2018	328,649	512,455
ECO	2017	228,534	510,040
ECO	2016	204,958	535,061
ECO	2015	107,464	591,543
ECO	2014	394,770	649,094
STERLING	2018	9,468,000	13,194,000
STERLING	2017	7,954,000	11,545,000
STERLING	2016	5,182,000	11,552,000
STERLING	2015	10,293,000	12,101,000
STERLING	2014	9,005,000	12,031,000

Innovation and Sustainability of Small and Medium Scale Enterprises in Enugu Metropolis

*Josephine Ivoma Orga, Ph.D**

Abstract

The study was on innovation and sustainability of SMEs in Enugu metropolis. Small and Medium Enterprises are the driving force of industrial development globally, especially in developing economies due to their numerous contributions in terms of employment generation, export promotion and use of local raw material among others. Innovation has greatly contributed to sustainability of the SMEs. The major objective of the study was to examine innovation and sustainability of SMEs, while the following specific objectives formulated were to: identify product innovation on the circular economy of small and medium enterprises in Enugu metropolis, ascertain technological innovation on management behavior on small and medium enterprises in Enugu metropolis. Methodology research design was used and population of the study was 300 made up of owners and workers and 35 SMEs. The entire population was used, so determination of sample size was not necessary. The researcher found out that product innovation had significant positive effect on the circular economy of small and medium enterprises in Enugu metropolis, with the statistical evidence (χ^2 cal. Value 382.31 > χ^2 tab. value 9.49). while it was recommended that for SMEs to be sustainable it should have product innovation, especially adopting those surveys that will not affect the environment negatively.

Keywords: Innovation, sustainability, SMES, product innovation, technological innovation

Introduction

Schumpeter (1934) believes that innovation is the use of an invention to create a new commercial product or service that is incidental to creating new demand and thus wealth. Innovation is the key to the growth of small and medium enterprises as it provides firms with a competitive advantage over others in the industry. Allocca and Kessler, (2006), posit that the history of industrial growth in developed and developing countries has shown that small and medium enterprises are the driving force of industrial development due to their numerous contributions in terms of technological innovations, employment generation, export promotion and so on. Small and medium enterprises have become the focus of industrial policy in recent times as shown by the Central Bank of Nigeria (CBN, 1997). In the same light, they have become the pivot of economic growth and development in many nations. Fatai (2016), submits that in Nigeria, the small and medium enterprises sub-sector have been expanding, especially since the mid-1980s, following the introduction of the Structural Adjustment Programme (SAP) which led to rapid deindustrialization of the economy forcing many large scale enterprises to lay off a large portion of their work.

Carls and Vereeck, (2016), opine that sustainability emphasizes the satisfaction of people's basic need so that they may enjoy a better quality of life without compromising the quality of life of future generations. Dailey and Huang (2017), argue that small and medium enterprises should assess, monitor, and potentially develop strategies to accommodate widespread sustainability reporting and to proactively adapt to overall sustainability demands. They believed that by integrating sustainability into core business practices, the firm goes beyond mere legal compliance to enhance relations with wider stakeholders across a range of social, economic and environmental concerns.

Allocca and Kessler, (2016), emphasised that the firm's innovative performance depends on the opportunities provided by their external environment. This showed that small and medium enterprises become very competitive in an emerging market when they give importance to innovative activities that build their reputation in the market environment.

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Statement of the problem

Small and Medium scale enterprises have continued to play positive significant roles in the global economies, especially those of the developing countries like Nigeria. The key reason for innovativeness is the desire of firms to obtain increased business performance and increase competitive edge. Most manufacturing sectors have not fully integrated innovation to enhance their competitiveness for sustainability.

Despite the positive significant roles played by the SMEs in the economy, sustainability is one of the greatest challenges it faces as most of them go aground soon after they were established. Some of these challenges faced by the small and medium enterprises are relatively slow to adopt sustainability practices due to lack of external stakeholder pressure, weak corporate governance, lack of managerial competence of the owner and managers, lack of training and retraining, lack of research and development, lack of product differentiation, poor customers' satisfaction, lack of succession planning, poor business partnership/alliance and poor organizational structures.

Most local firms have not been able to develop technological competences to acquire and apply knowledge from foreign firms. Small and medium enterprises barriers to innovation include lack of organizational innovation, lack of process innovation, difficulty in utilizing technology innovation which results in low productivity or lack of sustainability.

Objectives of the study

The broad objective of the study is to examine innovation and sustainability of small and medium enterprises in Enugu metropolis, while the following specific objectives were formulated to:

1. Identify product innovation on the circular economy of small and medium enterprises in Enugu metropolis.
2. Ascertain technological innovation on management behavior on small and medium enterprises in Enugu metropolis.

Research questions

The following research questions were formulated:

1. What is the effect of product innovation on the circular economy of small and medium enterprises in Enugu metropolis?
2. What is the effect of technological innovation on the management behaviour of small and medium enterprises in Enugu metropolis?

Statement of hypotheses

The following statements of hypotheses were formulated to answer the research questions:

1. Product innovation has no significant positive effect on the circular economy of small and medium enterprises in Enugu metropolis.
2. Technological innovation has no significant positive effect on the management behaviour of small and medium enterprises in Enugu metropolis.

Review of related literature

Conceptual review

Innovation:

Schumpeter (1934), posits in his classical interpretation that technical change is "a historic and irreversible change in the method of production of things" and "creative destruction".

When this definition is analyzed, technical change in practice can be implemented in forms related to:

- the implementation of goods (products/services) that are new to consumers, or higher quality than their previous counterparts;
- the application of process that are new to specific industries and economic activities in which they are used;
- the entering of new markets;
- the use of new sources of raw materials;
- the implementation of new forms of competition that lead to structural changes in the industries of their application.

Organization for Economic Cooperation and Development (OECD), (2005 :46), in the latest revision of her manuals is the Oslo Manual proposed that innovation is *"the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new* *organizational method in business practices, workplace organization or external relations"*

Godin, (2008), presents 12 concepts of innovation which can be described as follows:

A: innovation as process of doing of something new:
- innovation as imitation;
- innovation as invention;
- innovation as discovery;

B: innovation as human abilities to creative activity:
- innovation as imagination;
- innovation as ingenuity;
- innovation as creativity;

C: innovation as change in all spheres of life: -
- innovation as cultural change;
- innovation as social change;
- innovation as organizational change;
- innovation as political change;
- innovation as technological change;

D: innovation as commercialization of new product sustainability: Brundtland, (1987), the Brundtland Commission put forth a "global agenda for change" with the purpose of "furthering the common understanding and common spirit of responsibility so clearly needed in a divided world. The report enumerated the following description of sustainable development:

1. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of "needs," in particular, the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

2. Thus the goals of economic and social development must be defined in terms of sustainability in all countries—developed or developing, market-oriented or centrally planned. Interpretations will vary, but they must share certain general features and must flow from a consensus on the basic concept of sustainable development and on a broad strategic framework for achieving it.

U.S. Census Bureau. (2007), opines that the hallmark for Business Sustainability firms is to invent, produce and report measurable results in well-defined sustainable development areas, aligning this in an economically sound and profitable way. The value proposition of business is broadened to include all three dimensions of the "triple bottom line" (people, planet, profit).

Bakker, 2012; UNEP, 2012; WWF, 2012; Gilding, 2011), assert that poverty has not been eradicated, inequity is growing, hunger and malnutrition still kill a child every 6 seconds, 1.8 billion people don't have access to clean drinking water and sanitation, 2.3 billion people don't have access to electricity and a 4 degree warming scenario is now being accepted by international organizations like the World Bank and the IEA, while the international climate negotiations have failed to produce any consensus on effective global strategies to keep global warming at least below 2 degrees.

Small and medium enterprises

Enudu, (2019), posits that there is no general acceptable definition of SMEs among scholars, governments, students and economists. That the definition varies from country to country, even within a country's different definitions apply to different sectors of the economy, such as in Japan in which manufacturing, commerce and service sectors have different definitions. Enudu, (2019) states that different people employed different criteria such as total asset size, relative size of a firm in an industry, number of employees, sales volume, ownership structure, or a combination of the above features, to define SMEs.

Owualah, (1999), posits that small and medium scale enterprises are businesses with total investment, including land and working capital, not exceeding N5000 and/or whose annual turnover did not exceed N5 million. Owualah opines that since 1993, that the Central Bank of Nigeria (CBN) has redefined them as firms whose total cost excluding cost of land but including working capital is above N1million, but not exceeding N10 million.

Small and Medium scale Enterprises for the purpose of revised Guidelines for the Small and Medium Enterprises Equity Investment Scheme (SMEEIS) is defined as any enterprise with a maximum asset base of N500 million (excluding land and working capital), and with no lower or upper limit of staff (Zenith Economic Quarterly, 2005). This definition is subject to review by CBN from time to time based on inflation.

Small and medium scale enterprises can be characterized as follows:
(a). The number of employees is between (11 to 100) workers. (b). Low capital investment and annual business turnover, (c). Small in size within the same industry, (d). Management is independent, (e). Small and medium scale enterprises are generally labour intensive

James et al., (2018; Pinkovetskaia, Nikitina, & Gromova, 2018), stated that SMEs are business enterprises owned by an individual to create values, which include economic, social, and environmental values and this was corroborated by Fatoki, 2018, that these values enhance the economic growth of the nation, decrease poverty, and reduce unemployment.

Product innovation
Coad and Rao, (2018), assert that product innovation is the introduction of new product/service. Mile, (2015), posits that product innovation is the introduction of new functions, enhanced performance, or the addition of new features into the existing products.

Demirbs and Hussain, (2017), opine that new product design plays pivotal role in defining the physical form of the product to satisfy customer's needs. The design component entails engineering design such as mechanical, electrical, software and industrial design such as aesthetics, ergo metrics and user interfaces. Fatoki, and Garwe, (2017), submitted that innovation development forms its basis on conducting customer surveys and trying to identify particular customer needs for products which are largely nonexistent.

Technological innovation:
Bouhsina (1998), states that technology is a body of knowledge which might be seen as a building block for technological innovation, serving as corner stone to research, design, development, manufacturing and marketing. That technological innovation is a part of the total innovation discipline, which focuses specifically on technology and how to use it successfully in products, services and processes.

Becchetti and Trovato (2015), proposed that technological innovation is a key factor in a firm's competitiveness. That it is unavoidable for firms which want to develop and maintain a competitive advantage and gain entry into new markets.

Harrison and Watson (2017), believed that SMEs are generally more flexible and adapt themselves easily, and are better placed to develop and implement new ideas. Rutan, (2017), submits that technological changes increase profit of organization.

Circular economy:
Circular economy is a new approach to sustainability. Its potential is in part due to its applicability to a wide range of organizations. Circular economy is the opposite of a linear economy, which is characteristic of most contemporary production processes, where natural resources are converted into products, via production, which then turn to wastes. This means natural capital is used, and never restored.

Circular economy strategies aim to have no net effect on the environment, restoring damaging resource acquisition, while reducing the waste generated in production (Gast, Gundolf, and Cesinger 2017; Murray, Skene, and Haynes 2017; Geissdoerfer et al. 2017).

MacArthur, (2013), states that circular economy strategies have grown from work by industrial ecologists in the 1990s and that the aim was to create a system with (near) complete internal cycling of materials. The 4R framework of reduce, reuse, remanufacture and recycle is often used as a hierarchy of preferred options for managing materials. Reduce involves increasing efficiency by consuming fewer natural resources and materials during both the production and use phases. Reuse involves ensuring that old products that are still able to function are still used. While remanufacture takes old and often worn-out products and through processing, and ensures that they retain their original function. Lastly, recycling involves further processing of materials to obtain the same or lower quality (Kirchherr et al. 2017).

Management behaviour

Mahajan, and Bose, (2018), opine that top management commitment is in fact, the most important enabler for formulation and execution of sustainable business strategies. Mahajan and Bose, (2018), believed that business leaders have to be convinced with the business case for sustainability and they must set such a vision for the organization, define goals that are measurable and chalk out guidelines that are precise for lower levels of management to commit to sustainability initiatives.

Theoretical framework:

Upper echelons theory

Hooi et al., (2016) considered upper echelons theory and resource-based view theory, evidence for the research according to Hambrick and Mason (1984) the theory of upper echelons suggested that the manager's situation partly influences the organisation results, strategic decisions as well as level of performance. The upper echelon tasks have a positive effect on organisational sustainability and, as such, contribute to the future sustainable growth of small and medium-sized enterprises (Tacheva, Simpson & Ivanov, 2020).

Methodology

Research design

The researcher adopted the survey research design for the study and it leaned heavily on opinion of respondents.

Source of data

The sources of data were primary and secondary sources.

Primary sources

Primary data were first hand information collected by the researcher, usually; the data are assembled by the person who observed the phenomenon. This was achieved through the use of structured questionnaire.

Secondary sources

Secondary data refer to already published information. Secondary sources of information are those data which contained accounts of events or phenomena by other people who did not participate or witness the events.

Population of the study

This refers to the entire number of the members or elements in which the researcher is interested in. However, the population used in this research work was derived from the population of the entrepreneurs/CEOs and workers of the SMEs. The entrepreneurs/CEOs and staff of the selected SMEs were the population of this study.

Table 3.4.1: Population of the Study

S/NO	SMEs	NUMBER OF EMPLOYEES
1.	Entrepreneurs	35
2.	worker	265
	Total	**300**

Source: field survey 2021

Thus, the three hundred (300) owners/employees of the above selected SMEs in Enugu metropolis constituted the population of the study.

Method of data analysis

The data collected were analysed using tables and simple percentages, while hypotheses were tested using chi-square test statistic.

The chi-square (x^2)test statistics states as follow:

$$X^2 = \sum \frac{(O-E)^2}{E}$$

Where:

x^2 = chi - square

$\sum$ = summation of all items in items

o = observed frequency

E = expected frequency

Degree of freedom
DF - (R-1) (C-1)
Where:
R = Number of Rows
C=Number of Columns
1=Constant

Decision rule
Accept Ho: if the calculated value is less than the critical or table value. Otherwise reject null hypothesis if the calculated value is greater than the critical or table value.

Data presentation, analysis and discussion of findings

Data presentation
This section focused on the analytical aspects of the research work. The general report of activities conducted on the primary data collected from the sample population was made for proper presentation and analysis of responses generated from the administered questionnaire.

Here data was presented in Table 4.1 as follows:

Table 4.1: Distribution and return of questionnaire

Table 4.1: Distribution and Return of Questionnaire

No Distributed	% Distributed	No. Returned	% Returned	No. Not returned	% not returned
300	100	282	94%	18	6

Source: Field survey 2021

Table 4.1, shows a total of three hundred (300) copies of questionnaire distributed to the SMEs. However, two hundred and eighty two (282) copies of questionnaire representing 94% were returned and eighteen (18) copies of questionnaire were not returned. Analyses were therefore, based on the 282 copies of questionnaire that accounts for 94% of the total copies of questionnaire distributed.

Table 4.1.1: Respondents' response on product innovation on circular economic in SMEs in Enugu metropolis

Continuous Product/service improvement of the organization has continued to attract customers' patronage and it does not affect the environment negatively.

Response	Frequency	Percentage (%)
Strongly Agree	162	57.45
Agree	100	35.46
Undecided	20	7.09
Strongly Disagree		-
Disagree		-
Total	**282**	**100**

Source: Field work, 2021

Table 4.1.1 above indicated that the response on the Continuous Product/service improvement of your organization has continued to attract customers' patronage and it does not affect the environment negatively 162(57.45%) strongly agree, 100(35.46%) of the respondents agree, while 18(7.09%) of the respondents were undecided. This implies that those who strongly agree are greater in number.

Table 4.1.2: Respondents' response on the extent technological innovation affects management behavior of small and medium enterprises in Enugu metropolis.

Design of new product and service ensures organizational efficiency, especially when it has management support.

Response	Frequency	Percentage (%)
Strongly Agree	170	60.28
Agree	112	39.72
Undecided	-	-
Strongly Disagree	-	-
Disagree	-	-
Total	**282**	**100**

Source: Field survey, 2021

Table 4.1.2 shows the extent design of new product and service ensure organizational efficiency, especially when it has management support. The above table shows that 170(60.28%) of the respondents strongly agree, while 112(39.72%) of the respondents agrees. The implication is that those who strongly agree are majority.

Testing of hypotheses

The hypothesis is tested using the chi-square test statistic

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Where:

x^2 = chi - square

Σ = summation of all items in items

o = observed frequency

E= expected frequency

The level of significance is 0.05 or 5%

Hypothesis I

Ho: Product innovation has no significant positive effect on the circular economy of small and medium enterprises in Enugu metropolis.

Table 4.1.1: Respondents' response on the Continuous Product/service improvement of your organization does not attract customers' patronage and the waste does not affect the environment negatively in SMEs in Enugu metropolis.

Table 4.2.1: Chi-square Contingency Table for Hypothesis I

Response	O	E	O – E	$(O-E)^2$	$\frac{(O-E)^2}{E}$
Strongly Agree	162	45.2	116.8	13642.24	301.82
Agree	100	45.2	54.8	3003.04	66.44
Undecided	20	45.2	-25.2	635.04	14.05
Strongly Disagree	-	-	-	-	-
Disagree	-	-	-	-	-
Total	**282**				**382.31**

Source: Field survey 2021

Where: $E = \frac{sum\ of\ responses}{no\ of\ catogeries} = \frac{226}{5} = 45.2$

To determine the degree of freedom

DF = (R-1) (C-1)

Where:

R = Number of Rows

C = Number of Columns

1 = Constant

DF = (2-1) (5-1)

(1) (4) = 4

DF 4 under 0.05 = 9.49

The table value is given as x^2 = 9.49

Decision: Thus x^2 calculated value (382.31)>x^2 tabulated value 9.49. We accept the alternative hypothesis, which states that Product innovation has significant positive effect on the circular economy of small and medium enterprises in Enugu metropolis.

Hypothesis II

Table 4.1.2: Respondents response on the extent technological innovation affects management behavior of small and medium enterprises in Enugu metropolis.

Table 4.2.2: Chi-square contingency table for hypothesis II

Design of new product and service ensure organizational efficiency, especially when it has management support of your organization.

Response	O	E	O – E	$(O-E)^2$	$\frac{(O-E)^2}{E}$
Strongly Agree	170	45.2	124.8	15575.04	344.58
Agree	112	45.2	66.8	4462.24	98.72
Undecided	-	-	-	-	-
Strongly Disagree	-	-	-	-	-
Disagree	-	-	-	-	-
Total	**282**				**443.30**

Source: Field survey 2021

Ho: Technological innovation does not affect management behavior of small and medium enterprises in Enugu metropolis.

The statistical test is $\chi^2 = \sum \frac{(O-E)^2}{E}$

Where: $E = \frac{sum\ of\ responses}{no\ of\ catogeries} = \frac{226}{5} = 45.2$

To determine the degree of freedom

DF = (R-1) (C-1)

Where:

R = Number of Rows

C = Number of Columns

1 = Constant

DF = (2-1) (5-1)

(1) (4) = 4

DF 4 under 0.05 = 9.49

The table value is given as x^2 = 9.49

DF 4 under 0.05=9.49

The table value is given as x^2 = 9.49

Decision: Thus x^2 calculated value (443.30) $>x^2$ tabulated value 9.49. We accept the alternative hypothesis, which states that technological innovation affects management behavior of small and medium enterprises in Enugu metropolis.

Summary of findings, conclusion and recommendations

Summary of findings

The summary of the findings made for the purpose of this research study include the followings:

i. Product innovation had significant positive effect on the circular economy of small and medium enterprises in Enugu metropolis, with the statistical evidence (x^2 Cal. Value 382.31$>x^2$ tab. value 9.49).

ii. Technological innovation had significant positive effects on management behavior of small and medium enterprises in Enugu metropolis with the statistical evidence (x^2 cal. Value, 443.30$>x^2$ tab. value 9.49).

Conclusion

Product innovation is critical and pivotal to the sustainability of SMEs as it enhances performance and leads to consumers' patronage. It becomes imperative that SMEs should continually have product innovation as to remain relevant in the business environment.

Technological innovation is also pertinent as any business that is not alert to its emergence may go aground as it makes product, service and process obsolete. Therefore, adoption of these innovative ideas is crucial to sustainability of SMEs.

Recommendations

Based on the findings of the study, the following recommendations were made:

i) It is recommended that for SMEs to be sustainable it should have product innovation, especially adopting those methods that will not affect the environment negatively.

ii) That since technological innovation cuts across all segments of innovative ideas it should be at the SMEs core values in order to be sustainable.

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Impact of Economic Governance on Socio-economic Development in Nigeria

*Georgina Obinne Ugwuanyi, Efanga, Udeme Okon, Professor Wilfred N. J. Ugwuanyi**

Abstract: *The study investigated the impact of economic governance on socio economic development of Nigeria for the period 2005-2019. Economic governance was proxied by effective governance index, corruption control index, quality budgetary and financial management index and public administration index. The dependent variable of socio-economic development was measured by GDP growth rate. Four objectives were developed to pilot the study. Data were generated from secondary sources from the World Bank data base. Analysis was carried out using E-views 10 and the statistical tools used were: Augmented Dickey Fuller Unit root test, Autoregressive Distributed Lag (ARDL). Results of the unit root test showed that some of the data used were stationary at levels while some were stationary at first order of integration. The ARDL regression model revealed that economic governance indices proxied by effective governance index, corruption control index, quality budgetary and financial management index; and public administration index did not significantly impact on GDP growth rate to effect socio economic development in Nigeria for the period under study. The study recommended that Good economic governance which will translate to improved formulation and implementation of sound micro and macroeconomic policies is vital for socio economic development.*

Keywords: Economic Governance, Financial Management, GDP growth rate, Corruption control, Socio-economic development

1. Introduction

It is worrisome to note that Nigeria has existed for over fifty years with little or no record of such socio-economic and political development. This ugly trend is connected with the pervasive corruption noted in the country (Lawal and Tobi, 2006). Although there has been various administrative reforms carried out to ensure sustainable good governance, the gains have not materialized due to corruption among other factors. Over the years, billions and now trillions of naira are budgeted yearly with the aim of improving the living standard of the citizenry through increase in output. These dreams were elusive perhaps due to the failure of government to implement the content of the budget to the latter. As noted by Ogujiuba and Elugiamusoe (2013), budget is supposed to be the most important economic policy instrument: unfortunately, it is shrouded with a lot of myths and illusions which is still not contributing to the economic growth and development of the country.

Inefficiency in public administration has been a matter of concern in most developing countries. Despite the fact that Nigeria is a country blessed with enormous material resources like oil, yet their socio-economic development is still very low. One of the major explanations for the failure of all development programmes in Nigeria has been the absence of effective accountability and transparency that would ensure good governance. Indeed, the socio-economic and political development of a country depends on its ability to entrench and sustain good economic governance which is expressed in a committed, patriotic and disciplined leadership with a vision to advance in the quest for national development.

1.2 Statement of the problem

Obviously, the improvement in economic governance indicators in Nigeria, has been slow and below the average level of assessment. Various factors are said to be responsible for this current status, of which lack of good governance is seen to be the most prominent

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among many others. Many political and economic scholars argue that good governance is one of the main factors, not only for the democratic development of the country, but it is also one of the primary factors in the economic growth and socio-economic development.

In the last three years, the Federal Government has budgeted for over 16 trillion naira without much on ground to show for it (CBN, 2016). If we combine the budgets of the 36 states and that of the Central Government in the last 3 years, it amounts to hundreds of trillions of naira. Perhaps such questions as, what have we to show for these trillions of naira budget in terms of critical infrastructure, employment opportunities, poverty reduction, debt reduction amongst others will arise. Weak economic governance especially on area of quality public administration, quality budgetary and financial management, corruption control and overall government effectiveness has continued to be one of the key factors hindering growth and socio-economic development in Nigeria. It is on these notes, that this study was conceived.

1.3 Objectives of the study

The objective of the study is to investigate the impact of economic governance on socio economic development. Specifically the study will evaluate the:

- Impact of quality budgetary and financial management Index on GDP growth rate in Nigeria.
- Effect of governance effectiveness Index on GDP growth rate in Nigeria.
- Impact of quality public administration Index on GDP growth rate in Nigeria.
- Effect of quality corruption control Index on GDP growth rate in Nigeria.

1.4 Research questions

In line with the objectives, the following research questions were asked to guide the study.

1. What is the impact of quality budgetary and financial management Index on GDP growth rate in Nigeria?
2. What effect does governance effectiveness Index have on GDP growth rate in Nigeria?
3. To what extent does quality public administration Index affect GDP growth rate
4. What relationship exists between quality corruption control Index and GDP growth rate

1.5 Research hypotheses

In line with the objectives the following hypotheses were formulated to guide the study:

$HO_{1:}$ Quality budgetary and financial management Index have no significant impact on GDP growth rate in Nigeria over the period in view

$HO_{2:}$ Governance effectiveness Index has no significant effect on GDP growth rate in Nigeria over the period in view

$HO_{3:}$ Quality public administration Index has no significant impact on GDP growth rate in Nigeria over the period in view

$HO_{4:}$ Quality corruption control Index has no significant impact on GDP growth rate in Nigeria over the period in view.

2. Literature review

2.1 Conceptual framework

Economic governance

Sub-Sahara African countries have had a checkered past when it comes to good governance and institutions. Increasingly, economists and policy makers are recognizing the importance of governance and institutions for economic growth and development. The

New Partnership for Africa's Development (NEPAD) has four main goals: eradicating poverty, promoting sustainable growth and development, integrating Africa into the world's economy, and accelerating the empowerment of women. Economic governance means the policy and regulatory settings that governments adopt to manage the economy. It includes the system and procedures established by institutions to achieve union objectives in the economic field, namely the coordination of economic policies to promote economic and social progress for the citizens.

In addition, Economic governance refers to the policy and regulatory settings that governments adopt to manage the economy. Economic governance encompasses two broad areas of public policy: macroeconomic (including aggregate fiscal) management and microeconomic management (relating to the policies that determine the private-sector operating environment, including business licensing procedures and contract enforcement processes).

Government effectiveness includes the quality of government services, competent policy formulation and its ability in implementation of the desired policy (Kaufmann, Kraay and Mastruzzi, 2010). Regulatory quality is also a complementary governance indicator for government effectiveness, describing the capacity of governments to take effective policy decisions to promote private sector growth (Kaufmann, Kraay&Mastruzzi, 2010).

Governance

The concept of governance has been discussed by political science and public administration researchers for years. According to de Ferranti et al (2009), "governance describes the overall manner in which public officials and institutions acquire and exercise their authority to shape public policy and provide public goods and services". Similarly, governance also can be seen as the process of decision-making and the process by which decisions are implemented or not implemented. (United Nations Economic and Social Commission for Asia and the Pacific UNESCAP, 2009).

Although consensus exists in terms of defining governance, a common theme among scholars is that governance means more participation in the political and decision-making process by nongovernmental institutions (Agere, 2000; de Ferranti, Jacinto, Ody, &Ramshaw, 2009; Lovan, Shaffer, & Murray, 2004). Thus, under governance, there are many stakeholders managing all the needs of the nation which government is one of them.

The United Nations also introduced characteristics of good governance practices as a global standard to be adopted by governments that receive their aid. According to them, "good governance has 8 major characteristics such as being participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive, and follows the rule of law" (UNESCAP, 2009). These criteria are often used by recipient nations to assess how their governments are achieving better governance (Mimicopoulos et al, 2007).

Budgeting and financial management

Obviously, government in an attempt to achieve macro-economic goals and objectives of price stability, socio-economic development, stable and full employment, infrastructural development as well as Balance of Payments equilibrium, initiates several types of budget such as Balanced, Surplus, Deficit, development as well as supplementary budget. Meigs and Meigs (2004) defined budget as a comprehensive financial plan, setting forth the expected route for achieving the financial and operational goals of an organization. Budget being an important economic policy instrument for proper financial management of a nation's resources, reflects the government priorities regarding her social and economic policies.

According to Ohanele (2010), a well-functioning budget system is vital for the formulation of sustainable fiscal policy and the acceleration of economic growth. Being a comprehensive income statement of the government, it is arguably a potent tool for the realization of government objectives of achieving economic growth and development. Generally, for a budget to perform its obligation, it must possess some important qualities. Falete and Myrick in Olaoye et al (2017) identified four basic qualities – it should be well designed, effectively and efficiently implemented, adequately monitored and finally its performance should be evaluated. It could therefore be deduced that the essence of budget is not in its formulation or initiation but in its implementation which is aimed at meeting the needs and aspirations of the people.

A well implemented budget helps to translate government campaign promises, policies and programs into outcomes that have a direct bearing on the people such as provision of employment opportunities, poverty reduction as well as development of critical infrastructure such as roads, water, electricity, hospitals, schools, etc. for the good of the people.

In Nigeria, the reality on ground is that there have been many cases depicting the lack of accountability and barefaced corruption in the conduct of public fiscal affairs. Funds meant for development and good governance are diverted to personal accounts via corruption in high places. According to Waziri (2009), revelations in the past, as given by the Economic and Financial Crimes Commission (EFCC) in the war against corruption pointed to the fact that Nigeria is faced with a major crisis of transparency and accountability. Sadly, the entrenched culture of corruption in the financial management is being enhanced by bureaucratic secrecy, which encourages the management of public funds by public officials and cronies that account to no one but himself or herself.

Corruption

Nigeria as a country is still battling with the problem of good governance, despite her long years of independence. Above all, the leadership of the country is known with gross lack of vision, gross corruption among many others which has become a threat to the nation's survival (Kuffuor, 2009). Obviously, corruption has eaten deep into every segment of the Nigerian society. This is why Ogundiya (2009), in his opinion said that corruption is a huge challenge in the Nigerian public administration. This statement can be confirmed from the revelations of many probe panels that have been set up at different regimes in the country. Corruption has indeed robbed Nigerians of the benefit of good governance.

Ogundiya (2008) asserted that Nigeria had lost some US$380 billion to corruption between independence in 1960 and the end of military rule in 1999. In addition, some western diplomats estimated that Nigeria has lost a minimum average of "$4 billion to $8 billion per year to corruption over the eight years of the Obasanjo administration". That figure would equal between 4.2% and 9.5% of Nigeria's total GDP in 2006 (HRH, 2007). This reckless drainage of common wealth has been responsible for the socio-economic stagnation and bad governance witnessed in all the sectors of the national life.

Indeed, corruption is the major reason for the insolvable problems of hunger, poverty, diseases the general acute development tragedy in Nigeria (Ogundiya, 2009). Seriously, corruption has hindered the growth and effective budgeting, control and utilization of resources to ensure good public administration in the country.

Furthermore, the CLEEN Foundation (2010) gave other effects of corruption as lack of development, infrastructural decay, and mediocrity in leadership. Other visible signs are; fuel scarcity in an oil-producing nation, then fallen standards of education and work output, high rates of unemployment and the ever widening gaps between the rich and poor among other factors. At the international level, corruption manifests in tarnishing the image of the country and the caution exercised by foreign nationals in business transactions with Nigerians, thereby weakening the economic sector. Bureaucratic corruption in particular has been responsible for the mismanagement of public resources, economic setback as a national heritage etc (Imokhuede, Lawal and Johnson, 2012). Corruption, which was compounded during the several years of military misrule, has become institutionalized thereby obstructing progress in every facet of the country's political and socio-economic life. The result has been the paradox of mass poverty amidst rich natural resources (CLEEN Foundation, 2010).

Socio-economic development

Socio-economic development is a product of development and can be defined as the process of social and economic transformation in a society. Socio-economic development embraces changes taking place in the social sphere mostly of an economic nature. Thus, socio-economic development is made up of processes caused by exogenous and endogenous factors which determine the course and direction of the development. Socio-economic development is measured with indicators, such as gross domestic product (GDP) which is the sum total of all the goods and services produced in the country within a specific period of time usually one year, by both citizens and foreigners in the country alike, life expectancy, literacy and levels of employment. Changes in less-tangible factors are also considered, such as personal dignity, freedom of association, personal safety and freedom from fear of physical harm, and the extent of participation in civil society.

Moreover, causes of socio-economic impacts are, for example, new technologies, changes in laws, changes in the physical environment and ecological changes. Scholars have identified strong links between security and development since the cold war ended (Nwanegbo and Odigbo, 2013; Chandler, 2007).

However, lower development indicators, such as corruption, poor budgetary and financial management, weak state institutions and limited regulatory capacity among others, have impaired the rule of law, allowed resources to be diverted and illegal acts to thrive thereby undermining the integrity of institutions.

2.2 Theoretical framework

The study on impact of economic governance on socio-economic development is hinged on the theory of social contract.

Social contract theory

Social contract theory was introduced by early modern thinkers Hugo Grotius, Thomas Hobbes, Samuel Pufendorf, and John Locke the most well-known among them as an account of two things: the historical origins of sovereign power and the moral origins of the principles that make sovereign power just and/or legitimate. It is often associated with the liberal tradition in political theory, because it presupposes the fundamental freedom and equality of all those entering into a political arrangement and the associated rights that follow from the principles of basic freedom and equality. Basically, social contract theory talks about the imperative of surrendering people's power over their lives and properties, to others in the same society who in turn are responsible for providing for, and protecting the people and the society at large.

Thus, relating this theory to this study, government should be concerned with the provisions of most general and fundamental needs of the people, and likewise the dynamics of political, economic and security needs of the society. Most scholars are optimistic that good governance gives better future for development. Those optimistic about the profits of good governance argue, for instance, that quality in the area of budgetary and financial management, corruption control and effective public administration offers better prospects to actualize the developmental aspirations of the citizenry.

2.3 Empirical review

Some studies related and relevant to the research work have been reviewed. Such studies include: Jiandang, Jie, Zhou and Zhijun (2018) who in their paper investigated the impact of governance quality on economic growth in China. After developing a theoretical framework for the effect of governance quality on local economic growth, this article studied the panel data in provincial governance, and checked the robustness of the empirical findings from four aspects. The results showed that governance quality has a positive effect on economic growth, due to good governance strengthening the helping hand or weakening the grabbing hand of power. Governance quality presents diminishing marginal returns, which means that the high-speed economic growth effect becomes less and less, while the high-speed economic development effect becomes more and more. Higher governance quality could bring a high-speed economic growth effect in the western region, while higher governance quality could bring a high-quality economic development effect in the eastern region. Compared with fixed-asset investment, human capital has played a more important role in economic growth. In order to promote the sustainable development of China's economy, policy makers should improve local governance quality, strengthen the capacity of independent innovation, and promote the accumulation of high-quality human capital.

Adefeso and Tunde (2016) examined the impact of governance administration on economic development in a relative opened economy, Nigeria. The study employed co-integration approach on the secondary data which were obtained from Statistical Bulletin published by Central Bank of Nigeria and World Development Indicator (WDI) from 1970-2014. The result showed that there is a long-run relationship among the variables employed. The statistical significance of the positive coefficients of governance administration index (GI) indicated that its previous year had positive and significant impact on economic development in the current year of the Nigerian economy with relative small magnitude of less than 0.05% impact on economic development compared with the developed economies of the world. Also, contrary to our expectation, the result revealed that tax revenue (LTAX) is negatively related with economic development indicating that its previous year had negative and significant impact on economic development in the current year of the Nigerian economy. The study therefore, concluded that the cost of governance administration and the nature and quality of service delivery needed to be examined for meaningful economic progress in Nigeria.

Engjell Pere (2015) investigates the impact of good governance in the rates of economic growth of GDP. The article adopts a quantitative methodology approach, i.e. an econometric model based on the examination of a panel – data of good governance indicators for Western Balkan countries for the period 1996 – 2012. The analysis concentrated on Albania, Bosnia and Herzegovina, Croatia, Kosovo, Macedonia, Montenegro and Serbia.

Bichaka and christain (2013) investigated the role of governance in explaining the sub-optimal economic growth performance of African economies. Our results suggest that good governance or lack thereof, contributes to the differences in growth of African countries. Furthermore, our results indicate that the role of governance on economic growth depends on the level of income. In a nutshell, our results demonstrate that without the establishment and maintenance of good governance, achieving the goals of NEPAD will be hampered in Africa.

Bassam (2013) in his work examined whether the strong relationship between governance and growth exists during economic crises or only during non-crisis periods. The results of the current paper demonstrate that the global economic crisis has had an unnoticeable influence on the relationship between governance and economic growth. However, this study found that different levels of development of nations affect the relationship between governance and growth in various ways during times of crisis. Thus, the results of the current paper highlight the instability in the relationship between governance and economic growth during the economic crisis; this unsteadiness is a sign of the need for long-term strategies to promote global and national good governance practices that are not adversely affected by crises.

3. Methodology

The study adopted the Ex-post facto research design. It is a quasi-experimental study examining how independent variables affect the dependent variable. The design aimed at investigating the impact of economic governance on socio economic development in Nigeria for the period 2005-2019. Secondary data were used, relevant data were sourced from the world bank data base. Multiple linear regression analysis was used to analyze the relationship between the dependent variable and the explanatory variables of the study.

3.1 Model Specification

A linear relationship was established between socio economic development proxied by Nigerian GDP growth rate as the dependent variables, and economic governance were proxied by Quality budgetary and financial management index (BFMI), Quality public administration index (PADMI), Corruption control index (CCI) and Governance effectiveness Index (GEFI) as the independent variables. The model is specified thus:

GDPGR = {BFMI, PADMI, CCI, GEFI }

The model is expressed in the econometric form below:

$GDPGR = \beta_0 + \beta_1 BFMI + \beta_2 PADMI + \beta_3 CCI + \beta_4 GEFI + U_t$

β_0 = Intercept of the model.

$\beta_1, \beta_2, \beta_3, \beta_4$ = Parameter Estimates.

GDPGR = Gross domestic product growth rate

BFMI = Quality budgetary and financial management index

PADMI = Quality public administration index

CCI = Corruption control index.

GEFI = Governance effectiveness Index

The following statistical and econometric techniques were employed in the study.

Unit root test

The test enables us to verify whether the time series data employed in analysis are stationary. The unit root test has to be conducted first because without it, if the regression analysis is conducted in the traditional way and time series variables are found to be non-stationary the result will be spurious. The ADF unit root test will be employed.

Long Run and Short Run Estimation of the ARDL Model

The short run equation in our model is given as follows

$D(GDPGR)_{t-1} = \beta_0 + \beta_1 D(BFMI)_{t-1} + \beta_2 D(PADMI)_{t-1} + \beta_3 D(CCI)_{t-1} + \beta_3 D(GEFI)_{t-1}$ ECM(-1). "D" represents the first difference operation of the variables, ECM (-1) is the one period lag of the model residual. The parameters β_1 *to* β_4 are the short run coefficients of the model while the coefficient of ECM (-1)is the long run speed of adjustment of the model. The sign of the coefficient of ECM (-1)should be negative and significant as well for holding the long run equilibrium. Data collected are processed and analyzed with E-view 10 analytical tool.

4. Data presentation, analysis and discussion of results

Table 4.0: Data for analysis on socio-economic development and economic governance variables

Year	GDPGR	BFMI	PADMI	GEFI	CCI
2005	4.282	3.5	2.5	21.81	10.24
2006	4.152	3.5	2.5	13.79	7.31
2007	5.075	3.5	3	15.29	13.1
2008	3.435	3.5	3	18.1	17.21
2009	-3.292	3.5	3	12.57	14.35
2010	4.41	3.5	3	12.44	13.09
2011	6.131	3.5	3	14.21	10.42
2012	6.496	3.5	3	18.25	10.9
2013	4.926	3.5	3	18.24	8.53
2014	4.786	3.5	2.5	27.85	7.93
2015	4.792	3.5	2.5	22.59	13.46
2016	4.562	3	2.5	10	15.44
2017	4.63	3	2.5	10	13.46
2018	-3.949	3	2.5	15.86	14.18
2019	-3.879	3	2.5	15.86	14.18

Source: World Bank effective governance indicator databank.

4.1 Data analysis

Stationary test

Table 4.1 Augmented Dickey Fuller unit root test result

Variable	ADF Statistics	Critical Value	Order of Integration	Remark
GEFI	-3.125126	-3.119910	1(1)	Stationary at 1st difference
BFMI	-3.605515	-3.119910	1(1)	Stationary at 1st difference
PADMI	-3.316625	-3.119910	1(0)	Stationary at level
CCI	-3.328171	-3.119910	1(0)	Stationary at level
GDPGR	-3.426059	-3.212696	1(1)	Stationary at 1st difference

Source: Authors extracted from E-Views 10

The ADF unit root test result of the table 4.1 above shows that at level, 1(0), the absolute value of the ADF statistic of Public administration index (PADMI) and Corruption control index were greater than the reported critical values thus we conclude that the two variables are stationary at levels, that is, integrated at order I(0). At first difference, 1(1), the absolute values of the ADF statistics of governance effective index (GEFI), Quality budgetary and financial management index (BFMI), Public administration index (PADI) and Gross domestic growth rate (GDGR) were greater than their reported critical values of -3.119910 (in absolute term) at 5% level of significance, thus it is concluded that the three explanatory variables are stationary at first difference.

Autoregressive Distributed Lag (ARDL) Short Run Regression Table 4.2

Dependent Variable: GDPGR				
Method: ARDL				
Date: 07/15/21 Time: 13:08				
Sample (adjusted): 2006 2019				
Included observations: 12 after adjustments				
Maximum dependent lags: 1 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (0 lag, automatic): CCI BFMI GEFI PADMI				
Fixed regressors: C				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDPGR(-1)	0.494266	0.334627	1.477064	0.1901
CCI	-0.010874	0.645032	-0.016858	0.9871
BFMI	7.104650	3.893827	1.824593	0.1179
GEFI	-1.089850	0.648003	-1.681859	0.1436
PADMI	-0.904286	2.175105	-0.415744	0.6921
C	-3.994901	3.725666	-1.072265	0.3248
R-squared	0.719613	Mean dependent var		1.311997
Adjusted R-squared	0.485957	S.D. dependent var		0.634105
S.E. of regression	0.454633	Akaike info criterion		1.568200
Sum squared resid	1.240147	Schwarz criterion		1.810654
Log likelihood	-3.409203	Hannan-Quinn criter.		1.478436
F-statistic	3.079799	Durbin-Watson stat		2.063192
Prob(F-statistic)	0.101697			

Source: E-views 10

Short run estimates of the model on table 4.2 shows that corruption control index is negatively related to GDP growth rate in Nigeria, a unit increase reduces GDP growth .

Test of significance with respect to T-statistics of the variables in the regression model of table 4.2

Test of significance of the variables are carried out with respect of the stated null hypotheses which are hereby restated.

HO_1 Quality budgetary and financial management Index have no significant impact on GDP growth rate in Nigeria over the period in view. Results of the regression model reveal that Budgetary and financial management index has probability value of 0.1179 which is greater than 0.05, this leads to the acceptance of the null hypothesis one.

HO_2 Governance effectiveness Index has no significant effect on GDP growth rate in Nigeria over the study period. Results of the regression model in table 4.3 shows that Governance effective index has probability value of 0.1436 which is greater than 0.05, null hypothesis two was accepted.

H_{O3} Quality public administration Index has no significant impact on GDP growth rate in Nigeria over the period in view. Analysis of results of the regression model in table 4.3 shows that the probability value of Public administration index is 0.6921 which is greater than 0.05 the stated null hypothesis three was therefore accepted.

H_{O4} Quality corruption control Index has no significant impact on GDP growth rate in Nigeria over the period in view. Results shows that the probability value of quality corruption index in the regression model of table 4.3 is 0.9871 and therefore insignificant since it is higher than 0.05. This therefore led to the acceptance of the null hypothesis.

ARDL long run regression

The ARDL long run Regression was further carried out to express the long run relationship of the specified model

Table 4.3: ARDL long run regression result

ARDL Long Run Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.994901	3.725666	-1.072265	0.3248
GDPGR(-1)*	-0.505734	0.334627	-1.511336	0.1815
CCI**	-0.010874	0.645032	-0.016858	0.9871
BFMI**	7.104650	3.893827	1.824593	0.1179
GEFI**	-1.089850	0.648003	-1.681859	0.1436
PADMI**	-0.904286	2.175105	-0.415744	0.6921

Source: E-views 10

Corruption control index coefficient value of -0.010874 revealed a negative long run relationship between Corruption control index and socio economic development in Nigeria.

Budgetary and financial management index

Budgetary and financial management index has a positive coefficient value of 7.104650 in the long run regression model of table 4.3 Results revealed positive effect Budgetary and financial management index on socio economic development in Nigeria in the long run.

Governance effective index

The coefficient of Governance effective index -1.089850 units as displayed in table 4.3 revealed negative long run relationship between Governance effective index and socio economic development in Nigeria.

Public administration index

Public administration index has a negative coefficient of -0.904286 which shows that it is inversely related to socio economic development in Nigeria in the long run.

The Error Correction Model (ECM) Result

Table 4.4

Error Correction Model (ECM) Result				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CointEq(-1)*	-0.505734	0.138923	-3.640386	0.0108
R-squared	0.502386	Mean dependent var		-0.142023
Adjusted R-squared	0.502386	S.D. dependent var		0.475986
S.E. of regression	0.335769	Akaike info criterion		0.734867
Sum squared resid	1.240147	Schwarz criterion		0.775276
Log likelihood	-3.409203	Hannan-Quinn criter.		0.719906
Durbin-Watson stat	2.063192			
Source E-views 10.				

Results of the ECM in table 4.4 shows that the Error Correction Term ECM (-1) is rightly signed with a negative coefficient of -0.505734 with significant T-statistics value of -3.640386 (P-value 0.0108). This explains that about 50.57% of disequilibrium in the short run is corrected every year by changes in Corruption control index, Budgetary and financial management index, Governance effective index and Public administration index in the long run. Results therefore affirm that there is long run causality from the economic governance index to socio economic development.

5. Summary, conclusion and recommendations

5.1 Summary of findings

i. Findings revealed that corruption control index has inverse and insignificant impact on Nigeria socio economic development as proxies by the gross domestic growth rate.

ii. It was also observed that quality budgetary and financial management index is positively impacting on Nigerian socio economic development but has no significant impact within the studied period.

iii. There is indirect yet insignificant effect of effective governance index on socio economic development.

iv. Public administration index has a negative and non-significant impacton socio economic development in Nigeria for the period under study.

v. Results of the Error Correction Model revealed that the speed of adjustment to equilibrium was 0.505734. This entered with correct sign and also explains that about 50.57% of disequilibrium in the short run can be corrected every year by changes in corruption control index, quality budgetary and financial management index, Public administration index and effective governance in the long run.

5.2 Conclusion

The study concludes that economic governance index, corruption control index, quality budgetary and financial management index, Public administration index and effective governance has not significantly impacted on Nigerian gross domestic product growth rate to effect socio economic development.

5.3 Recommendations

i. Good economic governance which will translate to improved formulation and implementation of sound micro and macroeconomic policies is vital for socio economic development.

ii. Effective budgetary policies and sound financial management strategies should be instituted by all concerned and financial regulatory institutions for socio economic development.

iii. Problem of corruption must be addressed by checkmating the excesses of and enforcing the legal restraints on the authority of government official as well as increase the principle of accountability in governance.

iv. Effective governance index should be carried out by effective governance procedure in both the public and private sectors.

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The Relationship between Internet and Entrepreneurship: Information system Perspective in Nigeria

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Abstract

The study was to evaluate the relationship between internet and entrepreneurship. The specific objectives were to: Examine the extent computer has assisted on information system; Examine the extent computer has been used as internet television. The primary sources were personal interview and the administration of questionnaire. A population of 275 staff was sampled. That gave 83 percent response rate. The closed-ended questionnaire was utilized. The validity of the instrument was tested using content analysis and the result was good. The reliability was tested using the Pearson correlation coefficient (r). It gave a reliability co-efficient of 0.92 which was also good. The data were analyzed using Pearson product moment correlation for hypotheses (f-statistics) with aid of Statistical Package for Social Sciences (SPSS). The result showed than computer has assisted information services to a great extent. From the result, f-calculated (1778.848) is greater than the f-tabulated (5.1523), that is, f-cal>f-tab. That computer has been used as internet television to a great extent. From the result, f-calculated (1254.195) is greater than the f-tabulated (5.1523), that is, f-cal>f-tab. The study recommended that people should be encouraged. The current technological trends or innovations especially in entrepreneurship and internet should aid student's learning, thus institutions should equally make available such facilities.

Keywords: Entrepreneurship, Information System, Internet, Relationship, Technology

Introduction

The 19th century saw astonishing developments in internet with technology originating in Europe. In 20th century internet technology developed rapidly due to the scientific gains tied to military research and development, as they did in part due to World War II (Musime and Biyaki, 2010). Today's business environment is very dynamic and undergoes rapid changes as a result of technological innovation, increased awareness and demand from customers. Interrelated component working together to collect, process, store, and disseminate information to support decision making, coordination, control, analysis, and visualization in an organization. Laudon, C (2004). Organizations are confronted with rapidly changing market conditions, indicated by high merger rates and strong competitors.

The role of internet technology in the "Information Age" is well recognized by business, industry, and government and is completely woven into their organizational structures and strategic planning processes. Glover (2013) emphasized technology's role when he said "that the quality of strategic planning is limited by the quality of information available to decision makers…" and that executive information systems were critical in furnishing the necessary data which produced information. Business organizations, especially the banking industry of the 21st century operate in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Laudon, C (2004), opined that, internet technology is a specification that establishes the compatibility of products and the ability to communicate in a network.

The ICT infrastructure evolved to become a critical factor driving productivity and growth in global economics with varying implications among developed and developing nations (Steinmueller, 2001). It is important for developing nations not to isolate themselves from the changes occurring due to the developments in the ICT globally (Gholami, 2004). This is partially because ICT is transforming the global economy and creating new networks that cross cultures as well as minimize distances.

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However, it is important to note that increased investment in ICT without the involvement of other socioeconomic factors may not improve growth in developing nations (Mbarika, 2003). Internet can use information systems to create unique new products and services that can be easily distinguished from those of competitors. Many of these information technology based products and services have to be created by financial institutions. Citi Bank developed automatic teller machines (ATMs) and bank debit cards in 1977 Laudon, C (2004). The internet is rapidly becoming the infrastructure of choice for electronic commerce because it offers businesses an even easier way to link with other businesses and individuals at a very low cost. It provides a universal and easy-to-use of technologies and Internet is the global system of interconnected computer networks that consists of private, public, academic, business and government networks of local to global scope, linked by a broad array of electronic, wireless and optical networking technologies. The internet carries a vast range of information resources and services as a result of technological assistance.

The challenges remain that internet is affecting both individual as a single and society as a whole. It makes people isolated, depressed and lonely. People who use internet as technological assistance remain cut off from their environment and lose face to face relations which are strong by spending time in virtue reality with unknown people.

The general objective of the study is to evaluate the relationship between internet and entrepreneurship. The specific objectives were to: Examine the extent computer has assisted internet and entrepreneurship. Examine the extent computer has been used in internet and entrepreneurship. To what extent has computer assisted internet and entrepreneurship.

Conceptual framework

The Internet is the global system of interconnected computer networks that use the Internet protocol suite (TCP/IP) to link devices worldwide. It is a network of networks that consists of private, public, academic, business, and government networks of local to global scope, linked by a broad array of electronic, wireless, and optical networking technologies. The Internet carries a vast range of information resources and services, such as the inter-linked hypertext documents and applications of the World Wide Web (WWW), electronic mail, telephony, and file sharing. The origins of the Internet date back to research commissioned by the United States Federal Government in the 1960s to build robust, fault-tolerant communication via computer networks. Stewart (2000), the linking of commercial networks and enterprises in the early 1990s marked the beginning of the transition to the modern Internet and generated rapid growth as institutional, personal, and mobile computers were connected to the network. By the late 2000s, its services and technologies had been incorporated into virtually every aspect of everyday life. At the entrepreneurial level the most common analytical tool is value chain analysis. The value chain model highlights specific activities in the business where competitive strategies can best be applied (Porter, 1985). The model views the entrepreneurship as a series or chains of basic activities that add a margin of value to a firm's products or services. According to Marire, M (2006), it is an opinion of some group of women at an interactive session organized by Nigerian Young Women Political Forum on good governance.

Technology is the collection of techniques, skills, methods, and processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation. Technology can be the knowledge of techniques, processes, and the like, or it can be embedded in machines to allow for operation without detailed knowledge of their workings. The simplest form of technology is the development and use of basic tools. The prehistoric discovery of how to control fire and the later Neolithic Revolution increased the available sources of food, and the invention of the wheel helped humans to travel in and control their environment. Technology is a body of knowledge devoted to creating tools, processing actions and extracting of materials. Technology has many effects. It has helped develop more advanced economics including today's global economy and has allowed the rise of a leisure class. Many technological processes produce unwanted by-products known as pollution and deplete natural resources to the detriment of Earth's environment. Innovations have always influenced the values of a society and raised new questions of the ethics of technology. Examples include the rise of the notion of efficiency in terms of human productivity, and the challenges of bioethics. Philosophical debates have arisen over the use of technology, with disagreements over whether technology improves the human condition or worsens it.

Technology is also an application of science to solve a problem. But what you have to know is that technology and science are different subjects which work hand-in-hand to accomplish a specific task or solve a particular problem.

Literature review

The Extent Computer has Assisted in Information Services: Ataur, (2011) Students' perceptions of Computer Assisted Learning: an empirical study. Research indicates that although students are the ultimate 'beneficiaries of Information and Communication Technology (ICT) – based' higher education learning says their voices have been neglected in its development. This paper attempts to redress this imbalance by illuminating students' perceptions of the use of Computer Assisted Learning (CAL) in an undergraduate accounting module. The findings suggest that students are in favour of using EQL in a supportive role only. Interviewees rejected the idea of replacing human tutors with machine tutors and they believed that most of their learning occurs in tutorials and ranked these as the most important component of the module. The sales of enterprise content management software for knowledge management are expected to grow by 35% annually through 2006, even though overall software sales are projected to grow only by 6% annually during the same period (Marketer, 2003). The past decade has likewise shown an explosive growth in research on knowledge and knowledge management in the economic, management, and information systems fields (Alavi and Leidner, 2001; Cole, 1998; Spender, 1996). Already, Nigeria is on the wrong side of the international digital divide, as it has not made significant effort to integrate ICT into secondary school curriculum. Marire, M (2004) opined that, a great deal of instructional and administrative work in secondary schools in Nigeria is still carried out manually from her teaching practice experience in the field. This paper, therefore, examines the major obstacles militating against the use of ICT and entrepreneurship in secondary education in Nigeria. If important data and people are accessible anywhere and anytime, workers spend less time trying to establish contact with these people or to access information. (Intel, 2004; Sandmark, 2002). Also, secondary schools in Nigeria are not given adequate funds to provide furniture, relevant textbooks and adequate classroom with entrepreneurial facilities, let alone being given adequate fund for high-tech equipment.

Empirical work

Management Information System networking on political forum, an on-going study by Marire, M (2018). The objective is to inculcate into the platform environment for online entrepreneurial training and marketing. The study is examining how to inculcate into the environment the findings in the interest of the entrepreneur. The study is focusing on the best ways to bring into the entrepreneurial development work Internet base. The findings are that it makes practical work of the entrepreneurial cheap, easy and fastest.

The Extent Computer has been used as Internet Television: Satoshi, (2013) The Relationship between the use of the Internet and entrepreneurship. This study examines how the spread of the Internet has affected Nigerian people's information and entrepreneurship development from traditional information channels. In particular, this study focuses on the relationship between Internet and Entrepreneurship displacement and complementary effects on devices for Internet access. Using representative data from Nigeria (N1,179), the results show that Internet use by entrepreneurs has complementary effects on information system from its perspective, while internet use via entrepreneurship does not. In addition, the results show that Internet use via Entrepreneurship has a displacement effect on information acquisition from

Internet. These findings are discussed with regard to communication means, social contexts, and media interfaces.

Fusun, and Roger (2013) opined that, Innovative Teaching: An Empirical Study of Computer-Aided Instruction in Quantitative Business Courses. The study investigated on business undergraduate mathematics-based courses in a blended environment of online assignments and exams and offline lectures, and report the impact on academic performance of factors such as classroom attendance, web-based course supplements, and homework. We discuss biases in estimation when the ordinary least squares method is used, resulting from the fact that it ignores unobserved heterogeneity. The fixed effects results suggest that (1) class attendance has a positive impact on exam score, (2) a student who achieves proficiency in a greater number of Khan Academy skill sets to prepare for an exam takes longer time to complete an exam but does not experience a significant change in exam score, (3) a student who spends more time completing the homework spends more time completing the exam but does not experience a significant change in exam score, and (4) students who score relatively higher in homework tend to score relatively higher in exams and finish in less time than other students.

Internet use via personal computers has a displacement effect on information acquisition. Technology is also an application of science to solve a problem. But what you have to know is that technology and science are different subjects which work hand-in-hand to accomplish a specific task or solve a particular problem.

Technology has many effects. It has helped develop more advanced economics (including today's global economy) and has allowed the rise of a leisure class. Many technological processes produce unwanted by-products known as pollution and deplete natural resources to the detriment of Earth's environment. Innovations have always influenced the values of a society and raised new questions of the ethics of technology.

Technology is a body of knowledge devoted to creating tools, processing actions and extracting of materials. The term "Technology" is wide and everyone has their own way of understanding the meaning of technology.

Methodology

The survey approach was adopted because the respondents were spread all over the Institutions that make up the study organization; hence, the researcher was interested in obtaining their views through the use of questionnaire and personal interviews. The areas of the study include selected staff of the Entrepreneur Tertiary Institutions in Enugu state who teach Technology in various departments. The population is 275 staff. The closed-ended questionnaire was utilized. The validity and evaluation system was tested using experts in business education and measurement evaluation department. The reliability was tested using the Pearson correlation coefficient (r). It gave a reliability co-efficient of 0.92 which was also good. The research questions were analyzed using mean and standard deviation while the hypotheses were analyzed using t-test.

Data analysis: the extent computer has assisted on information services regression

Model summary

Model	R	R-square	Adjusted R Square	Std. Error of the Estimate
1	.957a	.916	.915	.39222

a. Predictors: (Constant), CAQSD

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	273.645	1	273.645	1778.848	.000b
1. Residual	25.229	164	.154		
Total	298.873	165			

a. Dependent Variable: IPCS

b. Predictors: (Constant), CAQSD

Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error			
1	(Constant)	-.001	.061		-.011	.991
	IPCS	.915	.022	.957	42.176	.000

a. Dependent Variable: CAQSD

Coefficient of multiple determinants (R^2)

The R2 (R-squared) which measures the overall goodness of fit of the entire regression, shows the value as 0.916 and adjusted to 0.915. This means that R^2 accounts for 91.6% approximately 92%. This indicates that the independent variables account for about 92% of the variation in the dependent variable. Which shows goodness of fit.

The student's t-test:

The test is carried out to check for the individual significance of the variables. Statistically, the t-statistics of the variables under consideration is interpreted based on the following statement of hypothesis.

Ho: The individual parameters are not significant.
If t-calculated > t-tabulated, we reject the null hypothesis (Ho) and if otherwise, we select the null hypothesis (Ho)
Level of significance = α at 5% = $\frac{0.05}{2}$ = 0.025

Degree of freedom: n-k
Where n: sample size.
K: Number of parameter
116-2 = 114 = 1.980

The calculated value for t-test:

The t-test is summarized in the table below:

Variables	t-cal	t-tab	Remark
(Constant)	-.011	±1.980	Insignificant
	42.176	±1.980	Significant

The t-statistics is used to test for individual significance of the estimated parameters. From the table above, we can infer that the following parameters were statistically significant, it means that the parameters were true; that computer has assisted in Quick services delivery.

On the other hand, the following parameters were statistically insignificant; it also means that they were not true; that there is improvement in productivity through computer services.

F-Statistics (ANOVA)

The F-statistics is used to test for simultaneous significance of all the estimated parameters.
Level of significance: α at 5%
Degree of freedom: $\frac{K-1}{N-K} = \frac{2-1}{116-2}$ = (114, 1) = 5.1523
F-Tab = 5.1523

If the f-calculated is greater than the f-tabulated (f-cal > f-tab) rejects the null hypothesis (H0) that the overall estimate is not significant and conclude that the overall estimate is statistically significant.

From the result, f-calculated (1778.848) is greater than the f-tabulated (5.1523), that is, f-cal > f-tab. Hence, we reject the null hypothesis (Ho) and accept alternative hypothesis which means that the overall estimate has a good fit which also implies that our independent variables are simultaneously significant. We now conclude from the analysis that computer has helped Internet Entrepreneurship Information services to a great extent.

The Extent Computer has been used as Internet Entrepreneurship regression

The Extent Computer has been used as Internet Entrepreneur regression

Model	R	R-square	Adjusted R Square	Std. Error of the Estimate
1	.940ª	.884	.884	.43584

b. Predictors: (Constant), ITOAR

	Sum of Squares	Df	Mean Square	F	Sig.
Regression 2. Residual Total	238.244 31.153 269.398	1 164 165	238.244 .190	1254.195	.000ᵇ

c. Dependent Variable: ITDIAR
d. Predictors: (Constant), ITOAR

Coefficientsª

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error			
1	(Constant)	-.176	.072		2.456	.015
	ITOAR	1.095	.031	.940	35.415	.000

a. Dependent Variable: ITDIAR

Where

ITDIAR = Response on whether internet entrepreneurship has a displacement effect on information from the internet.
ITOAR = Response on whether internet entrepreneurship has effect on online assignment and reports.

Coefficient of multiple determinants (R^2)

The R2 (R-Squared) which measures the overall goodness of fit of the entire regression, shows the value as 0.884 and adjusted to 0.884. This means that R^2 accounts for 88.4% approximately 88%. This indicates that the independent variables account for about 88% of the variation in the dependent variable. This shows goodness of fit.

The student's T-test:

The test is carried out, to check for the individual significance of the variables. Statistically, the t-statistics of the variables under consideration is interpreted based on the following statement of hypothesis.

Ho: The individual parameters are not significant

Decision rule:

If t-calculated > t-tabulated, we reject the null hypothesis (Ho) and if otherwise, we select the null hypothesis (Ho) .

Level of significance = α at 5% $= \frac{0.05}{2} = 0.025$

Degree of freedom: n-k

Where n: sample size.

K: Number of parameter

116-2 = 114 = 1.980

The calculated value for t-test:

The t-test is summarized in the table below:

Variables	t-cal	t-tab	Remark
(Constant)	-.011	±1.980	Insignificant
	42.176	±1.980	Significant

The t-statistics is used to test for individual significance of the estimated parameters. From the table above, we can infer that the following parameters were statistically significant, it means that the parameters were true; that there is customers influence over the market, that computer has been used as internet television to a great extent.

F-statistics (ANOVA)

The F-statistics is used to test for simultaneous significance of all the estimated parameters.
Level of significance: α at 5%
Degree of freedom: $\frac{K-1}{N-K} = \frac{2-1}{116-2} = (114, 1) = 5.1523$

F-Tab = 5.1523

If the f-calculated is greater than the f-tabulated (f-cal > f-tab) reject the null hypothesis (H0) that the overall estimate is not significant and conclude that the overall estimate is statistically significant.

From the result, f-calculated (1778.848) is greater than the f-tabulated (5.1523), that is, f-cal > f-tab. Hence, we reject the null hypothesis (Ho) and accept Alternative hypothesis which means that the overall estimate has a good fit which also implies that our independent variables are simultaneously significant. The study now concludes from the analysis that computer has been used as internet entrepreneur to a great extent.

Conclusion

Based on the findings of the study, the study concluded that there is a relationship between internets and entrepreneurship. This is the application of scientific knowledge for practical purposes, especially in industry. "Advances in internet technology". It is a machinery and equipment developed from the application of scientific knowledge. Entrepreneurship is the branch of knowledge dealing with innovation, creativity and making good use of the environment as a means of engineering or managing resources to generate wealth and coup poverty.

Technology is the collection of techniques, skills, methods, and processes used in the production of goods, services or in the accomplishment of objectives, such as scientific investigation. Technology also can be the knowledge of techniques, processes, and the like, or it can be embedded in machines to allow for operation without detailed knowledge of their workings. The simplest form of technology is the development and use of basic tools.

Recommendations

Based on the findings of the study, conclusion, the following recommendations are made:

1. Students should be encouraged to acquire the skills to operate in the computer system and the internet business.

2. The current technological trends or innovations especially in computer should aid students' learning, thus institutions should make available such facilities.

3. The t-statistics is used to test for individual significance of the estimated parameters.

4. That computer as an Internet assessment mechanism has helped in the television industry.

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