



**THE DETERMINANTS OF ONLINE TAX SYSTEM:
SURVEY EVIDENCE FROM SELF-EMPLOYED
TAXPAYERS IN NIGERIA**

BY

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ABSTRACT

The Federal Inland Revenue Service Board of Nigeria is streamlining the tax administration environment to embrace an online tax system. This will enable taxpayers, especially the self-employed and their representatives to submit their tax returns electronically to the tax authority rather than mailing the paper form. Experiences of other countries have shown that the online tax system can only work effectively with the full cooperation of the taxpayers. However, at the time of this study, little is known about self-employed taxpayers' usage of the online tax system. This study therefore, examines the determinants of an online tax system with survey evidence from self-employed taxpayers in Nigeria. It also examines the relationship between innovation, technology, the external factor and tax service quality on the online tax system. It further evaluates the mediating effects of tax service quality on innovation, technology and the external factor onto the online tax system by the self-employed taxpayers. An online survey (e-mail) was used for data collection using a simple random sampling method with questionnaires e-mailed to 1,125 self-employed taxpayers. Structural equation modelling technique was used to test the integrated online tax service model. The result shows that innovation, technology and the external factor are significantly important determinants of the online tax system. As such, tax service quality was found to mediate the hypothesized relationship in the model with significant values. The result also indicates that tax service quality significantly mediates the relationship between innovation, technology and the external factor as determinants of an online tax system. Overall, this study provides empirical evidence by expanding the relatively understudied area of the Nigerian tax system. This study paves the way for future research on corporate taxpayers' usage of the online tax system.

ملخص البحث

يقوم المجلس الاتحادي النيجيري لشؤون الإيرادات الداخلية بتنظيم مكاتب إدارة الضرائب لتبني نظام دفع الضرائب عبر الانترنت، حيث يقوم الآن دافعو الضرائب وخصوصا العاملون في القطاع الخاص ومثلوهم بإرسال عائداتهم الضريبية ودفع الرسوم لمصلحة الضرائب وتبادل المعلومات إلكترونيا بدلا من إرسالها بالبريد على شكل وقي. وتشير تجارب الدول الأخرى أن النظام الضريبي عبر الانترنت لا يمكن أن يعمل بشكل فعال إلا بالتعاون الكامل من جانب دافعي الضرائب. وقبل هذه الدراسة، لا يعرف الكثير عن استخدام دافعي الضرائب في القطاع الخاص للنظام الضريبي عبر الانترنت. لذا، تبحث هذه الدراسة عن محددات النظام الضريبي عبر الانترنت لدافعي الضرائب من القطاع الخاص في نيجيريا، وذلك باستخدام طريقة المسح. هذا وقد استخدمت الدراسة الأسلوب الاستقصائي عبر الإنترنت (بالبريد الإلكتروني) لجمع البيانات. وبالاعتماد على أسلوب العينة العشوائية البسيطة، تم إرسال الاستبيانات الإلكترونية (بالبريد الإلكتروني) إلى ألف ومائة وخمسة وعشرين شخصا من دافعي الضرائب من القطاع الخاص. وتبحث الدراسة عن العلاقة بين الابتكار والتكنولوجيا والعامل الخارجي وجودة الخدمة الضريبية وتأثيرها على النظام الضريبي عبر الانترنت. وتقوم الدراسة أيضا بتقييم دور الوسيط الذي يمكن أن تقوم به جودة الخدمة الضريبية بين الابتكار والتكنولوجيا، والعوامل الخارجية والتأثير المحتمل على النظام الضريبي عبر الانترنت من قبل دافعي الضرائب من القطاع الخاص. وتفيد النتائج أن الابتكار والتكنولوجيا والعوامل الخارجية هي المحددات الهامة للنظام الضريبي عبر الانترنت، حيث تم الاكتشاف أن جودة الخدمة الضريبية يلعب بشكل فعال دور الوسيط في النموذج المفترض. ويمكن إجراء البحوث المستقبلية على دافعي الضرائب الأخرى مثل الشركات وغيرها. وعموما، فإن هذه الدراسة تقدم أدلة تجريبية حول مجال غير مدروس نسبيا من النظام الضريبي النيجيري. وقد تم استخدام نمذجة المعادلة الهيكلية لاختبار جودة الخدمة الضريبية كمتغير وسيط. وأظهرت النتيجة أن جودة الخدمة الضريبية تلعب دور وسيط كبير في العلاقة بين التكنولوجيا والابتكار والعامل الخارجي كمحددات النظام الضريبي عبر الانترنت.

APPROVAL PAGE

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DECLARATION

I hereby declare that this dissertation is the result of my own investigation, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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Signature.....

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EVIDENCE FROM SELF-EMPLOYED TAXPAYERS IN
NIGERIA**

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This thesis is dedicated to late wife Fatimah Omotayo Salami Bojuwon who died during our PhD journey may your soul rest in peace Amen (RIP).

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All praises and adorations are due to Almighty Allah (SAW). The Uncreated Creator of the Universe. May His peace and ceaseless blessings be showered continuously on the noble soul of the seal of the Prophets, his household, his companions and all the Muslim Ummah until the day of recompense.

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LIST OF ABBREVIATION

AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
ATT	Attitudes
BI	Behavioural Intention
CITA	Company Income Tax Act
CFA	Confirmatory Factor Analysis
CRI	Critical Ratio Index
CAC	Corporate Affairs Commission
CFI	Comparative Fit Index
DIT	Diffusion Innovation Theory
EFA	Exploratory Factor Analysis
EFCC	Economic and Financial Crime Commission
FIRSB	Federal Inland Revenue Service Board
ITAS	Integrated Tax Automation System
ICT	Information Communication Technology
ICPC	Independent Corrupt Practice Commission
ITO	Income Tax Ordinance
IT	Information Technology
ITMA	Income Tax Management Act
IRB	Inland Revenue Board
JTB	Joint Tax Board
MLE	Maximum Likelihood Estimates
PITA	Personal Income Tax Act
PPT	Petroleum Profit Tax
PCA	Principle Component Analysis
PA	Parallel Analysis
SEM	Structural Equation Modeling
TRA	Theory of Reason Action
TPB	Theory of Plan Behaviour
TAM	Theory of Acceptance Model
TOEM	Technological, Environmental and Organizational Model

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The proliferation of the internet has brought about radical changes in all domains of life, including public governance, service provider, and tax environment. This is not only because of the socio-political, and economic situation surfacing faster than before, but also due to the emergence of information technology (IT) that is transforming the operation of the tax administration system. The evolution of IT has a reflective effect on the tax revenue generation and tax compliance backdrop. Globally, tax authorities are challenged to develop a simplified and efficient tax administration system to increase the level of revenue generation and level of voluntary tax compliance. Similar challenges are being faced by tax authorities in Nigeria. In order to address these challenges and increase tax collection, there was a transformation in the Nigerian tax administration system to implement an online tax system. In May 2009, the Nigerian tax administration system adopted the online tax system called Integrated Tax Automation System (ITAS) by the Federal Inland Revenue Service Board (FIRSB).

Given the underdeveloped nature of e-government, an online tax system is increasingly growing within the tax administration environment worldwide (Warkentin, Gefen, Pavlou, & Rose, 2013). This is as a result of the advancement in the use of information technology worldwide (Cockfield, 2000). The nature of the internet and the emergence of information technology conveniences have been the driving forces behind the effective usage of an online tax system.

An online tax system incorporates tax preparation, tax filing and tax payment with the implementation of the innovation. The online tax system (OTS) users can file

their tax returns and tax-related information electronically through the use of technology. As soon as the users file their taxes electronically, the accuracy is checked automatically before further evaluation of the information provided. With this process, acknowledgements of receipt are issued immediately to the filer to show the evidence of filing. Besides filing their tax return through the online tax system, users also electronically, pay their taxes, make an enquiry about the tax data and download their tax related information through the internet (Beynon-Davies, 2005; Box, 2007).

According to Preston & Howlett (2013), out of 185 economies covered by annual surveys, only 66 economies have fully implemented the electronic filing system for all their major taxes during 2010. The majority of countries (64%) only partially implement their online tax systems, with some taxes filed and paid electronically while others are still being collected manually. The taxpayers' challenges to use the system include the misconception in the usage of an online tax system. The lack of adequate relative benefits, compatibility with the existing filing system, perceived usefulness, perceived ease of use, government support and security of user data which is related to address confidentiality issues (Alryalat, Dwivedi, & Williams, 2013). A tax service quality survey also reports that the user perceived quality of service provided is based on the responsiveness, reliability and informativeness of the online tax system when they are using it for filing in their tax return (Kim, Kim, & Lennon, 2006).

A number of empirical studies have established that online tax system is more effective, easy to use, convenient, time saving and accurate than the manual tax filing system (Camp, 2009; Lai & choong, 2005; James, Sawyer, & Wallschutzky, 1998). The use of OTS reduces the workload and the operational cost for tax administrators in handling and managing tax returns effectively (Azmi, Kamarulzaman, & Hamid, 2012; Azmi & Kamarulzaman, 2010). Also, level of errors when filing electronically reduces

significantly than the manual filing system. This makes errors traceable for the tax administrators through a clear stream of a database. Evidence shows that the error rate of an online tax system is one percent compared to that of a manual tax filing system which has been found to be 20 percent (Fu, Farn, & Chao, 2006).

The potential of using an online tax system is high for improvising the low-level revenue generation, increase tax compliance and tax administrative effectiveness in collecting and filing of tax electronically. A report from Angahar and Alfred (2012) has shown that the use of an online tax system could reduce the time used by taxpayers in visiting tax offices. The online tax system is time-saving, convenient and administratively cost-effective, it requires minimum staff effort and less time to provide better services to the users (Teo & Wong, 2005). Additionally, the emergence of the online tax system helps tax authorities to provide quality service to the users in very fast and countless ways since the taxpayers' data are easily available for them (Viljoen, 2012).

However, despite these potential benefits associated with OTS, the experience of tax authorities from developed and developing countries that have embraced online tax systems shows that the system is not hassle free and not easily accepted by taxpayers (Lai, Normala, & Meera, 2005; Fu, Farn, & Chao, 2006). These benefits may be foiled by the users' unwillingness to accept and use the emerging technology. The unwillingness to comply with the online tax system may have arisen as a result of poor infrastructure, poor tax culture, fear of technological adoption, inadequate enforcement policy, inadequate of consolidated database, mismanagement and ineffective tax service quality (Thong, 1999; Ibadin & Eiya, 2013). With all these issues unresolved, accommodating the online tax system would remain fearful to taxpayers due to speculation of failure.

As noted earlier, Nigeria's adoption of OTS in May 2009 was aimed at addressing issues facing the country's tax system. The challenges are quite well-reflected in the downward movement of the non-oil income tax. It was evident that the rate of non-oil income tax generated dropped from 19.8% in 1999 to 11.7% in 2008 with the tax ratio of 11% in 2009, which was the lowest in Africa (Cobham, 2005). In addition, the Ministry of Finance reported that over 350,000 taxpayers in Nigeria are not complying to paying taxes during a discussion on the usage of electronic payment and collection in Abuja (Yunusa 2004). Thus, efforts by the government to increase revenue over the years show that the contribution of income tax to the government's total revenue remains constantly low (Alabede, Zaimah, & Idris, 2011).

In the wake of this reality, the government has resorted to a viable online tax system that may improve the nation's economy and stable development. The effort has been made to focus on revenue from both direct and indirect taxes. To strengthen the campaign, the FIRSB places information technology as an anchor that would improve voluntary compliance, tax collection and tax management.

Subsequent to the adoption of the online tax system, there is a slight increase of the revenue generated from the non-oil sector during 2009 and a fall in the revenue from the oil sector. This perhaps happened as a result of the government's deviation from the high dependence on oil revenue and also the global financial crises that led to the fall in crude oil price. The total percentage of revenue contribution to the economy through company income tax was 20.5% (DiJohn, 2010). There is evidence that the revenue generation of self-employed taxpayers was 7% of the total revenue generated with the group representing 50% of the Nigerian employment rate (Micah, Ebere & Umobong, 2012). Self-employed taxpayers are those who have their business registered with the FIRSB and Corporate Affairs Commission (CAC).

Despite the increase in revenue from the self-employed taxpayers after the implementation, there is still more to be done in identifying the determinants of compliance with an online tax system. This becomes important because survey evidence from the self-employed taxpayers in Nigeria indicate a low usage of the online tax system. A number of factors may be responsible such as the level of innovation in terms of compatibility of the online tax system with the existing manual tax filing system. Also, it could be due to the benefit linked to the user in using the online tax system. The level of infrastructure development allows users to see the usefulness and ease of use of an online tax system which is linked to its technology characteristics.

In the global context, self-employed business can be defined by using the size and scale of operation that are fixed within the coordinated national boundaries of the business (Tijani & Oyeniyi, 2012). At the 13th National Council on Industry meeting held in July 2008, a self-employed business is described as an industry with a labour size of not more than 10 workers, or total cost of not more than N1.50 million, including working capital, but excluding the cost of land (Osotimehin, Jegede, Akinlabi & Olajide, 2012). One of the commonest features of self-employed business is that they are sole proprietorships. Even though they register as Limited Liability business, this is merely on paper as their true ownership structure reflects that of a one-man business.

Consequently, the rate of mistrust among the self-employed businesses is the highest among employees with poor partnership spirit, regulatory environment, policy instability and inadequate infrastructure which often contribute to their level of development (Odunayo, 2015). In fact, no industrial sub-unit under self-employed business category is immune from this structural weakness since it represents the sub-sector with a special focus. This is by means of a meaningful economic programme that targets employment generation, poverty alleviation and reversing rural-urban migration

(Osotimehin et al., 2012). In Africa, most of the jobs, especially those in non-urban areas, are provided by self-employed businesses such as sole proprietorship. In many cases, a self-employed business also accounts for the vast majority of industrial units operating in the respective country (Akpala & Oboro, 2014).

The emphasis is more on facilities and supportive services which is a hallmark of an effective strategy for promoting the self-employed businesses (Akande, Adebayo, Oladejo & Ademola, 2011). The assistance to be provided by the government should be made available in the form of finance, capital, information, training and infrastructure. However, the problems of self-employed business in Nigeria are enormous, which range from inadequate and inefficient infrastructural facilities. This tends to increase costs of doing business that forces the self-employed to resort to private provisioning of utilities such as road, water electricity, etc. Also, the incidence of multiplicity of regulatory agencies and taxes has also resulted in high costs of doing business, poor management practices and low entrepreneurial skills arising from inadequate educational and technical background.

Furthermore, there have been efforts taken by the FIRSB on the security of user information with the trust of the system and how the users perceive the online tax system to be reliable, responsive and informative to encourage them to use the system. In all, the revenue collected through the online system remain low despite the effort made by the tax authority on innovations and effective policy for the online tax system. This particular instance, has led to the conceptualization of the determinant of an online tax system by examining the relationship between innovation, technology the external factor and tax service quality of the online tax system.

According to Festus and Samuel, (2011), self-employed taxpayers are the group of taxpayers that post more challenges to the tax authority in Nigeria. This is as

a result of changes in their business location which has effects on the tax collection activities of the tax authority. Hence, most of them instead of paying tax on the profit made they rather re-invest it to boost their business. The above scenario no doubt weakens the effective administration of Nigeria's tax system. It is important to strengthen the Nigerian tax administration until the primary purpose of taxation is achieved. The quality of service provided by the tax authority is not in conformity with the expectations of self-employed taxpayers who undermine the confidence and interest in the online tax system (Abiola & Asiweh, 2012).

Besides the benefits associated with the online tax system, little is known about the determinant of compliance with the system by self-employed taxpayers in Nigeria. Carter, Shaupp, Hobbs, and Campbell (2011) posit that researchers should increase study in understanding the usage of an online tax system as an innovation. Similarly, Santhanamery and Ramayah (2014) argue that users' acceptance of innovation is an important primary measure of system success. Without knowing their involvement and participation, even the best developed online tax system cannot be successful.

Therefore, to understand the determinants of an online tax system, there must be a prior understanding of the users' understanding of the system. Thus, this study examines the determinant of an online tax system with survey evidence from the self-employed taxpayers in Nigeria. This is achieved by examining the relationship between innovation, technology and the external factor in Nigeria as mediated by the tax service quality.