Critical Factors of XBRL Adoption in Nigeria: a Case for Semantic Model-Based Digital Financial Reporting

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Abstract The application of Technology Acceptance Model 2 (TAM 2) has reached remarkable heights in theory and practice. However its application to recent development in corporate reporting has been limited especially in emerging economies. To address this gap, we extend the theory to eXtensible Business Reporting Language (XBRL) adoption in Nigeria from the view of external auditors in the Big Four accountancy firms. XBRL usage, its perceived usefulness, and perceived ease of use were tested with subjective norm, image, job relevance, results demonstrability, and output quality. Through the path analysis among these TAM 2 variables, the results indicated that path magnitudes were significantly altered by XBRL model acceptance. The view of respondents reflects positive effect of perceived usefulness on intention to adopt XBRL. There is strong effect of perceived ease of use on perceived usefulness. Output of data analysis also indicate positive effect of results demonstrability on perceived usefulness while output quality influences perceived usefulness as job relevance also impacts on perceived usefulness. This might suggest that if the use of XBRL delivers improved data accuracy and information transparency it is expected that users would perceive the technology as valuable. The study is the first of its kind in Nigeria to observe determinants of XBRL acceptance with regards to professional accountants in the Big Four Audit firms.

Keywords XBRL, Theory of Planned Behaviour, Financial Reports, Professional Accountants, Nigeria

1. Introduction

"... About 12,000 companies submit their financials to the U.S. Securities and Exchange Commission (SEC) using the structured digital format XBRL (eXtensible Business Reporting Language). Over 5,000 mutual funds are submitting their financial reports to the SEC digitally. Approximately 9,000 banks submit their financial statements to the Federal Deposit Insurance Corporation (FDIC) digitally. This trend towards digital financial reporting is

gaining momentum as the XBRL digital financial reporting format is being adopted by many different financial reporting channels around the world in Europe, India, China, Japan, Australia, South America, Canada, and many other locations around the world. While the number of digital filers is not known, it is in the millions and rapidly rising.

Yes, the undeniable reality is that financial reporting is going digital"(Hoffman & Egmond, 2012, p. 30) [13].

The globalization of business practice and the 21st century age of technological evolution and its convergence with innovation yielded a new turn for the corporate reporting function when XBRL became a part of accounting terminology in 1998. This development which gave rise to new models of business (Salehi & Torabi, 2012) [25] became the motivation for a single reporting standard capable of mapping semantics to financial data and has attracted the support of international accounting standard setters in leading jurisdictions. It is a phenomenon which has also earned the support of regulatory authorities, foremost software houses and technology experts across capital markets (Teixeira, 2005) [29]. Chances are that this new digital financial reporting paradigm, a part of the broader trend in digital business reporting will eventually take the place of electronic financial reporting which is only structured for presentation and not meaning (Hoffman & Egmond, 2012) [13]. Digital financial reporting operates as a global standard specification such as the XBRL currently being deployed in over 15 countries in Europe.

The trend towards global harmonization of financial reporting via Standard Business Reporting (SBR) on a single IT and communications platform seem irrefutable especially in the last decade. What might appear unclear however is the thin line between electronic and digital formats. The following statement credited to the Chief Executive Officer of the Nigerian Stock Exchange (NSE) in March 26, 2013 in line with the status-quo in the nation's capital market on electronic reporting by listed entities might reaffirm this position:

"... The Issuers' Portal, a key regulatory initiative of The NSE, will entrench structure and control in the submission and dissemination of company information. It will provide

an unparalleled opportunity to significantly reduce information leakage and eliminate delays associated with the discharge of issuers' post-listings obligations in a cost effective and efficient manner. X-Issuer will no doubt result in greater market integrity and participation," (Onyema, 2013, p. 1) [21].

In a bid to achieve its vision of becoming the gateway to African markets, the NSE serving the second largest financial center in Sub-Saharan Africa and the largest market in West Africa (by company capitalization) marked another landmark in its renaissance, growth and transformation launched the first Issuers' Portal (X-Issuer) in the Nigerian capital market during the first quarter of 2013 (Onyema, 2013) [21]. With over 200 listed companies and about five million registered shareholders 53 years post establishment as a company limited by guarantee the NSE has nearly 81 percent foreign and 19 percent local market activities (Peterside, 2012) [22]. Perhaps its zeal and unwavering commitment to maintain a vibrant capital market for the benefit of all stakeholders underscores its passion for 21st century technology strategies (Onyema, 2013) [21].

Although Nigeria is one of the 120 reporting jurisdictions that have authorized the adoption of IFRS for all entities including listed and non-listed (public listed and significant public interest entities by January 1, 2012; other entities such as not for profit, pension funds, and other publicly owned entities by January 1, 2013; and SME's by January 1, 2014) as yet, no blueprint nor any definite decision has been reached, perhaps no national schedule for the deployment of XBRL in Nigeria. Multinational audit firms seem concerned to embrace the change for their clients, for regulatory and statutory reasons nonetheless they must ensure cooperation with local jurisdictions.

The study makes a case for XBRL adoption in Nigeria drawing on the distinction between the electronic platform currently in use and XBRL as a semantic model-based digital reporting medium. The objective of this paper is to provide an empirical investigation of the determinants of XBRL adoption in Nigeria using the extended Technology Acceptance Model (TAM 2) introduced by Venkatesh and Davis (2000) [31]. In particular the study investigates whether variables of emphasis in the theory such as subjective norm, image, job relevance, output quality, result demonstrability, perceived usefulness, and perceived ease of use in the view of external auditors are most likely to influence XBRL technology acceptance among reporting entities in Nigeria. This paper substantially contributes to TAM2 empirical investigations with relevance to the widespread adoption of XBRL. With this combination, IT and accounting researchers are able to understand the acceptance of the XBRL technology at a finer level in emerging markets. In addition, the paper strengthens past studies involved in technology innovations. Our findings have significant implications for developing technology choice theories, regulators considering mandatory adoption of XBRL-based reporting, and entities considering voluntary adoption of the technology in the near future. The rest of the

paper consists of five sections. The next section is a review of past works on XBRL technology. Section three reviews the theoretical background and presents hypotheses developed. The Research methodology section relates the survey approach and the procedures involved while section five is a synopsis of data analysis and results. Section six concluded the study and placed limitations of our research while suggestions are made for future research.

2. Literature Review

As mentioned in the previous chapter, this section takes an overview of the current report filing format for listed entities on The Nigerian Stock Exchange (NSE). After a general description of the format, a brief history and clarity between electronic and digital formats are examined. Next, empirical evidences are observed paying attention to advantages and disadvantages, as well as technical implications of XBRL adoption.

2.1. The NSE X-Issuer

During the first quarter of 2013 the NSE launched the X-Issuer, an online submission portal designed to permit listed companies to submit periodic reports as electronic documents in accordance with Listing Rules. The agreement deed for the use of X-Issuer by listed entities defined an electronic document admissible by the exchange as *"a document in form of a digital representation of information generated, sent, received or stored by electronic or similar means but excluding a facsimile"* (Onyema, 2013) [21]. The X-Issuer simply allows listed entities to submit financial reports produced in electronic formats directly to the NSE portal. This replaces the hitherto delivery of information to the Exchange by hand, post or courier. While the authors agree with the submission that an electronic document takes computer generated financial reports a step further as the output formats are capable of being standardized into layouts such as Hyper-Text-Markup-Language (HTML) or Portable Document Format (PDF), they do not however serve as good replacement for digitally generated reports. Information produced in electronic format is unstructured and are incapable of being reused or analyzed independent of human intervention. On the other hand, when information produced is digital, it simply means that such document is structured for meaning and many times using a global standard in some format adding meaningful interpretation.

Since there are connotations associated with the information produced in a digital format, three scenarios are feasible. First, because computers have the capability to read the structure and assist report creators, upon the creation of the information, software applications can assist in the process. Second, to analyze information produced in a digital format, no form of human intervention is required in converting the original into any other formats required for onward interpretation and/or analysis as computers can also

use the structure to effect such tasks. Finally, rather than the business information created being locked into one particular form as paper (for use by one person at a time), computer (not standardized) or electronic formats (unstructured), the information might be made more interactive within a software application similar to a what is experienced in a pivot table of an electronic spreadsheet. The concept of semantic model-based digital financial reporting is leveraging this development as it assist in creating, reusing, and analyzing financial information. In addition, the order of magnitude improvements in quality, significant reductions in cost as well as functionality are achieved. These improvements becomes even better if everyone in the “chain” of creation use and reuse each tools which leverages the digital characteristics described (Hoffman & Egmond, 2012) [13]. This is the case for XBRL.

XBRL, eXtensible Business Reporting Language, is a computer language which provides semantic model-based digital financial reporting. XBRL basically serves as a standard medium, through which financial statements are electronically and automatically prepared, published, extracted and exchanged (Suosalo, 2013) [28]. Ever since its development in 1999 by AICPA after a year earlier presentation of a prototype about how XML could be utilized in financial reporting (Corkern & Morgan, 2012) [7], XBRL has been proven to decrease human intervention in the corporate reporting processes, provide faster and error free information and has subsequently received significant global attention (Wu & Vasarhelyi, 2003) [32]. By 2009, the US SEC issued a final rule mandating all large firms to file their reports using XBRL. Although XBRL evolved outside of the US, its adoption is more pronounced in other nations such as China, Australia and the Netherlands (Alles, 2009) [2]. Without doubts XBRL is fast becoming a global standard for e-reporting as over 22 jurisdictions including 50 other economies in Europe are unlikely to be wrong. Over 900 articles have been produced in the last decade on XBRL. While several authors articulate its benefits, others evaluate its challenges on the reporting process. Its impact on auditing, taxation as well as corporate governance has also been examined. A cursory look beyond immediate boundaries of developed economies also revealed that two members of the BRICS¹ has also implemented XBRL, namely China and India. However the same cannot be said of other emerging markets even though there is widespread harmonization of the corporate reporting function inherent in their adoption of the International Financial Reporting Standard (IFRS).

2.2. Empirical Evidence

¹ An acronym for the combined economies of Brazil, Russia, India, China and South-Africa. BRIC without South-Africa was originally coined in 2003n by Goldman Sachs, which speculates that by 2050 these economies will be the most dominant. South-Africa was added to the list on April 13, 2011 creating “BRICS”.

According to (Bay et al. 2006; Plumlee & Plumlee, 2008) [5] [24], the standardized nature of XBRL makes probable the provision of easier access and improve comparability of information, speed up and improve analytical possibilities. Since the users of financial reports are one of the greatest beneficiaries of XBRL, one reason to force the use of XBRL reporting has been the provision of flexibility, ease of use, timeliness, error-prone information and transparency for capital market (Wu & Vasarhelyi, 2003; Baldwin & Trinkle, 2011) [32], [3]. Although it has been reported that XBRL filings in the US have contained many errors (Bartley et al. 2011; Boriz & No, 2009) [4], [6], those countries who do not foresee opportunities in XBRL adoption are reporting jurisdictions where the technology is in the development phase (Suosalo, 2013) [28] because such errors earlier discovered in the US were results of initial testing phases. Lee (2005) [17] found that factors such as task characteristics (corporate reporting responsibility), task-technology fit, environmental characteristics, and individual firm characteristics were predominantly responsible for the willingness to adopt XBRL in Taiwan. Shan and Troshani (2013) [26] argue through empirical evidence from two of the largest economies in the world, US and Japan that XBRL does reduce the auditing cost of companies that have adopted it. In a wider context, Stergiaki (2013) [27] examined eleven countries in Europe to determine the factors leading to the acceptance and usage of XBRL by listed firms. Result showed that effectiveness and efficiency, perceived ease of use, and total output quality were responsible for XBRL implementation in these countries. While XBRL does not solve financial reporting judgments issues nor lead to continuous reporting, the reduced transactions costs and improved efficiency in generating information is powerful and possess far-reaching consequences of adopting the language (Teixeira, 2005) [29]. There are also its insinuations for financial system design and market efficiency in addition to the potential to enrich available data to analysts and researchers. Troshani and Doolin (2005) [30] revealed that XBRL adoption in Australia is consistent with current innovation literature, hence depends on factors such as environmental characteristics, organizational resources, innovation characteristics, and readiness as well as the process by which XBRL technology is communicated. As XBRL is fast becoming the leading global financial communication, there must be perfect fit between XBRL Taxonomy and financial statement components. Valentinetti and Rea (2011) suggested that if firms apply the taxonomy without any changes, there is probability of achieving complete comparability of data across companies using XBRL. Tagging data in XBRL improves transparency without additional disclosures and makes more information available to the public (Cunningham, 2005). One of the peculiarities of technologies is that they often come with inherent challenges. One of such identified with XBRL is the updating of taxonomy and linkbases which continuously create seamless integration with version upgrades. The

taxonomy and linkbases are components required to be updated frequently and their inter-version transition could create challenges if not managed properly. Consequently, the comparability of financial statement from one period to another might be lost. In order to manage the risk associated with versioning, XBRL adopting companies must be proactive, make adequate plans for the instance document creation process and anticipate the inevitable taxonomy and linkbase changes. This involves downloading the applicable taxonomy, tagging financial statements according to taxonomy, extend taxonomy where necessary, create and review the instance document prior to filing the documents and taxonomy. In this way the risks accompanying comparability of financial reports is minimized (Ernest & Ali, 2009) [8]. Because the translation of financial statement information into an XBRL instance document is the end-point in a complicated process, to create an XBRL document successfully, preparers must engage in continuous training to achieve proficiency in XBRL usage. This would enable accountants holding responsibility for reporting with XBRL familiar with taxonomy upgrades, the general XBRL reporting, and XBRL tools used in creating an instance document (Merrill, 2007).

In an ex-post factor survey, Janvrin et. al (2011) [15] trained participants using Portable Document Format (PDF), Excel, and XBRL. The study found that 58 percent of respondents choose to use XBRL enabled technology, while 42 others preferred MS-Office Excel. Results of the analysis further suggested that non-professional investors' reason for choosing XBRL is evidence in their perception of its task efficiency in data pruning for analytical purposes. Non-professional investors who choose Excel were results of their greater exposure to Excel based on past experience with the application relative to PDF and XBRL. Using the TAM, the study found that perceived usefulness and perceived ease of use were not influential factors within XBRL-enabled technology adoption. In order to determine the actual impact of XBRL adoption in on the information environment of capital markets, Liu et al (2012) [19] investigated the effect of XBRL mandate on the quantity and quality of financial information environment, as may be reflected in analysts forecast behavior. In the survey of 1,430 listed firms in the U.S. between 2005 and 2010, the study revealed that the adoption of XBRL has provided significant improvement in both information quality and quantity. In an effort to capture the view of auditors with regards to XBRL-enabled reporting, Rosa and Caserio (2013) [23] examined acceptance and widespread use of XBRL by auditing professionals in Italy. The study proposed a preliminary theoretical framework in order to survey auditor's interest in the technology. Using electronic questionnaire and semi-structured interviews, the study found that despite the mandatory requirement to report financial statements by unlisted companies, independent auditors' knowledge about XBRL remained relatively low. This was traced to possible resistance to acquire new IT skills and competence amongst responding auditors. In a related study aimed at determining the level of XBRL

acceptance, Stergiaki et al (2013) [27] tested a sample of 100 listed entities across United Kingdom, Germany, Spain, Italy, France, Denmark, The Netherlands, Switzerland, Belgium, Luxembourg, and Poland. The result suggested that XBRL-reporting is breaking grounds in the European Union as companies within this region were showed significant satisfaction with the output of XBRL-enabled data.

3. Theory and Hypotheses Development

This section provides theoretical background of TAM2 as an extension of Technology Acceptance Model (TAM). It is a review of TAM2 and the suggested external variables involved within respondents context.

3.1. Accounting for Actions in Specific Contexts: Technology Acceptance Model 2 (TAM 2)

Venkatesh and Davis (2000) [31] presented an extension of TAM, integrating two processes namely the Social Influence Process (SIP) and the Cognitive Instrumental Process (CIP). In their view, the SIP is composed of Subjective Norm (SN), Voluntariness, and Image; while the CIP is a result of Job Relevance, Output Quality, Result Demonstrability, and Perceived usefulness. The two processes were considered crucial to the study of user-acceptance of with specific relevance to technology. The duo explained the critical factors of technology acceptance and the impact of the identified variables on users' acceptance or rejection of innovative information systems. Although TAM highlights the influence derivable from external factors and internal beliefs and indicated that system usage can be linked with perceived usefulness and perceived ease of use, Venkatesh and Davis in revisiting the variables posited that TAM would only explain 40% to 50% of technology acceptance while additional variables influence as combined in TAM 2 is capable of explaining over 60 percent.

3.1.1. Social Influence Process (SIP)

Venkatesh and Davis reflected the interrelationship amongst the three constructs combined in the SIP (subjective norm, voluntariness, and image) as a critical driver of user acceptance or rejection of an innovative system. Subjective Norm as a major component in the Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen (1975) [9] is a direct determinant of behavioral intention. The view of the proponents of TAM 2 is that this construct is a medium of social influence and it is described as the influence of others who are important to an individual on the individual's behaviour and action. The effect of *subjective norm* is also recognized in the Theory of Planned Behaviour (TPB) (Ajzen, 1991) [1]. In their context, Venkatesh and Davis in a study on *subjective norms* also proposed differentiating the usage of innovative systems. Usage context was distinguished by *voluntariness* into mandatory and voluntary

sets. Voluntariness as a moderating variable was used to mean the extent to which adopters perceive such acceptance as non-mandatory. *Image* was conceived to depict group influence on individual's behaviour and its implications towards enhancing the quality of organizations' processes. Consequently, we hypothesized the positive relationship between these variables and XBRL adoption in the view of external auditors.

H₁: Users' *subjective norm* has positive effect on *perceived usefulness*

H₂: Users' *subjective norm* has positive effect on *image*

H₃: *Subjective norm* has positive effect on intention to use XBRL

H₄: Users' *perceived ease of use* has positive effect on intention to use XBRL

H₅: Users' *image* for using XBRL has positive effect on *perceived usefulness*

3.1.2. Cognitive Instrumental Processes

As identified earlier, the four cognitive instrumental processes in TAM 2 which constitutes are the critical factors for perceived usefulness include job relevance, output quality, result demonstrability, and perceived ease of use. *Job relevance* is used to mean the perception of individual on the germaneness of a particular system to his or her job effectiveness. Sometimes individuals may perceive that their on the job performance is fairly influenced by the mode of technology adopted in performing such responsibilities. *Output quality* according to TAM 2 refers to the extent to which an individual judges the extent to which a new system can perform a required task (Lin, 2001). *Results demonstrability* describes the extent of tangibility of benefits derivable from the use of a technology as perceived by the user. Moore and Benbasat (1991) [20] explained that this construct is capable of a direct influence on perceived usefulness. Where positive results are apparent, users are highly likely to attribute their achievement to system usage rather than work behaviour.

Venkatesh and Davis in addition to these constructs also integrated *experience* as a moderating variable in TAM 2. Consequently, their study envisioned users' acceptance to vary across pre, during and post implementing periods. Even though subjective norm may significantly influence systems usage prior to its development, this effect may become insignificant in the medium term when the system is at its post implementation period. Venkatesh and Davis however retained *perceived ease of use* as a construct in TAM as a direct factor for perceived usefulness. If a system is capable of being used with ease, users are likely to make extensive use of such technology. Several studies have suggested that most technology users who are non-resistance often have certain degree of knowledge and belief about innovative technologies. Wherein such knowledge and beliefs are imprecise, a wide spectrum of views might be sought and after such improvements, users must enhance their knowledge about the system as expectations becomes higher (Hartwick and Barki, 1994) [12]. From the above we are able to deduce the following hypotheses.

H₆: Users' *perceived usefulness* has positive effect on their intention to use XBRL

H₇: Users' *perceived ease of use* has positive effect on *perceived usefulness*

H₈: *Results demonstrability* has positive effect on users' *perceived usefulness* of XBRL

H₉: *Output quality* of XBRL has positive effect on users' *perceived usefulness* of XBRL

H₁₀: *Job relevance* of XBRL has positive effect on users' *perceived usefulness*

3.2. Research Model and Hypotheses

This study draws on the Technology Acceptance Model 2 (TAM 2), thus we propose the research model for the determinants of XBRL adoption in Figure 1.

Figure 1. Technology Acceptance Model 2 for External Auditors

4. Research Methodology

4.1. The Survey

This main purpose of this study is to examine the factors critical to the adoption of XBRL in Nigeria. The primary industry of respondents was the Big Four audit firms and the sample made up of their executives with active exposures to offshore offices of individual firms with clients resident in countries where XBRL technology has been deployed. In addition, such respondents are also engaged in auditing Nigerian clients in cognizance of local relevance for objectivity purposes. Data were collected using online survey software (Qualtrics) with the instrument divided into two portions. The first part documented participant's demographic information while degree of respondents' agreement with the constructs provided was indicated in the second section. A 5-point Likert-type scale, with values ranging between (1) "Strongly disagree" and (5) "strongly agree" with (3) denoting "neutral" to prevent extreme answers and eliminate non-response situations. Initial invitation e-mail was directed to 200 respondents via professional social network group at the end of October 2013. And by mid-December 2013, only 124 were found to be complete and usable, leading to a response rate of 62 percent. Regarding the frequency of XBRL usage, 47% indicated more than 4 hours daily; 29% at 3-4 hours; 13% 2-3 hours daily; and 11% makes use of XBRL 1-2 hours per day. Subsequently, we suggested that this represent a sample with substantial exposure to XBRL knowledge and experience.

4.2. Procedures

In order to analyze data collected from the survey, four stages of assessment were conducted. The first consist of an examination of the reliability and validity tests. Subsequently, internal consistency reliability was tested using Cronbach's Alpha coefficients of the measures. Using correlation between the measures and the principal component analysis, the convergent and discriminant validity of the measures were tested in the third stage. The structural equation model was also used to determine the causal relationship of TAM 2 variables peculiar to XBRL technology. The analysis of the XBRL technology acceptance by features was carried out using structural equation model. In the whole procedures, we engaged SPSS and AMOS software.

5. Data Analysis and Results

5.1. Test of Constructs Measured

In our assessment of the properties of the measurement model we present the result of reliability test in Table 1. The result revealed that all the constructs are high in the internal consistency reliability with Cronbach's Alpha coefficient exceeding 0.80. This indicates appropriateness internal consistency of items evaluated (Fornell and Larcker, 1981) [10]. Results presented in Table 2 demonstrate convergent and discriminant validity of TAM 2 measures. With the distinct constructs, correlations amongst the items associated with the measure is expected to be stronger compared to their correlations with the items representing other measures (Igbaria et al., 1997) [14]. Subsequently, items were

discovered to be highly correlated within a construct (system usage 0.902; perceived usefulness 0.876; perceived ease of use 0.934). On the other hand there were comparatively low correlation with items from other constructs ranging between 0.519 and 0.735. In order to clarify the relationship among *subjective norm*, *image*, *job relevance*, *results demonstration*, and *output quality*, the convergent and discriminant validity of these variables were verified. As revealed in Table 3, the principal component analysis with varimax rotation was adopted. This rotated component matrix showed a clearer pattern of the constructs. While the first factor is highly correlated with *job relevance* (JR), the second showed strong correlation with *results demonstration* (RD), *output quality* (OQ), and *image* (IM) while the third correlated with *subjective norm* (SN).

5.2. Structural Equation Model

The result of significant structural relationships among subjective norm, image, job relevance, results demonstration,

output quality, perceived ease of use, and perceived usefulness is herewith presented. As inconsistent with H1, subjective norm has no effect on perceived usefulness. Consistent with H2 and H3, subjective norm has a positive effect on image ($\beta = .34, p < .01$) and intention ($\beta = .36, p < .01$) to report using XBRL technologies. Consistent with H4, perceived ease of use has positive effect on intention to adopt XBRL reporting ($\beta = .28, p < .01$). Image has no significant effect on perceived usefulness. However, in the view of respondents there is a positive effect of perceived usefulness on intention to use XBRL ($\beta = .24, p < .01$), there is also a strong effect of perceived ease of use on perceived usefulness of XBRL ($\beta = .83, p < .01$). Further exploration indicate that results demonstrability has positive effect on perceived usefulness ($\beta = .25, p < .01$); output quality has positive effect on perceived usefulness ($\beta = .33, p < .01$); and job relevance has positive effect on perceived usefulness ($\beta = .22, p < .01$).

Table 1. Reliability Test

Construct	Cronbach's Alpha	No of Items
XBRL Usage	.987	2
Perceived usefulness (PU)	.965	2
Perceived ease of use	.933	2
Subjective Norm	.953	3
Image	.902	3
Job relevance	.897	3
Results demonstration	.899	3
Output quality	.868	3

Table 2. Validity of TAM 2 measures

	FREQ	TIME	PU1	PU2	PEOU1	PEOU2
Correlation	FREQ	1.0000	***.902	***.563	***.564	***.542
	TIME	***.912	1.0000	***.532	***.522	***.574
	PU1	***.564	***.541	1.0000	***.876	***.703
	PU2	***.512	***.506	***.905	1.0000	***.749
	PEOU1	***.513	***.511	***.734	***.748	1.0000
	PEOU2	***.543	***.542	***.785	***.764	***.934

***Regression weight is significant with less than 0.001

Table 3. Validity of external variables

	Component		
	1	2	3
SN1	.231	.096	.886
SN2	.129	.127	.840
SN3	.142	-.564	.951
IM1	.054	.806	.140
IM2	.199	.823	.128
IM3	.053	.853	-.123
JR1	.876	.112	.203
JR2	.843	.093	.221
JR3	.872	.119	.243
RD1	.123	.805	.135
RD2	.156	.890	.128
RD3	.217	.854	.132
OQ1	.065	.786	.202
OQ2	.99	.829	.123
OQ3	.042	.798	.204

Extraction method: principal component analysis. Rotation method: Varimax with Kaiser Normalization. A rotation converged in 5 iterations

6. Conclusion

This study is an examination of the effects of the variables reflected in Technology Acceptance Model 2 (TAM 2) on the attitude of Nigerian companies towards XBRL technology reporting. We began with the clarification that the current reporting model in Nigeria (X-issuer) is not by any means a replacement for XBRL. Afterwards, we substantiate this stand through the consideration of the relevant variables. As we expect that global adoption of XBRL reporting will have large influence on the technology acceptance in the near future, we found significant relationship between this innovative technology acceptance and corporate reporting in Nigeria. In order to understand this technology acceptance in the view of external auditors, we demonstrate the result of significant structural relationships among subjective norm, image, job relevance, results demonstration, output quality, perceived ease of use, and perceived usefulness associated with XBRL usage. We found that subjective norm has no effect on perceived usefulness. Consistent with H2 and H3 however, subjective norm has positive effect on company image and intention to report using XBRL technologies. Perceived ease of use also influences intention to adopt XBRL. Herein, we assume that the experience of our respondents decreased the effect of ease of use because ease of use was influenced by users' IT experience. Image has no significant effect on perceived usefulness. However, the view of respondents reflects positive effect of perceived usefulness on intention to use XBRL. There is also a strong effect of perceived ease of use on perceived usefulness. Finally output of data analysis also indicated a positive effect of results demonstrability on perceived usefulness; output quality has positive effect on

perceived usefulness; and job relevance has positive effect on perceived usefulness. This might suggest that if those responsible for corporate reporting experience tangible positive results from using XBRL, then it is highly unlikely that they would perceive the technology as being non beneficial. In addition, the outcome propose that if the quality of output of financial statements is enhanced with the use of XBRL and that it is very relevant to the corporate reporting function it is expected that users would perceive it as beneficial. Understanding the relationship among these variables understudied with particular reference to external auditors who have exposure to the technology usage is essential for further technology acceptance in the accountancy profession in future.

This study nonetheless has some limitations. We request external auditors to appraise XBRL usage, perceived usefulness, and perceived ease of use; on subjective norm, image, results demonstrability, job relevance, and output quality. We have assumed that technology acceptance in this instance is not influenced by extraneous variables. Hence we averaged these other constructs to estimate their relationship with XBRL usage, perceived usefulness, and perceived ease of use, but the result was weaker impact of external variables on the technology acceptance by external auditors. We have also anticipated that external auditors whose responsibility is to report on the true and fair view position of financial statements are in a state to express the opinion of financial accountants with regards to XBRL technology. Moreover, the features of XBRL do not represent those of all other technology platforms operated by accountants.

The authors are interested in a number of extensions to this research. Studies extending external variables such as anxiety, affection, efficacy etc., to XBRL technology

acceptance, covering other accounting functions and on a wider sample should be added to our research model. We also advocate that this study be replicated in other professions to verify the impact of XBRL on technology acceptance. Most importantly, this is essential for internal auditors, financial analysts, stockbrokers, tax practitioners, banking, and academia.

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