

Taxpayer Education And Tax Compliance By Water Vending Businesses In Hargeisa City, Somaliland

By

Hamse Ibrahim Jirde & Dr. Daniel Makori

Department of Accounting and Finance, Kenyatta University, Kenya

jirde15@gmail.com

makori.daniel@ku.ac.ke

Abstract

An effective tax system is vital for driving economic growth, and tax compliance is a primary focus of the Somaliland Inland Revenue Authority, which aims to maximize revenue collection for essential public services and wage obligations. This research explores the impact of taxpayer education on tax compliance among water vending businesses in Hargeisa, Somaliland. It specifically examines three key areas: the effect of teaching basic tax principles, the impact of communicating tax-related information for awareness, and how assistance with tax filing influences compliance. The study is based on several theories, including the Economic Deterrence Tax Theory and the Theory of Planned Behavior. A descriptive research design guides the data collection process, targeting 326 registered water vending businesses in Hargeisa City. Using the Yamane formula, a sample size of 179 participants was selected through stratified and simple random sampling methods. Data were collected using structured questionnaires, followed by diagnostic tests and analysis through a multiple regression model, with findings presented in various statistical formats. The results indicate that educational, communicative, and practical assistance strategies significantly enhance tax compliance. Teaching tax essentials improves understanding and adherence to obligations, while effective communication raises awareness and fosters positive perceptions of the tax system. Practical assistance simplifies tax filing processes, reducing compliance barriers. Additionally, socio-demographic factors influence the relationship between education and compliance, highlighting the necessity for tailored programs addressing specific needs. To enhance compliance, the study recommends targeted tax education strategies, effective promotional communication, and the provision of practical assistance. It also emphasizes the importance of understanding socio-demographic factors to develop targeted outreach programs. Further research is suggested to evaluate the long-term effects of these strategies and explore the role of digital tools in improving compliance.

Key words: Tax Compliance, Taxpayer Education, Social Demographic Characteristics, Teaching Tax Essentials, Communicating Tax Awareness, Assisting with Tax Filing, Excise Tax, Fiscal Exchange Theory, Economic Deterrence Theory, Water Vending Businesses, Online Tax Filing, Tax Morale

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Introduction

Tax compliance refers to the accurate reporting and fulfillment of tax obligations according to the legal framework. Traditionally, compliance has been studied through economic deterrence models, where enforcement strategies such as audits and penalties are considered crucial. However, this approach has been criticized for overlooking human behavior and decision-making processes. Modern models of tax compliance now incorporate sociological and psychological factors, acknowledging that taxpayers are influenced by attitudes, norms, perceptions, and social characteristics such as age, gender, and education level. The integration of behavioral models provides a broader understanding of tax compliance as not just a response to deterrence but also a reflection of societal values and individual beliefs.

Behavioral approaches emphasize that education plays a crucial role in tax compliance. Tax education enhances taxpayer morale, fosters a sense of fairness, and improves knowledge about tax obligations. Countries with well-established tax education systems tend to have higher compliance rates. This is particularly relevant in developing countries, where lack of tax education and administrative inefficiencies hinder revenue collection. For instance, in Somaliland, the tax-to-GDP ratio remains below 7%, one of the lowest in sub-Saharan Africa. The need for effective tax education is paramount in countries like Somaliland to increase compliance, especially in sectors like water vending businesses, which are largely non-compliant.

In a global context, countries with high tax-to-GDP ratios, such as Denmark, which raises 46.5% of its GDP from taxes, contrast sharply with those in emerging economies struggling with low compliance. Empirical evidence shows that a tax-to-GDP ratio of at least 15% is critical for sustainable economic development. Countries below this threshold, such as many fragile states including Somaliland, are unable to raise enough revenue to support infrastructure and social services, leading to a cycle of poor compliance and insufficient public resources. Research also shows that automation and technology can boost tax compliance. For example, Rwanda's use of electronic billing machines (EBMs) increased tax revenues by 6% in the 2018/2019 fiscal year. Similarly, South Africa's automated tax system reduced compliance costs and increased efficiency. These examples highlight the importance of modernizing tax administration systems to simplify tax processes and encourage compliance.

Tax compliance is a complex issue influenced by both economic deterrents and behavioral factors. While enforcement remains important, the integration of tax education, technology, and the consideration of sociodemographic factors like age and education can significantly improve compliance rates. For countries like Somaliland, enhancing taxpayer education and modernizing tax systems are critical steps toward increasing tax revenue, supporting economic growth, and meeting public service needs.

Statement of the Problem

Tax compliance involves accurately reporting income, determining tax obligations, and timely paying taxes to appropriate authorities, as per legal requirements (Onu, Oats &

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Kirchler, 2019). Traditional models, grounded in economic deterrence, emphasize enforcement strategies like audits and penalties (Allingham & Sandmo, 1972), but these models have been criticized for overlooking the human element in tax compliance (Cullis & Lewis, 1997). Modern approaches incorporate psychological and sociological factors, recognizing that taxpayers' attitudes, beliefs, and social norms influence compliance behavior (Bantrancea et al., 2023).

Behavioral models of tax compliance focus on factors such as fairness, tax morale, and trust in authorities (Olsen et al., 2018). Sociodemographic variables like age, gender, and education also play a role, with older individuals generally exhibiting higher compliance (Richardson, 2018). Countries with low tax-to-GDP ratios, like Somaliland, face significant challenges in mobilizing revenue due to factors such as weak tax education and administrative inefficiencies (World Bank, 2023). Taxpayer education is crucial in promoting voluntary compliance by raising awareness of tax obligations, simplifying tax processes, and fostering positive taxpayer-government relationships (OECD, 2023).

Recent tax reforms in Somaliland, including digitalization and e-payment systems, aim to improve compliance and efficiency. However, legal and administrative gaps continue to hinder revenue collection, particularly in the informal sector (World Bank, 2022). Enhanced education and support in tax filing can help bridge knowledge gaps and improve compliance, especially among vulnerable groups.

Objective

The study's general objective was to investigate the effect of taxpayer education and tax compliance by owners of water vending businesses in Hargeisa City, Somaliland.

The specific objectives that guided this study include;

To determine the effect of teaching tax essentials on tax compliance by owners of water vending businesses in Hargeisa City, Somaliland.

To examine the effect of communicating tax to raise awareness on tax compliance by owners of water vending businesses in Hargeisa City, Somaliland.

To analyse the effect of assisting with tax filing on tax compliance by owners of water vending businesses in Hargeisa City, Somaliland.

Theoretical Review

To reinforce the study, economic deterrence theory, theory of planned behaviour, fiscal exchange theory and theory of slippery slope as theories that anchor various variables of the study have been reviewed by the researcher.

Economic Deterrence Tax Theory

Assuming that rational taxpayers make judgments based only on economic calculation, Allingman and Sandmo (1972) established this hypothesis. They will cooperate if they anticipate that the expenses of evasion will outweigh the benefits gained. Tax theories based on the principle of economic deterrence serve as a disincentive to engage in undesirable or unlawful activities. Using the threat of audit and penalty, among other things, to coerce taxpayers into compliance is central to the approach.

People won't pay their fair share of taxes if they don't think the benefits will outweigh the costs. So, to reduce tax evasion, it is sufficient to conduct taxpayer checks more frequently and to implement harsher penalties. Despite its apparent lack of complexity, this method tends to be quite persuasive. Nevertheless, no tax authority can reliably and consistently audit every taxpayer and levy heavy fines. Even rational people may think about

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this and decide to keep avoiding paying their fair share of taxes. Furthermore, there is far less tax evasion in reality compared to what the model would predict. The theory posits that several factors influence taxpayer behavior. These elements include, but are not limited to, tax rates, fines for non-compliance, audit coverage likelihood, and system complexity (OECD, 2020). Lack of awareness in matters tax as well as inadequate information regarding taxpayers' rights and obligation can be a contributor to tax evasion. Hence this theory anchors communicating tax to raise awareness variable in this proposal.

Theory of Planned Behaviour

Theoretical framework in psychology that seeks to explain human actions by drawing connections between ideas and deeds. Icek (1989) first suggested the idea as a way to enhance the theory of reasoned action's predictive effectiveness by incorporating perceived behavioral control. This idea states that there are predetermined elements that arise in a planned manner and have certain causes that impact how people behave within society. A person's capacity to engage in a behavior is contingent upon their having a goal in mind when they do so (behavioural intention). Attitude toward the behavior, subjective standards, and perceived behavioral control are the three components that ultimately determine behavioral intention. The three components mentioned before are additionally impacted by ideas about behavior, norms, and control.

Thus, the ethics and morality of the taxpayer are the central concerns of this philosophy. According to the hypothesis, taxpayers may still comply even if there's little chance of discovery. While economic theories propose stricter audits and fines to address noncompliance, psychological theories propose that people's attitudes about tax systems should be changed. This theory therefore anchors communicating tax to raise awareness variable and social demographic characteristics in this proposal as it aims at changing taxpayers' behaviour

Fiscal Exchange Theory

Alm and Jackson's (1993) fiscal exchange theory is based on the idea that taxpayers and the government have an existing relational, psychological, or social contract; it is said to have evolved from theories of economic and psychological deterrence. So, according to fiscal exchange theory, taxpayers act in accordance with their expectations of the government's provision of public goods and services. Given this, the model contends that taxpayers may be more likely to comply with tax demands if they perceive a positive return on investment from the government in the form of goods and services. Think of taxpayers as buying government services with their buying power, with the exchange being primarily conditional and variable according to the government's performance. Fiscal Exchange theory therefore anchors the teaching tax essentials variable and tax compliance variable. In case of the former, in-depth engagement with participants who can be individual or business taxpayers, involves among others an exposure of the benefits of paying taxes as well as getting them to know their rights which ultimately results in the willingness to pay taxes. According to the notion, paying taxes is a trade-off for receiving government services, and taxpayers are free to renegotiate the amount of taxes they must pay.

Theory of Slippery Slope

According to Kirchler, Hoelzl, and Wahl's (2008) slippery slope hypothesis, which takes into account socio-psychological factors. Two major factors influencing tax compliance, as per

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the idea, are faith in and respect for authority. The power of authorities refers to taxpayers' belief in the ability of tax officers to identify and penalize tax evasion, while trust in authorities refers to the general belief among individuals and social groups that tax authorities are helpful and act in the public interest. 2.3 Empirical Review

Under this section, empirical studies that focus on the proposal variables are reviewed and respective contextual, methodological, and conceptual gaps put into perspective.

Teaching Tax Essentials and Tax Compliance

Adekoya (2019) investigated how tax payer knowledge of tax laws and tax compliance relate to one another in Lagos State, Nigeria. A cross-sectional study was conducted in Lagos state, targeting a specific group of private taxpayers. Primary data was collected using a five-point Likert scale questionnaire. The sample consisted of 400 individual taxpayers, selected through a purposive sampling method. Descriptive statistics were used to display the data, and regression models for the study were estimated using both simple linear regression and multiple regression analysis. The analyses' findings demonstrated that knowledge of both existing laws and new laws significantly and favourably affects tax compliance. This study focused on individual tax payers whereas the current study focused on individual businesses compliance status and specifically excise tax. So, the current study addressed contextual gap in terms of excise tax compliance.

Kurniawan (2020) investigated the impact of tax education at the higher education level in Namibia on personal tax compliance, specifically focusing on raising tax awareness. A mixed-method approach using the convergent parallel design was applied. The researcher collected both quantitative and qualitative data simultaneously through a survey of 100 students who regularly attended evening classes and met the necessary tax criteria. The gathered data were then analyzed. The study concluded that tax education plays a crucial role in improving tax compliance. The study focused on learners in an institution and their personal tax compliance whereas the current study focussed on on-going business concerns and more specifically, excise tax compliance thereby bridging a contextual gap.

The purpose of the study by Christina, Deborah, and Gray (2014) was to identify the monetary and behavioral elements impacting taxpayer compliance with tax obligations. Finding out what economic and behavioral variables influence taxpayers' compliance with tax penalty amnesty programs was the primary goal of the research. Participants in this amnesty program were asked to fill out surveys about their reasons for not paying their taxes on time and for not declaring the correct amount of income. Some of the factors mentioned were the complexity of the tax laws, their ability to pay, their ignorance of the laws, their perceptions of high tax rates, and the unfairness of the tax system. The purpose of this research is to examine the impact of tax education basics on taxpayer compliance.

Communicating Tax to Raise Awareness and Tax Compliance

To determine the impact of tax education on tax compliance in Ghana, Twum *et al.* (2020) utilized SMEs to evaluate educational extension excursions. This study includes 130 responses from SME managers in Nkawkaw Municipality, Ghana, who were participants in a tax education session organized by the Ghana Revenue Authority. In order to examine the data, structural equation modeling was employed. Findings show a favorable and statistically significant relationship between tax compliance and knowledge of one's rights and responsibilities under the law as it pertains to taxes, wages, and fines.

A study by Wasao (2020) focused on tax compliance and i-tax system in Kenya. The analysis demonstrated that tax compliance had potential to reach 3.663m taxpayers if online tax registration, payment, and filing were all set to zero. A unit increase in tax filing could

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result in a 0.161 rise in tax compliance, whereas a unit increase in online tax payment could provide a 0.086 gain in compliance. However, the study over-generalized the findings to incorporate all types of tax-payers even though they are subjected to different tax demands. The current study focused on whether awareness campaigns have had an effect on tax compliance among water vending businesses in Hargeisa City, Somaliland

Researchers Rasshid and Noor (2014) looked at Malaysian taxpayers to see how much of an impact tax literacy had on taxpayers' propensity to pay their fair share. To what extent does tax knowledge and awareness influence tax compliance behavior was the overarching research question. Findings revealed that taxpayers with a greater level of tax knowledge had a higher level of compliance than those without, according to an analysis of questionnaire data comparing the compliance behavior of taxpayers with and without a substantial degree of tax knowledge. To address this knowledge vacuum, the present research concentrated on tax compliance, defined here as the timely submission of tax returns and the payment of all amounts owed.

Assisting with Tax Filing and Tax Compliance

Therkildsen (2019) did a study to investigate the effect of tax counselling and tax compliance in Spain. The data was collected from taxpayers who had gone through previous interactions with tax authorities excursions where direct assistance with tax and how to use various tool and services was discussed. Research shows that tax counseling helps people pay their fair share of taxes, which boosts a country's revenue collection efforts. The research went on to say that people should be helped with tax concerns and that tax counseling should encourage the voluntary filing of proper forms and payment of taxes. In most cases, tax counseling offices can help you understand and comply with tax regulations, as well as guide you through the application and return filing processes. The current study was guided by the same principles of tax counselling however the focused on an evolving country that has different infrastructure set up in Hargeisa City, Somaliland.

Gwaro *et al.* (2016) study examined the impact of online tax filing on tax compliance among small and medium enterprises (SMEs) in Nakuru, Kenya. The key findings from the study indicated that exposure to online tax filing among SMEs in Nakuru was relatively high, suggesting successful implementation of the tax system.

Characteristics and Tax Compliance

A study by Hana, Goran, and Ana (2023) found that taxpayers' age, gender, and educational level significantly influenced the moderating role of sociodemographic factors on tax compliance behavior in Croatia. The research used a quantitative approach, surveying Croatian income taxpayers. To ensure data validity, a structural questionnaire in the Croatian language was pretested and piloted. Ordinary least square regression analysis was applied to analyze the results. However, the present study will focus on age groups from a developing country with a less established tax-paying history compared to Croatia. Therefore, the findings from the reviewed study may not be applicable to Somaliland, which has a distinct cultural diversity.

Muehlbacher, Kirchler, and Schwarzenberger (2021) conducted a study comparing voluntary and enforced tax compliance, using correlation analysis and time series for comparative purposes. To evaluate the comparison, t-tests and analysis of variance were employed. The study found a positive relationship between voluntary tax compliance and age, but no connection between enforced tax compliance and age. In the current research,

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taxpayers' age was examined to determine its moderating effect on the relationship between tax education and tax compliance, thus addressing a conceptual gap.

Hofmann *et al.* (2017), in a meta-analysis of tax compliance across sociodemographic groups, found that older taxpayers tend to comply more with tax regulations compared to younger individuals.

Methodology

The study used descriptive research design to observe an event to describe patterns that allow for predictions. Descriptive research design quantitatively describes certain aspects of a phenomenon such as relationship that can be used for generalization (Glasgow, 2005). The study used descriptive research design to describe patterns of events existing in tax education and tax compliance by water vending businesses in Hargeisa City, Somaliland.

Empirical Model

The empirical model employed in this study used multiple regression analysis to explore the relationship between independent variables (teaching tax, communicating tax, and assisting in tax) and the dependent variable (tax compliance). It also examined the moderating effect of sociodemographic variables on the relationship between taxpayer education and tax compliance. Empirical models, as described by Shafique and Mahmood (2014), represent real-world objects or events, allowing researchers to test connections between independent and dependent variables. These models help researchers predict outcomes and refine their analyses by including or excluding variables based on statistical significance. The findings can be applied to generalize real-world events, with statistical models like regression being used to estimate the likelihood of real-life occurrences (Tingley, 2021). The study utilized a multiple regression model to assess tax education's influence on tax compliance among water vendor businesses in Hargeisa City, Somaliland.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon \dots\dots\dots \text{equation 1}$$

Y = Tax compliance (composite Index)

X₁= Teaching Tax Essentials, X₂= Communicating Tax to Raise Awareness, X₃= Assisting with Tax Filing, e = error term and β₀ = Constant variable

The parameters β₁, β₂, and β₃ measures the amount of variation in Y as a result of a unit change in X₁, X₂ and X₃ respectively.

Rockwood and Hayes (2020) pointed out that moderation occurs when the effect of a variable to another depends on another variable. It was argued that moderating effect can be modelled by getting the product effect of independent variables and moderating variable. In the study social demographic was the moderating variable, denoted by M. The moderating effect model evaluated the effect of tax education and tax compliance. The moderating effect is as shown in equation 2.

$$Y = \beta_0 + \beta_1X + \beta_2M + \beta_3X * M + \varepsilon \dots\dots\dots \text{equation 2}$$

Where:

Y is tax compliance (composite index)

X is composite index for tax education.

M is Social Demographic Variable

X* M is the interactive product of tax education and social demographic variable

ε is the error term

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The parameters β_0 , β_1 , β_2 and β_3 are parameters (coefficients) for the moderating effect. These parameters will measure the amount of change in Y due to a unit change in the respective variables. The study applied the approach proposed by Rockwood *et al* (2020). The hypothesis for the moderating effect analysis was H_{04} . The moderating effect is said to exist when coefficients β_3 is statistically significance. The null hypothesis was rejected if the p-value of the coefficients were less than 0.05. The model parameters were assessed at 5 Percentage level of significance.

Hargeisa City has 412 licensed water vending businesses (Municipal Government of Hargeisa City, 2024) whose owners' major activities encompasses operating water kiosks and bulk water wholesalers. Hence the target population was 412 business owners.

Table 1: Target Population Distribution

Category of Water vendor	Population	Percentage
Retail water kiosks	341	82.7%
Bulk water wholesalers	71	17.3%
Total	412	100%

Source: Field Data 2024

Sample Size

The study utilized a stratified random sampling technique to choose the sample. This approach is beneficial for researchers as it ensures a more representative sample by dividing the target population into distinct, non-overlapping groups, then selecting a random sample from each group independently. The population was grouped into two strata comprising of retail water kiosks vendors and bulk water wholesaler vendors. This method is good since the stratified sample offers greater precisions and also saves money as it arrives at a small sample (Alvin, 2016). The respondents were sampled using stratified sampling method and selected using simple random sampling technique. Taro Yamane (1967) formula was used to calculate the sample size and assumes an error margin of 0.05.

$$n = N / (1 + N(e^2))$$

Where n= sample size, N= target population and e= error margin

$$n = 326 / (1 + 326(0.05^2)) = 179$$

Therefore, the study had a sample size of 179 respondents which is a 55% of the target population which were used to determine sampling in respective stratum.

Table 2: Sample size distribution.

Category	Population	Percentage	Sample size
Retail water kiosks	265	55%	145
Bulk water wholesaler	61	55%	34
Total	326	55%	179

Source: Field Data 2024

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The research utilized a semi-structured questionnaire for data collection, following Saunders and Thornhill's (2015) recommendation for large data gathering. The questionnaire was divided into five sections addressing various variables, including tax teaching, communication, and compliance. Pilot testing was conducted with 17 taxpayers from Awdal district to ensure reliability and validity. The study applied content validity, involving expert review, and Cronbach's alpha for reliability, aiming for a coefficient above 0.7. Data collection involved trained assistants distributing questionnaires to respondents, with a two-week window for completion. Quantitative data analysis was conducted using SPSS version 26.0, with descriptive statistics and inferential analyses like regression and correlation applied. Diagnostic tests for normality, heteroskedasticity, and multicollinearity were performed, ensuring the regression model's reliability. Ethical considerations were upheld, including obtaining permission from SNACOSTI and following Kenyatta University's research protocols.

Results and Discussion

Table 1: Reliability Test

Cronbach's Alpha		Cronbach's Alpha Based on Standardized Items	No. of Items
Communicating Tax	.974	.975	8
Assisting with Tax Filing	.993	.994	13
Teaching Tax Essentials	.977	.983	5
Social demographic characteristic	.991	.992	4

Source: Field Data 2024

The Cronbach's Alpha values for various items in the study suggest excellent internal consistency, indicating high reliability in measuring the effects of tax education on compliance among water vending business owners. A score of .974 for teaching tax essentials shows that respondents consistently view this factor as crucial for improving tax compliance. Similarly, a near-perfect Alpha of .993 for tax awareness communication highlights the strong influence of clear tax communication on compliance. The .977 score for tax filing assistance indicates that respondents find tax filing support beneficial for meeting compliance requirements. Lastly, the Alpha of .991 for socio-demographic characteristics as moderators suggests that factors like age, education, and income significantly influence how tax education impacts compliance, revealing a complex relationship between these characteristics and tax behavior.

Response Rate

A total of 179 questionnaires were distributed to water vending business owners in Hargeisa City, Somaliland, with an excellent return rate. The response rate is as discussed in the table 4.2.

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Table 1: Response Rate

Response	Frequency	Percentage
Well answered and returned	156	87.15
Incomplete/not returned	23	12.85
Total	179	100

Source: Field Data 2024

The study distributed 179 questionnaires to water vending business owners in Hargeisa City, Somaliland, and retrieved them after three days. Out of the total, 179 were returned, but 23 were either incomplete or unreturned, leading to their exclusion from the analysis. This resulted in a satisfactory response rate of 87.15%. According to Mugenda and Mugenda (2003), a response rate exceeding 70.0% is considered excellent. Table 4.1 provides a summary of the response rate.

Demographic results

The demographic data of the respondents provides valuable insights into the characteristics of the study population, including gender, education level, year of business founding, work experience, tax compliance, and age of business owners. Out of 156 respondents, 68.5% were male, while 31.5% were female. In terms of education, most respondents (51.2%) held a Bachelor's degree, followed by 20.5% with a Master's degree. Businesses were predominantly founded between 2019 and 2023, with the highest frequency (28.85%) in 2020. Regarding work experience, 51.4% of respondents had been in business for over three years. Notably, 68.58% of respondents reported being charged for failing to pay excise tax. The majority of business owners were aged 21 to 30 (51.4%), followed by those aged 31 to 35 (22.3%), while only 2.2% were over 46 years. This demographic overview highlights trends in education, experience, and age, offering context for interpreting the study's findings.

Teaching Tax Compliance

The study on taxpayer education initiatives offers key insights into the effectiveness of these programs. Targeted approaches, such as classifying groups into businesses and individuals, received strong support with a mean score of 3.8045, while interactive and participatory teaching methods were highly valued, scoring 4.1508. The explanation of complex tax concepts scored moderately at 3.7989, but the technical explanation of specific taxes was rated lower at 2.1508, highlighting potential gaps in technical understanding. Interactive learning environments were appreciated, scoring 4.0950, though initial outreach methods scored lower at 2.0838, indicating a need for improvement. Promotion and tailored strategies for different target groups were well-regarded, scoring 4.1397 and 3.8659, respectively. The use of understandable language in tax education scored 3.7318. The study aligns with previous literature, demonstrating that tax education, particularly through interactive sessions, positively influences tax compliance among water vending businesses in Somaliland.

Table 3: Teaching tax compliance

Statement	Mean	Std. Deviation
When we have tax payer education initiative, target groups are classified in business and individuals	3.8045	1.16637
Teaching tax initiatives seek to create in-depth engagements with participants where dialogue between participants and those delivering the programme take place	4.1508	1.05182
In teaching tax initiatives, complex messages and deep thinking among participants in terms of role of tax in citizenship are explained.	3.7989	1.25143
In teaching tax initiatives, technical aspects of the design and functioning of specific taxes are explained.	2.1508	1.10394
In teaching tax initiatives, participants are given time and space to think, respond and ask questions.	4.0950	.96391
In teaching tax initiatives, the target groups are made aware of the workshop/seminar first and then invited to register and participate	2.0838	1.13113
Awareness of teaching tax initiative is done through advertisement or promotion to encourage participation.	4.1397	1.10033
Different approaches are used for different target groups. For instance, partnership with business when delivering workshop/seminars to business owners.	3.8659	1.19169
Those delivering teaching programmes use local language or a language that can be understood by the participants	3.7318	1.30928

Source: Field Data 2024

Communicating Tax To Raise Awareness

The second objective of the study was to assess the impact of tax communication strategies on the awareness and compliance of water vending business owners in Hargeisa City, Somaliland. The findings indicate a generally positive reception of these strategies, with communication efforts being well-targeted and effective in improving perceptions of the tax system. The highest mean score (4.1899) suggests strong agreement that specific messages are effectively reaching the intended audience. Respondents also felt that the communication enhanced their understanding of taxpayer rights and obligations. However, there is room for improvement in areas such as organizing interactive events and the frequency of updates on tax changes. Overall, the study demonstrates that tailored communication initiatives significantly influence tax awareness and compliance, aligning with prior research that emphasizes the importance of regular and targeted communication in fostering tax compliance behavior.

Table 4: Communication

Statement	Mean	Std. Deviation
Communicating tax initiatives focus on raising awareness among taxpayers regarding different aspects the of tax system	3.9609	1.21952
Awareness relating to rights of taxpayers are discussed.	4.0112	1.16594
Awareness relating to obligations of taxpayers are discussed.	3.9385	1.31611
Awareness relating to any changes in tax system are regularly communicated.	3.8771	1.23000
In communicating tax initiatives, issues facing specific groups of taxpayers are highlighted and solutions given	4.0726	1.12693
Communicating tax initiatives promote improvements in the perception of the tax system and administration	4.1006	1.01724
Communicating tax disseminate specific messages to a chosen group or audience	4.1899	.93479
Communicating tax initiatives are done on daily basis via newspapers, radio, posters, television etc	3.9385	1.06614
Communicating tax initiative messages are highly regarded by owners of water vending business	3.7933	1.31404
Communicating tax initiative messages easily identify the right groups or audiences	3.9162	1.17975
Tailored communicating tax initiative messages are refined and target a specific group in order to change their tax behaviour in a certain way	4.0168	1.14889
Among the many approaches used by SIRA in communicating tax, information campaign is the common.	3.9050	1.16933
Tax administrators organise events or games with the tax payers to promote positive relationship among themselves.	3.3128	1.47351

Source: Field Data 2024

Assisting with Tax Filing

The study evaluated the impact of tax filing assistance on the compliance of water vending business owners in Hargeisa City, Somaliland. Key findings show that internet accessibility significantly facilitates the use of digital tax tools, with a mean score of 4.27. Practical assistance was also highly valued, receiving a mean score of 4.13, indicating its importance in helping business owners meet their tax obligations. Digital tools were generally perceived as helpful, scoring 4.06, though there was some variation in opinions regarding their ease of use. The lowest mean score, 3.56, was related to tax administrators' visits to demonstrate digital tools, reflecting inconsistencies in the effectiveness of these visits. Overall, the study highlights the critical role of both digital tools and practical assistance in improving tax compliance, suggesting that more consistent and effective support could further enhance compliance rates among water vending business owners.

Table 5: Assisting with Tax Filing

Statement	Mean	Std. Deviation
Practical assistance with tax provides a direct assistance to taxpayers in fulfilling their tax compliance obligations	4.1341	1.09847
Use of digital tools and services make tax compliance easier.	4.0559	1.16465
Use of digital tools and services like chat box, are easily followed by taxpayers.	3.8994	1.16163
Tax administrators regularly visit our business premises or business association offices to demonstrate how to use different digital applications.	3.5642	1.35334
Internet is always available to enable interaction with digital tools.	4.2737	.86631

Source: Field Data 2024

Social demographic characteristics

The study explored how socio-demographic characteristics affect the relationship between tax education and compliance among water vending businesses in Hargeisa, Somaliland. Key aspects of compliance examined included income disclosure, excise tax declaration, timely filing, and payment of tax balances. The results indicated high self-reported compliance, with mean scores above 4 on a 5-point scale across all categories. Businesses were particularly diligent in timely filing, with a mean score of 4.1453. The study found that tax education positively influenced compliance, though socio-demographic factors like age, education, and income level contributed to variations in behavior. Older and more experienced business owners showed higher compliance, aligning with findings from previous research. Understanding these demographic effects is essential for designing targeted tax education programs that enhance compliance behavior.

Table 5: Socio-demographic Characteristics

Statement	Mean	Std. Deviation
In my business, I always disclose the total amount of income from sale of water to tax authorities	4.0168	1.19208
In my business, I always declare the total amount of excise tax owed to the tax authorities	4.0950	1.14014
In my business, I always file tax receipt within the time Somaliland Inland Authority has given of the Voucher between the months of the following years	4.1453	1.06059
In my business, I always pay any tax balance within six months of the fiscal year end	4.1285	1.09658

Source: Field Data 2024

Tax Compliance

The results indicate a generally high level of tax compliance among respondents, with mean scores for tax-related behaviors exceeding 4.0. Most business owners consistently disclose income from water sales (mean = 4.0168, SD = 1.19208), declare excise tax owed (mean = 4.0950, SD = 1.14014), file tax receipts on time (mean = 4.1453, SD = 1.06059), and pay outstanding taxes within six months of the fiscal year end (mean = 4.1285, SD = 1.09658). The overall tax compliance score (mean = 4.0964, SD = 1.10864) reflects a strong adherence to tax obligations, though variability in responses suggests some inconsistency among respondents. The findings align with previous studies, such as Adekoya (2019), Akintoye and Onuoha (2019), and Kurniawan (2020), which emphasize the importance of tax education and effective communication in improving compliance. The use of digital tools for tax filing, as highlighted by Gwaro et al. (2016), also supports these conclusions.

Table 6: Tax Compliance

Statement	Mean	Std. Deviation
In my business, I always disclose the total amount of income from sale of water to tax authorities	4.0168	1.19208
In my business, I always declare the total amount of excise tax owed to the tax authorities	4.0950	1.14014
In my business, I always file tax receipt within the time Somaliland Inland Authority has given of the Voucher between the months of the following years	4.1453	1.06059
In my business, I always pay any tax balance within six months of the fiscal year end	4.1285	1.09658
Tax Compliance	4.0964	1.10864

Source: Field Data 2024

Correlations

The correlation matrix provided highlights strong positive relationships between the variables: Teaching Tax Essentials, Communicating Tax to Raise Awareness, Assisting with Tax Filing, and Tax Compliance. The Pearson correlation coefficients are all close to 1,

indicating very high correlations. Specifically, Teaching Tax Essentials has correlations of 0.974 with Communicating Tax to Raise Awareness, 0.978 with Assisting with Tax Filing, and 0.952 with Tax Compliance. Similarly, Communicating Tax to Raise Awareness is highly correlated with Assisting with Tax Filing (0.992) and Tax Compliance (0.980). Assisting with Tax Filing also shows a strong correlation with Tax Compliance (0.987). The significance values (Sig. 1-tailed) for all correlations are 0.000, suggesting that these relationships are statistically significant at the 0.01 level. This means that the probability of these correlations occurring by chance is very low, reinforcing the reliability of these associations.

The sample size (N) for each pairwise correlation is 179, indicating that the data set is sufficiently large to draw meaningful conclusions. Overall, the results suggest that efforts to educate individuals about tax essentials, communicate tax-related information to raise awareness, and assist with tax filing are strongly interconnected and collectively contribute to higher tax compliance.

Table 7: Correlations Matrix

			Teaching Tax Essentials	Communicating Tax to Raise Awareness	Assisting with Tax Filing	Tax Compliance
Pearson Correlation	Teaching Essentials	Tax	1.000	.974	.978	.952
	Communicating Tax to Raise Awareness		.974	1.000	.992	.980
	Assisting with Tax Filing		.978	.992	1.000	.987
	Tax Compliance		.952	.980	.987	1.000
Sig. (1-tailed)	Teaching Essentials	Tax	.	.000	.000	.000
	Communicating Tax to Raise Awareness		.000	.	.000	.000
	Assisting with Tax Filing		.000	.000	.	.000
	Tax Compliance		.000	.000	.000	.
N	Teaching Essentials	Tax	156	156	156	156
	Communicating Tax to Raise Awareness		156	156	156	156
	Assisting with Tax Filing		156	156	156	156
	Tax Compliance		156	156	156	156

Source: Field Data 2024

Regression On Moderating Variable

The regression results presented indicate the relationship between various independent variables (Teaching Tax Essentials, Communicating Tax to Raise Awareness, Assisting with Tax Filing, and Social Demographic Characteristics) and the dependent variable, Tax Compliance. The constant (3.101) suggests that when all independent variables are held constant, the baseline tax compliance level is 3.101.

Among the variables, Social Demographic Characteristics has the strongest positive effect on tax compliance, with a significant unstandardized coefficient (B = 0.250) and a high standardized Beta value (1.000), suggesting that socio-demographic factors substantially influence tax compliance. On the other hand, Teaching Tax Essentials and Assisting with Tax Filing have negative coefficients (-0.391 and -0.422, respectively), indicating a possible reduction in tax compliance with an increase in these activities, although they are not statistically significant given their p-values (0.301 and 0.840). The Communicating Tax to Raise Awareness variable also has a negative coefficient (-0.242), with an insignificant effect on tax compliance (p = 0.421). Collinearity statistics indicate multicollinearity concerns, especially with high Variance Inflation Factors (VIF) for most variables, particularly for Assisting with Tax Filing (VIF = 140.717), suggesting potential redundancy among predictors.

Table 8: Taxation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.101	1.109		3.122	.001		
	Teaching Tax Essentials	-.391	.357	-.344	-.219	.301	.034	29.004
	Communicating Tax to Raise Awareness	-.242	.491	-.291	-.334	.421	.016	62.773
	Assisting with Tax Filing	-.422	.322	-.414	-.242	.840	.007	140.717
	Social demographic characteristic	.250	.125	1.000	.837	.214	.020	48.991

a. Dependent Variable: Tax Compliance

Source: Research Data (2024)

Conclusion

This study highlights the impact of tax education initiatives on compliance among water vending businesses in Hargeisa City, Somaliland. Key findings reveal that teaching tax essentials significantly enhances compliance by equipping business owners with foundational tax knowledge. Effective communication strategies raise awareness and foster positive perceptions of the tax system, leading to improved compliance behaviors. Practical assistance with tax filing also plays a crucial role, as accessible tools and support simplify the compliance process. Additionally, socio-demographic factors such as age, education level, and business size moderate the relationship between tax education and compliance, indicating that tailored programs can better address diverse needs. Overall, these insights underscore the importance of comprehensive educational and supportive strategies in enhancing tax compliance and improving tax administration efficiency in the region.

Recommendations

Based on the summary findings provided, here are recommendations for educators, policy makers, and the government regarding the objectives outlined:

To effectively enhance tax compliance among water vending businesses in Hargeisa City, Somaliland, it is recommended to strengthen targeted educational approaches. The study highlights the importance of tailored strategies for different groups, emphasizing clarity in technical explanations of tax concepts to bridge existing knowledge gaps. Improving initial engagement through enhanced outreach strategies is crucial to increase participation in educational workshops and seminars, addressing the noted areas for improvement. By focusing on these aspects, tax education initiatives can better equip businesses with the necessary knowledge and understanding to comply effectively with tax regulations.

Effective communication plays a pivotal role in raising awareness and improving tax compliance among water vending businesses. Leveraging highly rated methods such as promotional activities and advertisements can further enhance awareness initiatives. It is essential to ensure clear and timely communication of tax system updates to maintain taxpayer engagement and understanding. Tailoring messages to address specific challenges faced by different taxpayer groups can also optimize the impact of awareness programs, fostering a more informed and compliant business community in Hargeisa City.

Practical assistance and digital tools significantly contribute to enhancing tax compliance among water vending businesses in Hargeisa City. Strengthening direct support through practical assistance is critical, given its positive impact on facilitating compliance efforts. Ensuring continued access to digital tools, supported by reliable internet availability, remains essential for simplifying tax filing processes. Improving the consistency and quality of demonstrations by tax administrators can further optimize the effectiveness of these efforts, addressing variability in experiences and ensuring businesses receive adequate support for compliance.

Understanding the influence of socio-demographic factors on tax compliance is crucial for designing targeted education and outreach strategies. Tailoring educational programs to cater to different demographic groups, considering factors such as age, education level, and business size, can effectively enhance compliance rates. It is recommended to implement continuous evaluation mechanisms to monitor the impact of demographic variables on compliance behavior. By adapting strategies based on these insights, tax authorities can foster a more inclusive approach to education and support, promoting sustainable compliance among water vending businesses in Hargeisa City, Somaliland.

To comprehensively understand and enhance tax compliance among water vending businesses in Hargeisa City, Somaliland, a multifaceted research approach is proposed. This includes conducting a longitudinal study to evaluate the long-term impact of tax education initiatives on compliance behaviors, tracking changes over time to assess their sustained effectiveness. Additionally, expanding the research to a comparative analysis across different socio-demographic groups within the sector will provide insights into how factors like age, education level, and business size influence compliance and educational needs. Qualitative research focusing on perceptions of various communication strategies will explore how different methods, such as media and community engagement, affect tax awareness and compliance. Lastly, investigating the role of digital tools and technological innovations will assess the impact of digital platforms and mobile applications on simplifying tax filing processes and enhancing compliance, thereby identifying ways to reduce barriers to tax filing.

Citation: Kimwe, P & Gakuo, J. K. (2024). Usawiri Wa Changamoto Za Maisha Katika Tamthilia Za Kiswahili: Uchunguzi Wa Bembea Ya Maisha Na Mstahiki Meya. *Journal of African Interdisciplinary Studies*, 8(10), 199 – 214.

References

- Abbas, Y., Tjen, C., & Wicaksono, P. T. (2021). Tax Education and Tax Awareness: An Analysis on Indonesian Tax Education Program (No. 202160). LPEM, Faculty of Economics and Business, University of Indonesia. <https://ideas.repec.org/p/lpe/wpaper/202160.html>.
- Adekoya, A.C. (2021). Taxpayer education and tax compliance in Lagos State. *Global Journal of Accounting*, 5(1), 16 – 26.
- Adhikari, B., Alm, J., & Harris, T. F. (2020). Information reporting and tax compliance. *AEA Papers and Proceedings*, 110, 162-166. <https://doi.org/10.1257/pandp.20201041>
- Bantrancea, M., Nichita, R., Bantrancea, L. & B., (2023) Tax Compliance Models: from Economic to Behavioral Approaches. *Transylvanian Review of Administrative Sciences*, No. 36 E/2012, pp. 13-26
- Bruner, D. M., D'Attoma, J. and Steinmo, S. 2017. The role of gender in the provision of public goods through tax compliance. *Journal of Behavioral and Experimental Economics* 71: 45-55
- Bruno, R. L. 2019. Tax enforcement, tax compliance and tax morale in transition economies: a theoretical model. *European Journal of Political Economy* 56: 193-211.
- Christan, F., Debroah, H. & Gray, F. (2014). Factors that affect tax compliance behavior of small and medium enterprises: Evidence from Nekemte city. *European Journal of Business and Management*, 23(1), 43-67
- Fjeldstad, O., Schulz-Herzenberg, C., & Hoem Sjursen, I. (2012). People's views of taxation in Africa: A review of research on determinants of tax compliance. *Finance Journal*, 4(3), 89-105. <https://doi.org/10.2139/ssrn.2411424>
- Franić, J. (2020). Repression, Voluntary Compliance and Undeclared Work in a Transition Setting: Some Evidence from Poland. *Post-Communist Economies*, 32(2), 250–266. <https://doi.org/10.1080/14631377.2019.1640984>
- Gwaro, O., Maina, K., & Kwasira, J. (2016). Influence of online tax filing on tax compliance among small and medium enterprises in Nakuru town, Kenya. *IOSR Journal of Business and Management*, 18(10), 82-92. <https://doi.org/10.9790/487x-1810028292>
- Hallsworth, M., List, J. A., Metcalfe, R. D., & Vlaev, I. (2017). The Behavioralist As Tax Collector: Using Natural Field Experiments to Enhance Tax Compliance. NBER Working Paper Series, 20007.
- Hartmann, A.J., Gangl, K., Kasper, M., Kirchler, E., Kocher, M. G., Mueller, M. and Sonntag, A. 2022. The economic crisis during the COVID-19 pandemic has a negative effect on tax compliance: Results from a scenario study in Austria. *Journal of Economic Psychology* 93: 102572.
- Icek, A. (1989). Attitude and Behaviour. University of Massachusetts Amherst. <https://www.researchgate.net/publication/264666774>
- James, S., & Alley, C. (2022). Tax compliance, self-assessment and administration in New Zealand – Is the carrot or the stick more appropriate to encourage compliance? *New Zealand Journal of Taxation Law and Policy*, 5(1), 3–14.
- Jongbo, O. C. (2014). The role of research design in a purpose driven enquiry. *Review of Public Administration & Management*, 3(6)
- Kirchler, E., Hoelzl, E. and Wahl, I., (2008) 'Enforced versus Voluntary Tax Compliance: The "Slippery Slope" Framework', 2008, *Journal of Economic Psychology*, vol. 29, no. 2, pp. 210-225.

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- Kothari, C. R. (2004). Processing and analysis of data. In C. R. Kothari, *Research methodology: Methods and techniques* (2nd ed., pp. 118-130). New Delhi: New Age International.
- Kothari, C. R. (2004). *Research methodology: Methods & techniques*. (2nd ed.). New Delhi: New Age.
- Kothari, C. R. (2004). Two-Way ANOVA. In C. R. Kothari, *Research methodology: Methods and techniques* (2nd ed., pp. 277-288). New Delhi: New Age International.
- Levenko, N. and Staehr, K. 2022. Self-reported tax compliance in post-transition Estonia, *Economic Systems*: 101047
- Mascagni, G. (2020). From the lab to the field: A review of tax experiments. Retrieved from: <http://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/8967/WP46%20Mascagni%20final3.pdf?sequence=1>
- Meijburg & Co. (2024). *Global Tax Compliance-KPMG International Ltd.* www.werkenbijmeijburg.nl
- OECD (2023). Better Policies for Better Lives. <https://oe.cd/tax-morale>
- Ogoun, S., & Ekpulu, G. A. (2020). Educational Level and Tax Compliance: Empirical Evidence From Nigeria. *International Journal of Accounting and Financial Reporting*, 10(1), 160–176. <https://doi.org/10.5296/ijaf.v10i1.16106>
- Oladipo, O., Nwanji, T., Eluyela, D., Godo, B., & Adegboyegun, A. (2022). Impact of tax fairness and tax knowledge on tax compliance behavior of listed manufacturing companies in Nigeria. *Problems and Perspectives in Management*, 20(1), 41-48. [https://doi.org/10.21511/ppm.20\(1\).2022.04](https://doi.org/10.21511/ppm.20(1).2022.04)
- Richardson, G. (2018). Determinants of tax evasion: A cross-country investigation. *Journal of International Accounting Auditing & Taxation*, 15(2), 150-169. doi:10.1016/j.intaccaudtax.2006.08.005
- Rockwood, N. J., & Hayes, A. F. (2020). *Mediation, moderation, and conditional process analysis: Regression-based approaches for clinical research*. In A. G. C. Wright and M. N. Hallquist (Eds.) *Handbook of research methods in clinical psychology*. Cambridge University Press.