



# The Implications of Upgraded Taxpayers Portal System on Tax Compliance among Business Entrepreneurs in Tanzania

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## Abstract

The study explored the implication of an upgraded taxpayer portal on tax compliance among business entrepreneurs in Tanzania. A technological acceptance model (TAM) was used to guide the study, and awareness, acceptability, and usefulness were the variables that predicted tax compliance. The study involved taxpayers with high tax liabilities in the Dar-es-Salaam and Coast regions. The regions were chosen because Dar-es-Salaam has many business entrepreneurs and contributes significantly to tax collection compared to other regions. The Coast region has a fragmented tax administration system that complicates a few entrepreneurs with high tax liabilities and tax collection. The study area was selected purposefully due to the ease of access to data. The sample size was 400 respondents determined using Rahman's (2023) formula, while selection of respondents to be included in the study was by snowballing, where one respondent directed the other who had a similar problem. Questionnaires and interviews were the means of data collection, and out of 400 respondents, 345 were interviewed and filled out the questionnaires. The results indicated that most of the respondents who participated had primary and secondary education levels and low knowledge of using the upgraded taxpayers portal. Awareness, acceptability, and usefulness contributed to 56.3% of the change in tax compliance. This implied that 43.7% of the factors were not explored and that these factors were important in enhancing tax compliance among taxpayers. The study recommended that more seminars, workshops and training were important to increase awareness among the taxpayers.

## Subject Areas

Business Management, Finance

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## Keywords

Taxpayers, Tax Compliance, Upgraded Systems, Taxpayers Portal, Awareness, Acceptability and Ease of Use

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## 1. Introduction

Tax is an essential component for development in all government systems all over the globe. Tax emanates from the ancient era, where kings of different dominions were used for the upkeep and development of their empires and were paid in money or labour equivalent [1]. All countries globally have a tax system to pay for public, common societal or agreed-upon national needs and government functions. Although tax systems have existed since the time of our ancestors, they have become a major nuisance for taxpayers in developing countries [2] [3]. In Sub-Saharan Africa, the tax system is riddled with abuse, corruption, high estimates, and rates out of line with the taxpayer's income [4] [5]. This creates high tax liabilities for taxpayers, which has caused most taxpayers to close their businesses, change tax identification numbers (TIN) and migrate to neighbouring countries to evade it.

A sound tax system has predominantly good taxes and fulfils most of the canons of taxation to yield sufficient revenues. Nor and Mohamed (2024) [6] state that fairness, efficiency, transparency, productivity and lack of evasion are the main characteristics of a good tax system. The tax administration in a good tax system provides taxpayers with awareness of tax rates and allows them to settle their liabilities conveniently. The system is complete with certainty, equality, fairness, and transparency, motivating taxpayers to pay taxes willingly. Bird (2015) [3] claims that how taxpayers behave reflects how the tax authorities treat them. Tax authorities must adhere to the canons of taxation to influence taxpayers to pay taxes willingly and yield high tax collection.

The behaviour of tax administrators in the tax system influences taxpayers in either positive or negative ways. Good behaviour of tax administrators ensures efficient revenue collection and contributes to efficiency and equity in society, and in the same way, it minimizes market distortion while achieving optimal revenue collection and distributional goals [7]. For the good functioning of the governments, it is postulated that the tax system should align with the government's objective, calling for a high standard of living for its citizens.

Governments in Sub-Saharan Africa have struggled to restructure the tax system to fit their goals. In Tanzania, in particular, the tax authority upgraded the taxpayer portal to enable e-filing for taxpayers' convenience. The taxpayers portal enables an individual taxpayer to do e-filing at their convenience and generate control numbers for settling tax liabilities. In general, the taxpayers portal aims for online tax registration, online tax filing and online tax remittances, and how each is affected by the online system to enhance compliance [8]. The taxpayers

portal was established to ease e-filing and enhance tax compliance through the new information technology. Besides the taxpayers portal, there have been complaints among the taxpayers about its acceptability, benefits and contribution to their tax compliance. Many taxpayers have found themselves in substantial tax liabilities even though they had previously settled them [9]. This brings some questions about whether or not the upgraded taxpayers portal is easier to use and user-friendly. Therefore, the government introduced electronic taxation to make payment of taxes easy for taxpayers, thus ensuring compliance.

The upgraded taxpayers portal aimed to reduce the inconvenience and increase the efficiency of tax collection. However, Since its introduction, taxpayers have found themselves with heavy tax liabilities that have caused harassment by tax enforcement officers and disruptions of business activities. This is evidenced by the strike made on June 24, 2024, by kariakoo business traders and the recent incident of the killing of a tax official at Tegeta, kwa Ndevu Street, after citizens stoned him while on duty [10]. These events raise some doubt about whether the taxpayers are aware of the use of the upgraded taxpayers portal, and whether the upgraded taxpayers portal has helped improve the tax compliance level among taxpayers is still unclear. Similarly, the awareness, accessibility and ease of use of the upgraded taxpayers portal have improved tax compliance. Is the accumulation of unpaid taxes, interest and penalties found in the system the lack of awareness of taxpayers' portal use, or is the system not user-friendly? This study explores the contribution of upgraded taxpayer portals on tax compliance among business entrepreneurs.

## 2. Literature Review

### 2.1. Concept of Upgraded Taxpayers Portal

Upgraded taxpayers portal in an electronic tax system that enables an individual to do e-registration, e-filing and generate tax control numbers for the taxpayers electronically. This is an online platform whereby the taxpayer can access all the services offered by the tax authority through the internet, such as registration for a personal identification number, filing of returns, electronic cargo tracking system, refund services, tax payments, driving licence application, motor vehicle, VFD and EFD management services and remission services. The upgraded taxpayers portal system in Tanzania enables taxpayers to file their tax returns at ease and convenient time

### 2.2. Tax Compliance

Tax compliance among taxpayers is of critical importance for the country's development. Compliance on tax issues increases tax collection and improves economic development. Verboon & Dijk (2007) [11] defined tax compliance as individuals' willingness to comply with relevant tax authorities by paying their taxes. Tax compliance can be defined as the ability of a tax-liable body to submit accurate, complete and satisfactory returns in conformity with state tax laws and reg-

ulations to the authority for tax assessment [12]. Sarker and Wells (2003) [13] also reported that tax compliance is the degree to which a taxpayer complies or fails to comply with the tax rules of his country. Brown and Mazur (2005) [14] noted tax compliance as a multifaceted measure, and theoretically, it can be defined by considering three distinct types of compliance such as payment compliance, which means timely payment of all obligations; filing compliance, which means the timely filing of any required return, and reporting compliance (the accurate reporting of income and tax liability). The Organisation for Economic Cooperation and Development (2001) [15] divided compliance into administrative and technical compliance. Administrative compliance refers to complying with administrative rules of lodging and paying. This compliance can also be called reporting compliance or regulatory compliance.

The technical compliance refers to complying with the technical requirements of tax laws. Tax compliance can be achieved through public relations, tax education, consultation, guidance, and examination. Wenzel (2004) [16] states that the interaction between the tax authority and the taxpayer creates a good relationship that impacts the taxpayer's attitude. Alm and Torgler (2006) [17] assert that the taxpayers' trust in the state improves their positive attitude and commitment to paying taxes. The eventual effect is reflected through voluntary compliance by willingly reporting and filling tax returns and paying the tax obligations as and when they fall due.

## 2.3. Empirical Review

### 2.3.1. Taxpayers Portal Awareness and Tax Compliance among Taxpayers

Compliance requires proper knowledge and awareness of the tax system and the frequent changes. A thin line exists between acceptability and awareness of the upgraded taxpayer system. Awareness implies being conscious of the upgraded taxpayer's system and perceiving things, whereas acceptability implies being satisfied with the tax system and conforming to its rules and laws for use [18]. Implementing tax system reform and adoption requires people's readiness and willingness to adopt the changes that will benefit the economies and increase revenue collections. Nurkhin *et al.* (2018) [19] regard tax system awareness as a state where a taxpayer knows, accepts, and complies with the implemented tax regulations and desires to comply with tax obligations. Therefore, formal training, workshops, seminars, and public awareness creation among retailers, traders, business owners and tax consultants adjust to the tax system change. The study by Rao (2000) [20] on tax reform in India observed a similar perception that tax system stakeholders adjust to the change in the system based on the awareness created and that people tend to behave the way the tax authorities treat them. Furthermore, Jalaja's (2022) [21] study verified that proper training and awareness about the government's tax system change helped ease the adaptation constraint. Therefore, the study hypothesizes that.

*H<sub>1</sub>: Awareness of the upgraded taxpayers portal positively influences tax com-*

*pliance among taxpayers.*

### **2.3.2. Taxpayers Portal Acceptability and Tax Compliance among Taxpayers**

Acceptability is one of the challenges of using new technology because of the co-existing different technological fashions. Sunstrum (2022) [22] contents that technology integration into the tax system can create a self-identity of aesthetic, functional, and expressive elements. The upgraded taxpayers portal is not socially acceptable if it is negatively disruptive, is perceived as annoying, confounds ordinary taxpayers' interaction, and runs against social norms [23]. This implies that social acceptability is the critical component that product designers must consider when designing and upgrading the tax system. Thus, designers must understand the interrelationship of the symbolic aspects of wearables for users and their social acceptability [24] [25] considering acceptance to be one of the determinants of technology adoption and compliance. The limited research on the acceptability of the upgraded taxpayer system leads to hypothesize that;

*H<sub>2</sub>: Acceptability of the upgraded taxpayer's system influences tax compliance among taxpayers*

The taxpayers' satisfaction level determines the tax system's accuracy and how it conforms to the rules and laws. Acceptability tracks users' attitudes and intentions to use the upgraded taxpayer's system.

### **2.3.3. Taxpayers Portal Perceived Ease of Use and Tax Compliance among Taxpayers**

The perceived usefulness of the upgraded taxpayers portal among taxpayers is described as the degree to which the user believes that the use of a particular tax system will support the work [26]. The perceived ease of use is verified by the empirical studies on the adaption of upgraded tax systems [26]-[30]. Perceived usefulness has also been examined in terms of the ability of the system to increase performance, productivity, effectiveness, and tax compliance. The upgraded taxpayer's system was introduced to reduce the taxpayers' effort needed for the manual tax filing process. Studies found that the perceived ease of use is primarily determined by behavioural intention [31] [32], and it is explained that perceived ease of use is the drive of behavioural intention, and this scenario leads to tax compliance. Therefore, it is hypothesized that

*H<sub>3</sub>: Perceived ease of use of upgraded taxpayers portal positively influences taxpayers' compliance*

Sonia and Lee (2021) [33] studied social acceptability and product attributes on smart appeal and their effects on consumer attitudes and user intention. The results demonstrated the importance of considering smart apparel's social acceptability and functional and expressive attributes to predict consumers' attitudes and intentions toward its use. Social acceptability and expressive and tracking attributes were the most significant determinants for predicting consumers' attitudes and intentions of using smart apparel. The smart appeal is a new technology; therefore, the social acceptability of this new technology depends on the user's

attitude.

Daniel and Esther (2019) [34] studied the effect of the level of awareness of electronic tax on tax compliance by small and medium-scale enterprises (SMEs) in Lagos state, and also examined the effect of perceived ease of use on tax compliance and determined the effect of electronic tax filing system cost on tax compliance among SMEs in Lagos state. This was done to determine the effect of the electronic tax filing system on tax compliance among SMEs in Lagos state, Nigeria. Analysis of the study revealed that level of awareness (LOA) showed a significant positive relationship with tax compliance ( $\beta = 0.276$ ;  $t = 2.689$ ;  $p = 0.008$ ). It was also revealed that perceived ease of use (PEU) ( $\beta = 0.249$ ;  $t = 2.331$ ;  $p = 0.022$ ) positively affected tax compliance but was statically non-significant. The study concluded that the level at which taxpayers are aware of the electronic tax filing system will determine their compliance.

Hung, Chang, and Yu (2006) [35] conducted a study to determine users' acceptance of e-government services in Taiwan region's online tax filing and payment systems. The results indicate that the proposed model explained up to 72 per cent of the variance in behavioural intention. In addition, the important determinants of user acceptance of e-governments are perceived usefulness, ease of use, perceived risk, trust, compatibility, external influences, interpersonal influence, self-efficacy, and facilitating conditions.

Adeyeye (2019) [36] studied the improvement of tax administration through technological innovation in Nigeria. The results indicated that, to a large extent, staff training and professional development, self-efficacy, and staff attitude determine the accuracy of applying information technology in tax.

Fu, Farn and Chao (2006) [37] conducted a study on the acceptance of electronic tax filing and taxpayers' intentions. The taxpayers' demographic characteristics and perceptions were also explored to identify potential determinants. Results indicated that taxpayers tend to concentrate on the usefulness of a tax-filing method and may be fairly pragmatic in developing general attitudes towards using the method. Interestingly, the effects of perceived ease of use, subjective norms, and self-efficacy on behavioural intention differed for manual and electronic tax filers. Understanding these factors can extend our knowledge of taxpayers' decision-making and lead to better planning and implementation of e-government services.

Gangodawilage, Madurapperuma and Aluthge (2021) [38] researched the use of technology to manage entrepreneurs' behaviour in tax compliance in the digital economy. The study specifically evaluated how technology in taxation influences the compliance decisions among entrepreneurs in the digital economy. This study's findings revealed that trust in the technology used by the tax authority and the power of the tax authority in implementing the technology-driven tax system influence maintaining tax compliance, and it breeds confirmatory compliance as a new compliance strategy in the digital economy.

Martins and Picoto (2020) [39] examined tax compliance as a driver for adopt-

ing information technologies' effect on competencies development and competitive advantages. The findings showed that companies decide to adopt IS due to their obligations for tax compliance. However, while some companies adopt basic IS to comply with the transmission of documents, others implement more complex systems to satisfy wider company needs.

Olonde (2019) [40] investigated information technology's effects on tax compliance by the Kenya Revenue Authority in Nairobi, Kenya. The study-specific objectives were the effect of iTax on tax compliance, the effect of big data analytics on tax compliance, and the effect of blockchain technology on tax compliance. With the research objectives, the study analysed the theoretical and empirical literature, with the theories used being the diffusion of innovations theory, technology acceptance model, and united theory of acceptance and use of technology. The study findings indicated that, in general, information technology affects tax compliance, *i.e.*, taxpayers' registration, filing of returns, and income declaration. The study also found that the iTax system affects tax compliance to a great extent and is well accepted by users, while data analytics and blockchain technology affect tax compliance to a great extent and the acceptance of the technologies is well accepted.

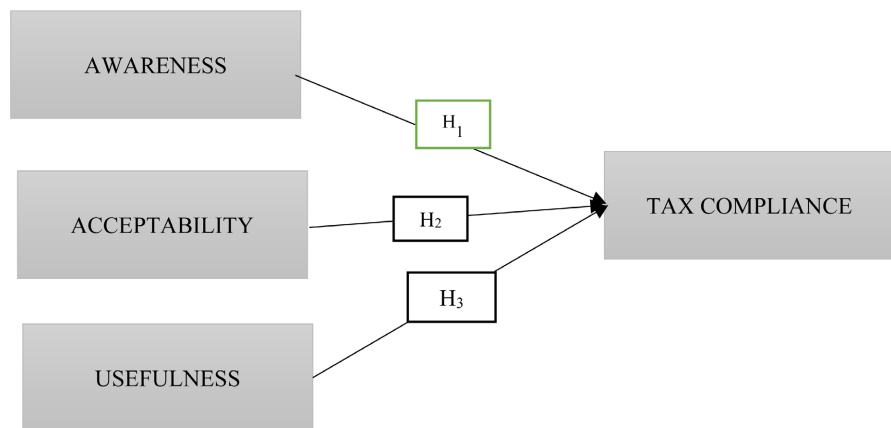
Furthermore, the regression analysis indicated that the iTax system and big data analytics significantly affected tax compliance, while blockchain technology did not significantly affect tax compliance. The study recommended that taxpayers should be trained on new information technology to bring awareness and acceptance of the use and implementation of change management to be effective. It is also recommended that the government create favourable policies to enable data privacy for users.

Nyakundi (2022) [41] conducted a study to investigate the influence of information communication technology on tax compliance among Small and Medium Manufacturing Enterprises in Nairobi, Kenya. The study's specific objectives were to establish the influence of the iTax system on tax compliance, the influence of online tax filing knowledge on tax compliance, and the influence of internet accessibility on tax compliance for small and medium taxpayers in Nairobi County. The study was anchored on the fiscal exchange theory, the technology acceptance model (TAM) theory and the theory of planned behaviour (TPB). The study adopted explanatory research design methods to collect and analyze data and present findings. The study revealed that iTax systems, online tax filing knowledge and internet accessibility positively correlated with tax compliance by up to 89.8% ( $R = 0.898$ ). In addition, the results revealed that iTax systems, online tax filing knowledge and internet accessibility caused a variation of 81% or ( $R^2 = 0.807$  and adjusted  $R^2 = 0.803$ ) on tax compliance. This implied that only 9% of the remaining change was caused by other factors not included in the model. These other factors could be taxpayers' perception of technology adoption, perception of the government tax expenditure, and other behavioural factors such as fear of the unknown in the use and adoption of technology. The regression equation showed

that a constant change of 0.404, a unit change in iTax systems, causes an increase of 0.275 in tax compliance, while a unit change in online tax filing knowledge causes an increase of 0.377 in tax compliance.

## 2.4. Conceptual Framework

The theoretical and empirical reviews identified that awareness, acceptability and ease of use of the newly introduced information and communication technology influence tax compliance among taxpayers. Therefore, the study tests the three hypotheses based on the specific objectives. It aims to determine the awareness, acceptability and usefulness of the upgraded taxpayers portal among taxpayers in the country. The practical tax enforcement in place and the high tax liabilities among taxpayers bring some doubts on the practical intention of introducing the upgraded taxpayers portal, which aims to increase tax compliance and collection.



**Figure 1.** Conceptual framework.

## 2.5. Research Gap

The reviewed studies, both theoretical and empirical, identify that awareness, acceptability and usefulness of new information and communication technology influence tax compliance. This happens once intensive training, workshops, and seminars are conducted for taxpayers and people in charge of tax collection. Most of the studies in information communication technology were conducted in other countries or regions outside Africa, specifically in India, Taiwan region, the United Kingdom and the U.S.A., while in African Kenya and South Africa. In Tanzania, very few studies were conducted to determine the influence of new technology, specifically the upgraded taxpayers portal, on tax compliance among taxpayers. Those who studied this area include [41]-[44], who concentrated on the effectiveness and acceptance of electronic devices but not the influence of the upgraded taxpayers portal on the tax compliance. This study intends to fill the knowledge gap existing in Tanzania.

## 3. Materials and Methods

The study opted for the pragmatism philosophy because it is concerned with the

reality, knowledge and idea of the existence of different world views. Slater *et al.* (2022) [45] assert that individuals' view of the world is closely linked to their perception of reality. Therefore, individuals' perception of reality and how they gain knowledge affects how they understand something. Therefore, adopting the pragmatism philosophy deals with a belief about how data about the research context is collected, analysed and used to acquire knowledge. The issue of what is believed to be true and what is true underpins the philosophical view about the study context. The study combines the positivist philosophy, which asserts what is believed to be true based on the theoretical view, and interpretivism philosophy, concerning what is true based on practical observation [46] [47].

The study opted for a descriptive design that allowed for the combination of quantitative and qualitative studies. The quantitative study was mainly supported by detailed information and descriptions obtained from the interview. This study requires triangulation because it deals with the taxpayers' perception of the introduced upgraded taxpayers portal; hence, quantitative information is not satisfactory unless the taxpayers express their feelings support it [48]-[51].

The study population referred to all Tanzanians conducting business using their tax identification number. The sample size for the study considered that the number of Small and Medium Enterprises (SMEs) was approximately 2.7 million [52], and therefore, the Rahman (2023) [53] formula for calculating the sample size was used.

$$n = \frac{N}{(1 + Ne^2)}$$

$N$  refers to the number of SMEs = 2.7 million

$e$  is the margin of error term, which is approximately 5% or 0.05

$n$  is the sample size

$$n = \frac{2.7\text{million}}{(1 + 2.7\text{million}(0.05)^2)}$$

$$n = 400$$

According to Rahma (2023) [53] formula, the sample size is 400 taxpayers, and these were obtained using a snowballing sampling technique. The snowball sampling technique was suitable for this study because the study aimed to evaluate the awareness, acceptability and usefulness of the upgraded taxpayers portal [54]; therefore, each taxpayer with higher tax liabilities identified and pointed the other with a similar problem. These purposeful sampling techniques aim to examine the people who share specific common characteristics and, in this study, those with high tax liabilities. The majority of the respondents were from Dar-es-salaam and Coast regions. Dar-es-salaam was chosen because it is among the regions leading in tax collection, and many business entrepreneurs reside and operate in the region. The coastal region was selected because the tax collection in the region is complicated by a fragmented tax administration system [55] [56].

The questionnaires and interviews were the data collection methods employed

for the study. In a study that needs to examine the cause relationship and detailed information and characteristics of the parameter under study, questionnaires and interviews are the best options for data collection [57]. The collected data were coded into SPSS and checked for errors and modal fitness using the multicollinearity, heteroscedasticity, linearity and normality tests. The tests confirmed the modal fitness and allowed quantitative data analysis using the standard multiple regression that tests the hypotheses [58]. The descriptive data was used to summarize data in a frequency distribution, mean, and standard deviation, and as the questions were on a Likert scale of 5 points, an average score was obtained to determine the level of disagreement, neutrality, and agreement and the qualitative information obtained in the interview were used to support the quantitative results.

The validity and reliability test of the obtained information was also ensured. Validity refers to the study measuring what it intended to measure [59] [60]. The confirmation for this was done by ensuring that the questions set were aligned with the study's specific objectives and that variables under use also emanated from the theories used in the study; before analysis, a correlation matrix was produced to determine the relationship among the variables. The reliability test was also done, and the Cronbach alpha test of 0.5 and above confirmed an internal consistency within and between the variables, according to Cheung *et al.* (2024) [61]. In addition, the ethical dimension was considered in this study by allowing those taxpayers identified to respond according to their willingness, and we also gave them the freedom to express their views based on the experience they have gained due to the problems they encountered with the tax officers.

## 4. Results and Discussion of the Findings

### 4.1. Demographic Results

In this study, out of 400 questionnaires sent to respondents, 345 were returned filled out. This constitutes 82.3% of the response rate, which is higher than the average response rate of 52.7%, based on the study of response rates from individuals established by Baruch and Holtom (2008) [62]. The high response rate implies that most of the respondents targeted were interested in giving opinions on the taxpayer's system because of the matter arising during tax collection and the disruption of businesses by tax enforcement officers. One of the taxpayers was quoted saying.

*We are unhappy with the tax authority, they have stopped motor vehicles carrying goods on the road and asked us to pay taxes. The time we spend negotiating disrupts our businesses, and some customers cancel their orders and find other suppliers. This attitude causes a business failure on our side, and the taxes they need me to pay do not come from the business profits, but I pay from my running capital.*

The study established that 280 (81%) of the respondents were male and only 65 (19%) were female. The higher percentage of men in the survey indicates that men share more information about the issues they encounter in business operations than women do. Furthermore, the study indicates that more men are engaged in

business compared to women, a characteristic that is shared by the study of Peck, Sockol and Hancock (2020) [63] and Ishengoma (2018) [64], asserts that males are more empowered and encouraged to finance their families in African families. This attitude triggers aggressiveness and boosts risk-taking behaviour.

The study found that 183 (53%) of the respondents were between 41 and 50, and 63 (18%) were aged above 50 years. The age between 31 and 40 was 58 (17%), and the age below 30 was represented by 41 (12%). The high representation of ages between 41 and 50 implies that more middle-aged people engage in business to sustain their living, and they have various responsibilities to meet; they have to do business [65] [66].

The survey results indicated that more than half of the respondents, 223 (65%), had attained a primary level of education, and 83 (24%) had a secondary school level, while 24 (7%) and 15 (4%) were diploma and above diploma level of education. The results indicate that most taxpayers with some tax liabilities have a low education level, and very few possess diplomas and secondary schools. The study concurs with a study by Fauziati *et al.* (2020) [67], who conducted a study in Kota Padang, Indonesia and found that a lack of tax knowledge causes non-compliance and, in the end, results in high tax liabilities. One of the respondents quoted saying,

*'I don't understand how the taxes are calculated; they bring demand notes asking me to pay taxes every time. How can I manage? My business does not generate enough money for living expenses and children's school fees.'*

The study established the number of years the business owners had in business. The number of years indicates the business experience of the businessman and woman and implies the experience they have gained in tax matters. The study revealed that respondents who had an experience between 5 and 10 years were 104 (30%), followed by people between 10 and 20 years 95 (28%), while those below 5 years and above 20 years were 72 (21%), and 74 (21.8%) respectively. Experience matters a lot; however, this study found that irrespective of the number of years in business, all business people had a similar problem of high tax liabilities. **Table 1** below displays the demographic characteristics of the study respondents.

## 4.2. Descriptive Results

This section presents descriptive statistics (mean, standard deviation (SD), maximum and minimum values) of the independent and dependent variables. The independent variables were measured on a 5-point Likert scale ranging from 1 = strongly disagree and 5 = strongly agree over a total of 345 observations (N = 345). The dependent variable of compliance measures was the time of filing returns and timely payments of the required tax amount, and respondents were required to indicate YES or NO as binary questions. Field (2009) [68] asserts that mean values represent respondents' views on a given variable, and the standard deviation (SD) indicates how well the mean represents the data and looks at the spread of responses. Field confesses that when SD is zero, all the scores are the same, and the mean represents the responses well when it is less than one.

**Table 1.** Demographic characteristics of respondents.

Characteristics	Description	Number of Respondents	Per cent
Gender	Male	280	81
	Female	65	19
Age	Less than 30 years	41	12
	Between 31 and 40 years	58	17
	Between 41 and 50 years	183	53
	Above 50 years	63	18
Education Level	Primary Education	223	65
	Secondary level	83	24
	Diploma level	24	7
	Above Diploma level	15	4
Experience	Less than 5 years	72	21
	Between 5 and 10 years	104	30
	Between 10 and 20 years	95	28
	Above 20 years	74	21

Source: Field (2024).

#### 4.2.1. Awareness of the Upgraded Taxpayers Portal

The study evaluated taxpayers' awareness of the upgraded taxpayers portal. The awareness context had five measurement scales: knowledge of laws and rules of tax, the consciousness of the upgraded taxpayers portal, technical know-how of the upgraded taxpayers portal, the use of agents on tax returns and attendance at training, seminars and workshops about the upgraded taxpayers portal. The ranking was on a Likert scale, with 1 strongly disagreeing and 5 strongly agreeing. The mean score results established from the SPSS indicated a score between  $M = 2.8$  and  $3.2$ , and the standard deviation ( $SD = 0.89$  and  $1.06$ ), implying that respondents were neutral; they neither strongly disagreed nor agreed with being aware of the upgraded taxpayers portal. (See [Table 2](#))

#### 4.2.2. Acceptability of Upgraded Taxpayers Portal

The mean values ranged from  $M = 2.6$  to  $3.6$  above the scale's centre-point of acceptability of the upgraded taxpayers portal. The tax filing system and easy-to-use upgraded taxpayer's system scored had a mean of less than  $M = 3.0$ , implying that the respondents disagreed on the suitability and usefulness of the upgraded taxpayers portal. This is evidenced by the standard deviation scores for the two measurements, which were between ( $SD = 1$  and  $1.1$ ), indicating that the mean is the same. However, the respondents indicated that the upgraded taxpayers portal was cost-effective, managed data well, and efficient. The mean scores were between  $M = 3.3$  and  $3.6$ , while the standard deviation ranged from ( $SD = 1.1$  to  $1.5$ ). (See [Table 3](#))

**Table 2.** Descriptive statistics on awareness of upgraded taxpayers portal.

Measurements	N	Minimum	Maximum	Mean	Std. Deviation
Tax laws and Rules	345	1.00	4.00	2.8899	0.89867
Conscious of the upgraded taxpayers' portal	345	1.00	4.00	2.9101	0.97082
Technical Know-how	345	2.00	5.00	3.1797	1.00415
Tax agents use	345	2.00	5.00	3.2725	1.04602
Tax training, seminars, workshops, tax system	345	1.00	5.00	2.9217	1.06324

Source: Field Data (2024).

**Table 3.** Acceptability of the upgraded taxpayers Portal.

Measurements	N	Minimum	Maximum	Mean	Std. Deviation
The system is good for filling tax returns for taxpayers	345	1.00	4.00	2.6058	1.02070
The system is easy to use for the taxpayers	345	1.00	5.00	2.9652	1.14066
Is the taxpayer's portal cost-effective?	345	1.00	5.00	3.3043	1.09577
The system manages the taxpayer's data well	345	1.00	5.00	3.6725	1.25752
The taxpayer's portal is efficient in revenue collection	345	1.00	5.00	3.4377	1.52013

Source: Field Data (2024).

### 4.2.3. The Usefulness of the Upgraded Taxpayers Portal

The evaluation of the usefulness of the upgraded taxpayers portal had a mean score of between  $M = 3.0$  and  $3.2$  and a standard deviation ranging from ( $SD = 1.1$  to  $0.7$ ). The results fall to the centre point, implying respondents were neutral about the system's usefulness. According to the displayed mean scores, it is evident that the taxpayers do not see its usefulness because they do not know how to operate the system in filling their tax returns using the new upgraded taxpayers portal. (See **Table 4**)

## 4.3. Multivariate Analysis

### 4.3.1. Correlation Analysis

A Pearson correlation coefficient was computed to assess the linear relationship between independent and dependent variables. The correlation matrix between awareness and accessibility was moderately negatively correlated,  $r(341) = 0.077$ ,  $p = 0.077$ ). The results imply that an increase of one awareness unit leads to a decrease of  $0.077$  in accessibility. The relationship between awareness and

**Table 4.** Descriptive results of the usefulness of the upgraded taxpayers portal.

Measurements	N	Minimum	Maximum	Mean	Std. Deviation
The system has reduced taxpayers' workloads	345	1.00	5.00	3.0000	1.16639
The upgraded taxpayers portal has made tax filing easier	345	1.00	4.00	3.0522	0.87115
The taxpayers portal allows the correction of errors	345	1.00	4.00	3.0551	0.86595
The taxpayers portal has reduced operation cost	345	2.00	4.00	3.2087	0.74898
Is the taxpayers portal curbing tax evaders?	345	1.00	5.00	3.2029	0.93665

Source: Field Data (2024).

usefulness had significant moderate positive  $r(341) = 0.096$ ,  $p = 0.037$ ), implying that an increase of one unit of awareness causes an increase of 0.096 in usefulness. Further, the relationship between acceptability and usefulness had significant positive  $r(341) = 0.66$ ,  $p = 0.000$ ), indicating that an increase of one unit of acceptability leads to a 0.66 increase in usefulness. The relationship concurs with the technology acceptance model (TAM) theory, which states that acceptance and usefulness go together. However, the relationship between independent and dependent variables indicated a significant negative. The results imply that a unit increase in awareness, acceptability and usefulness caused a decrease in compliance by 0.581, 0.399 and 0.479, respectively. The result contradicts the study by Mittal and Prakash (2020) [69] and that of Qader *et al.* (2022) [70], who found that awareness, acceptability, and usefulness have a positive relationship with compliance and also indicated that the e-tax filling had reduced the cost, time, convenience, improve the efficiency, and better from the traditional method of tax filling procedures. (See **Table 5**)

**Table 5.** Correlations matrix.

Variables		AWET	ACCT	USEFT	COMPT
AWET	Pearson Correlation	1			
	Sig. (1-tailed)				
ACCT	Pearson Correlation	-0.077	1		
	Sig. (1-tailed)	0.077			
USEFT	Pearson Correlation	0.096*	0.660**	1	
	Sig. (1-tailed)	0.037	0.000		
COMPT	Pearson Correlation	-0.581**	-0.399**	-0.476**	1
	Sig. (1-tailed)	0.000	0.000	0.000	

\*Correlation is significant at the 0.05 level (1-tailed). \*\*Correlation is significant at the 0.01 level (1-tailed). Source: Field Data (2024).

### 4.3.2. Standard Multiple Regression

The standard Multiple regression was used to test if the upgraded taxpayers portal's awareness, acceptability and usefulness predicted tax compliance among the taxpayers in the country. The regression results indicated that the three predictors explained 56.3% of the variance  $R^2 = 0.563$ ,  $F(3, 341) = 146.47$ ,  $p < 0.05$ . It was further found that awareness significantly predicted compliance ( $\beta = -0.582$ ,  $p < 0.05$ ), acceptability ( $\beta = -0.295$ ,  $p < 0.05$ ) and usefulness ( $\beta = -0.225$ ,  $p < 0.05$ ). The F-test indicated an  $F(3, 341) = 146.47$  and  $p < 0.05$  implying that the null hypothesis that there is no differences between the variances was rejected. Hence, the model was significant, and the predictor variables' awareness, acceptability, and usefulness helped to predict the dependent variable compliance. However, the independent variables explain 56.3% of the compliance, and 43.7% was explained by other variables that were out of the technology acceptance model (TAM). The variables out of the TAM are significant for ensuring taxpayers comply with tax obligations. (See **Table 6**)

**Table 6.** Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.750 <sup>a</sup>	0.563	0.559	0.46907	0.563	146.470	3	341	0.000	1.750

a. Predictors: (Constant), USEFT, AWET, ACCT, b. Dependent Variable: COMPT.

## 5. Conclusions and Recommendations

The study established that most of the respondents who participated had primary and secondary-level education. This implies that they had a low knowledge of using new technology to file tax returns through the upgraded taxpayers portal system using their computers and mobile phones. Therefore, the recent protests and incidences at the Kariakoo market area and the death of tax officials were caused by a lack of proper knowledge of using the upgraded taxpayers portal.

The awareness, acceptability, and usefulness of the upgraded taxpayers portal to compliance indicate a lack of awareness of the upgraded taxpayers portal. Seminars, workshops, and training conducted to raise awareness did not affect these taxpayers. The average score for the descriptive results confirms the disagreement on awareness, acceptability, and usefulness because the score was below the centre point.

The relationship between the variables was moderate and indicated a lack of multicollinearity among the independent variables. Awareness, acceptability, and usefulness contributed to 56.3% of the change in compliance and 43.7% of the change was contributed by other variables. Therefore, there is a need to know other variables that contribute to tax compliance outside the awareness, acceptability and usefulness.

The study recommends that the tax authority enhance awareness among tax-

payers to enable them to accept and use the upgraded taxpayers portal. Seminars, workshops, and training should be conducted several times in different areas to raise awareness among taxpayers in the country. Also, training on using upgraded taxpayer portals should be done properly for all those in need.

Finally, the present study was limited to the implication of the upgraded taxpayers portal on tax compliance. The study was confined to taxpayers with high tax liabilities who were found to lack the knowledge to use the system. Further study is important to explore the cost implication of an upgraded taxpayers portal system on tax compliance among taxpayers in the country.

## Conflicts of Interest

The authors declare no conflicts of interest.

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