

# The Effect of Online Tax Filing on Tax Compliance among Small and Medium Size Enterprises (SMEs) in the Littoral Region of Cameroon

Ntoug Agbor Tabot Lious<sup>1</sup>, Lehteno Chofor Innocent<sup>2</sup> & Tabi Betek Godfred<sup>1</sup>

<sup>1</sup> Department of Accounting, University of Buea, Southwest Region, Cameroon

<sup>2</sup> Department of Fundamental and Transversal Sciences, National Advanced School of Public Works Yaoundé

Correspondence: Ntoug Agbor Tabot Lious, Department of Accounting, University of Buea, Southwest Region, Cameroon. E-mail: agbor.lious@ubuea.cm

Received: January 13, 2025

Accepted: February 5, 2026

Online Published: February 11, 2026

doi:10.5430/afr.v15n1p1

URL: <https://doi.org/10.5430/afr.v15n1p1>

## Abstract

The study aims to examine the effect of online tax filing on tax compliance among small and medium enterprises in the Littoral Region of Cameroon. The independent variables were accessibility and reliability, Tax awareness, Computer literacy level and tax education while the dependent variable was tax compliance. The study adopted a descriptive survey research design to attain these objectives where a sample of 200 tax payers were selected using stratified random sampling technique of companies and business familiar with the online tax system. The qualitative methods of data collection were used in this work were a self-administered questionnaire composed of closed ended, and likert scale questions was used to collect data from the respondents. Data obtained through a structured questionnaire were analysed using descriptive statistics and the multiple regression analysis (Ordinary Least Square Regression Technique) with the help of Statistical Package for Social Sciences (SPSS) software. The findings show that online tax filing has a significant positive effect on tax compliance among small and medium enterprises in the Littoral region. Specifically, tax awareness, computer literacy level and tax education have a positive and significant effect on tax compliance among SMEs while accessibility and reliability had an insignificant relationship with tax compliance. The study therefore recommends that the government should make the site to be user friendly that is very easy to use and accessible by all Cameroonian tax payers. The study further recommends that computer literacy levels should be emphasized by SMEs in order to improve on tax compliance levels.

**Keywords:** online tax filing, tax compliance and small and medium enterprises

## 1. Introduction

Worldwide taxpayers' reluctance to use the online filing system still remains a great area of concern. Tax compliance is concerned with the timely declaration, timely payment, genuine negotiations and accurate submission of tax information to the revenue tax authority. The online filing system has a direct impact on the tax compliance levels (Nakiwala, 2010). The online tax system ensures that the taxpayer has filled all the required mandatory documents before allowing him to continue to the next level. This has the effect of ensuring that the revenue authority receives relatively high-quality data compared to the manual returns of the data (Nakiwala, 2010). Government loses billions as a result of tax avoidance and evasion, and there is one solution to this problem which is to implement the online filing system that allows all taxpayers to assess themselves and pay their taxes online Nawawi and Salin (as cited in Fossung & Warah, 2022). The online filing of the tax returns ensures that there is lack of inconsistencies, missing information and unintentional errors (Mandola, 2013). SMEs are faced with numerous challenges in the context of taxation. For example, the researcher in 2021 during internship found tax compliance levels among the SMEs in Cameroon to be very low. There are several factors that led to low tax compliance levels in Cameroon including poor book keeping, lack of tax knowledge and awareness. Other challenges include large proportion of SMEs who are ignorant of taxation processes and computations. Previous findings suggest that lack of appropriate computer knowledge makes online tax filing expensive Osebe (2013). When a taxpayer is unable to use the online tax filing quickly and efficiently, also when the taxpayer fails to understand the type of information required by the online tax filing system forces the taxpayers to engage a third party Mandola (2013). The third party could be tax consultants, tax consulting firms. Another issue was that the online portals are not readily accessible and reliable by taxpayers especially during peak times or hours closer to the deadlines. So the inability of the system to

handle huge info during the peak hours may change the perception of the taxpayers that the system is not reliable Nakiwala (2010). With the portals issue the taxpayers tend to lack trust in the system with thereby making them reluctant to trust the system with their personal information.

Particularly, the Cameroon Government loses billions as a result of tax avoidance and evasion, and there is no clear way that the government can use to increase the rate at which taxpayers pay their taxes in accordance with the established tax regulations. There is one solution to this problem which is to implement the online filing system that allows all taxpayers to assess themselves and pay their taxes online Nawawi and Salin (as cited in Fossung & Warah, 2022). The government has therefore taken a great step to curb tax evasion or the underpayment of tax by introducing the online platform for declaration and payment of taxes. To Nkwe (2013), the taxpayers' attitude is a strong factor to determine his/her behaviors towards tax. The taxpayers' attitude towards the online tax system plays an important role in the adoption or rejection of the online system. Nkundabanyanga et al. (2017) suggested that if there exist a good way of evaluation of the tax, that is convenience in terms of time, place of declaration and payment, limited movements to the tax centers, it will lead to the acceptance of the online tax system which will therefore increase the tax compliance level among taxpayers. The main source of revenue for every government in the world is taxes and Cameroon is not left out. But the governments are often faced with serious challenges especially in the area of tax administration and collection due to tax evasion and avoidance. The various governments are introducing online tax to increase her tax revenue (Fossung & Warah, 2022).

There are two operational sectors in the Cameroon tax system that is the formal and the informal sectors. The informal sectors mostly have taxpayers of the discharge system because their activities can start today and close tomorrow. The formal sector is made up of taxpayers in either the simplified or actual tax system who go through the process of registration of their business in the Registrar of Commercial Companies (RCCM). This study will focus on businesses in the simplified system where turnover ranges from 10 million to 50million FCFA and the minimum or global system where annual turnover ranges from 0 to 10million FCFA (The Cameroon General Tax Code, [CGTC], 2023). In Cameroon there are two ways of filing tax returns that is the manual and electronic filing of tax returns. The manual tax filing includes filing the manual tax return form from the taxation center and returning the completed form to the authority. The electronic filing of tax returns involved electronic filing and submission of the tax return and at the end print your receipt (CGTC, 2021). Online tax filing has come to solve many problems. It is a great innovation in the tax department with respect to taxpayers as they can do their tax declarations and payment from the comfort of their home through mobile money (MOMO) or bank transfer thereby limiting taxpayers' movement to the tax centers, reducing errors associated with the manual system, portals readily accessible.

## 2. Literature Review

In today's economy, information and communication technology (ICT) is a fundamental necessity for every business, government and the society at large (Hericko, Netemeyer & Cudeck, 2010). "ICT has taken center stage and has cut across every domain of local and international businesses. The coming of ICT and the internet has connected the world as one small village and transformed it into a digital age where almost everything is being done online with the use of computers and the internet. The powerful influence of the digital era on everyday life and activities of individuals, businesses and government has caused the phenomenon of digital disruption (Masunga & James, 2020). ICT is a fundamental necessity for every business, government and society as a whole. The introduction of ICT and the internet has connected the world as one small village and transformed it into a digital age where everything is being done online with the use of computers and the internet Fossung & Warah, (2022) the various governments in the world are introducing online tax filing in order to gain greater tax administration and compliance efficiency, Mandola (as cited in Ondara, Kimani & Josphat, 2016).

Governments all over the world are also introducing online tax filing of tax return due to the various advantages that comes with it. Among these advantages include; convenience in terms of time (day and night) and within one owns comfort (Geetha & Sekar, 2012), place of declaration and payment, limited movement to the tax centers that is taxpayers are able to file their tax returns from the comfort of their homes, reduced errors associated with manual filing as the system auto checks the application Osebe (2013), limit the movement of tax administrators. Thus, online tax filing was first introduced in the United States, where the Internal Revenue Services (IRS) began offering tax return electronic tax filing for tax refunds only (Muita, 2011). According Lai and Choong (2010), online filling of tax returns was first done in the Unites States of America in 1986. Presently, online tax filing has grown to an extent where approximately one out of every five individual taxpayers is now filing tax electronically. However, this has been as a result of numerous improvements and features being introduced to the program over the years." Today, electronic filing has been extended to other developed countries like Australia, Canada, Italy United Kingdom, Chile,

Ireland, Germany, France, Netherlands, Finland, Sweden, Switzerland, Norway, Singapore, Brasil, Mexico, India, China, Thailand, Malaysia and Turkey (Ramayah et al., 2008).

Eventually developing countries have also embraced online filing of tax returns; examples of the countries which are embracing the online filing include Uganda, Nigeria, Rwanda and Kenya (Muita, 2011). Night & Bananuka, (2020) added that digital tax administration systems have been adopted by many countries to enhance taxpayer experience in the digital economy. The introduction of these systems ensures that taxpayers comply with tax laws and policies available in a particular country (Bassey, Mulligan, & Ojo, 2022). Taxes are immensely vital instruments and primary sources of revenue for the government. All governments in the world need the revenues to develop the aspects of their nations since the development of every nation depends largely on taxation (Chindengwiye & Kira, 2021; Lubua, 2022).

This research on online “tax filing and tax compliance is quite a new area in research across Africa and in Cameroon in particular. The issue has attracted so many researchers and there exist a relatively huge amount of literature on the topic but these literatures are mostly in the context of the developed countries like Australia, Canada, Italy United Kingdom, Ireland, Germany, France, Netherlands, Ukraine, Finland, Sweden, Switzerland, Norway, Singapore, Brasil, Mexico, Bangladesh, India, China, Thailand, Malaysia and a few African countries like Kenya, Nigeria, Uganda, Zambia, Tanzania, Rwanda, South Africa and so on, who had digitalised their tax system for some time Fossung & Warah (2022).” There exists little or no literature on the subject matter in relation to the Cameroon context. Since most of the literature that exist have been done by authors in different countries and not Cameroon, this study therefore deemed it necessary to fill the existing gap in literature in Cameroon and to add to the existing literature by examining how online tax filing will affect or influence the level of tax compliance in Cameroon.

Again most SMEs in Cameroon found the process of online tax filing and payment procedures to be complex. Therefore, it is for this reason that the researcher decided to carry out this research study to investigate ways and means of improving tax education, awareness to SMEs in Cameroon and as well improve the levels of voluntary tax compliance by SMEs. Furthermore, Cameroon revenue administrators must ensure that they cover all taxation loopholes to enhance or increase tax compliance levels by SMEs and other taxpayers in the country, as taxation has a fundamental role to play in economic activity and the overall development of a country.

Thus, the above phenomenon proceed with the formulated hypotheses as follows;

- (1) H<sub>1</sub>: Accessibility and reliability of online portals have significant effect on tax compliance among SMEs in the Littoral region of Cameroon.
- (2) H<sub>2</sub>: Tax awareness has significant effect on tax compliance among SMEs in the Littoral region of Cameroon.
- (3) H<sub>3</sub>: Computer literacy level has significant effect on tax compliance among SMEs in the Littoral region of Cameroon.
- (4) H<sub>4</sub>: Tax education has significant effect on tax compliance among SMEs in the Littoral region of Cameroon.

### **3. Online Tax Filing**

Online tax filing “refers to the process of submitting tax returns electronically through a web-based platform provided by tax authorities or third-party service providers. This method allows taxpayers to complete and submit their tax forms via the internet, often utilizing software that guides them through the filing process (Swee, 2017). According to Kearney (2017), “Online tax filing is a digital means of submitting tax returns that not only simplifies the process for taxpayers but also enhances the efficiency of tax administration.” Kearney emphasizes that online systems can reduce errors associated with manual entries and provide immediate feedback, thus improving compliance rates.

Electronic tax filing or online tax filing is a practice where tax documents or tax returns are submitted through the internet, usually without the need to submit any paper return. The e-filing system encompasses the use of internet technology, the World Wide Web and Software for a wide range of tax administration and compliance purposes. Electronic taxation differs among countries hence the name of the system differs from country to country. According to Gellis (1991), electronic declaration is named electronic tax filing. It has also been called online taxation payment by UN (2007) or e-tax lodgement by Turner and Apelt (2004). According to Mandola (2013) electronic filing is an internet-based system that enables the taxpayers to register and submit their tax returns over the internet. The platform or system have inbuilt software that has been pre-approved by the relevant tax authority to assist the taxpayers in calculating and consequently submit the correct amount of tax due (Mandola, 2013). The e-filing incorporates the process of registration, tax preparation, tax filing and tax payment (Lukorito, 2012). The taxpayer

requires access to a computer, the tax software, a reliable internet connection and the knowledge” to utilise the electronic filing (Hussein, Mohamed, Ahlan, Mahmud, & Aditiawarman, 2010).

E-taxation is the process of assessing, collecting and administering the taxation process through an electronic media. In the words of Che-Asmi & Kamarulsaman (2014), E-taxation is one of the ways through which governments around the world utilize ICT to improve the delivery of public services and the dissemination of public administration information to the public. Wasao (2014) describes electronic tax system as an online platform whereby the taxpayer is able to access through internet all the services offered by a financial authority such as the registration for a personal identification number, filing of returns and application for compliance certificate. In Douala, where SMEs may face challenges related to traditional filing methods, online platforms can alleviate these issues by offering user-friendly interfaces and real-time assistance.

### *3.1 Accessibility and Reliability*

Accessibility in the context of online tax filing refers to the ease with which taxpayers can reach and utilize tax filing platforms, while reliability pertains to the dependability of these systems in providing accurate and consistent services (Maisibe & Atambo, 2016). As noted by Molla & Licker (2001), "Accessibility is a critical factor in e-government initiatives, as it determines whether citizens can effectively engage with online services." They argue that reliable systems must be available without significant downtime or technical issues, ensuring that users can confidently submit their information. In Douala, ensuring that online tax filing systems are accessible to all SMEs is crucial. This includes having platforms that are compatible with various devices and internet speeds. Reliability, on the other hand, fosters trust among users, encouraging more SMEs to adopt online filing practices.

### *3.2 Tax Awareness*

Tax awareness is the ability to comprehend the tax system. People are readier to respect the tax system if they reasonably comprehend the laws, according to Eriksen and Fallan (1996). As a result, they are more compliant with paying tax rather than evading it. Individuals also become educated, gaining expertise in tax planning and tax law. Knowledge in terms of taxation boosted people's awareness by reducing their proclivity for tax evasion (Sommerfeld, 2015). Finally, the self-assessment system ensures that taxes are paid on time, in unification with the filing of tax returns, putting an end to the era of bogus "best of judgment assessments," reducing the accumulation of uncollectable arrears, and fostering mutual trust and effective collaboration between taxpayers and tax officers (Onyegbule, 2012).

Tax awareness “can also be created through the use of media and public relation. The purpose of public relations is to build a tax conscious environment not only among taxpayers but also among the public including latent taxpayers, and this can be categorized as the need to enhance tax compliance, diffuse and enhance public knowledge of taxation, improve mutual understanding and trust between taxpayers and tax authorities and obtain the understanding and cooperation from mass-media for tax administration Sarker, (2003). Many of these activities are carried out through the media including regular television and radio programs/spots that provide current tax information, answering questions called-in by viewers, and reminding the public of tax deadlines. The print media and internet are also widely used. Other than the media, the authorities also conduct an annual „Know-Your-Taxes Week“, during which the tax authority’s set-up booths, etc. in public areas in order to meet people and provide tax information or answer any questions that they may have Sarker (2003).

In order to properly increase public awareness to pay taxes, the community as taxpayers needs to be guided to be able to carry out their tax obligations effectively and obediently, where the task of guidance is at the Directorate General of Taxes (DGT). Basically, the DGT always tries to improve its performance in an effort to provide services and guidance to taxpayers in fulfilling their tax obligations. DGT's efforts often drain a lot of resources and time, causing the DGT to lose focus in securing tax revenues which are its main task. The limited resources of time and human resources possessed by DGT have made DGT rely on tax consultants as other parties who can assist DGT in optimizing the functions of socialization, assistance functions, evaluation functions, and tax anti-avoidance functions by taxpayers in implementing tax obligations in Indonesia. Several studies conducted by previous researcher’s form the basis of this research, including research by (Munabari and Aji, 2014) showed that tax knowledge and perceptions of tax consultants have a positive and significant relationship with interest in using tax consultant services.

Tax awareness refers to the understanding and knowledge that individuals and businesses possess regarding their tax obligations, rights, and the implications of non-compliance. According to Alm & Torgler (2006), "Tax awareness is fundamental for compliance; individuals must understand their responsibilities and the benefits of contributing to

public finances." They highlight that higher level of tax awareness correlate with increased compliance rates among taxpayers. In Douala, raising tax awareness among SMEs is essential for fostering a culture of compliance. Many small business owners may not fully understand their tax obligations" or the advantages of timely filing, which can lead to inadvertent non-compliance.

### *3.3 Computer Literacy Level*

Computer literacy level refers to an individual's ability to effectively use computer systems and applications, including understanding basic operations, software applications, and internet navigation. As defined by Van Deursen & Van Dijk (2014), "Computer literacy encompasses not only the skills needed to operate computers but also the ability to evaluate information found online critically." They argue that higher levels of computer literacy can significantly enhance an individual's ability to engage with digital services.

Ofori (2009) asserts that the cost of adopting online tax filing increases when the taxpayer lacks computer literacy, leading to a preference for manual filing. The taxpayers may choose between handling the electronic filing themselves notwithstanding the challenges of navigating the online system (Muhangi, 2012). Hussein et al. (2010) pointed out that in this situation, the user must be able to use the website's self-help menus and self-navigates on the internet platform with little to no trouble. Similar research on the elements influencing utilization and acceptance of the e-filing system in Kenya by major taxpayers was carried out by Muita (2011). The research examined the technological requirements for e-filing users, the skills they require to utilize that technology, and the willingness of the tax authority to boost the use of tax compliance-based technology. For SMEs in Douala, a higher level of computer literacy is essential for successful online tax filing. Business owners who are comfortable using technology are more likely to embrace online systems, leading to improved compliance rates.

### *3.4 Tax Education*

Taxpayer education can be defined as a method of educating the people about the whole process of taxation and why they should pay tax (Aksnes, 2011). It assists taxpayers in meeting their tax obligations to the government. This means that the primary objective of taxpayer education is to encourage voluntary compliance amongst taxpayers. According to Misra (2004), the main objective of tax payer education is in three folds: impart knowledge concerning tax laws and compliance; change taxpayer's attitude towards taxation and increase tax collection through voluntary compliance. Tax education is a part of public relation activities, which can play important role in creating tax awareness. The target audience is primarily students, who are recognized as future taxpayers. As the next generation of taxpayers, the students are provided with an understanding of the significance and role of taxes in financing the government budget and also of their duty as citizens to file accurate returns and pay taxes Sarker, (2003).

Tax education refers to the "instructional processes aimed at informing taxpayers about their rights and responsibilities concerning taxes, as well as providing them with the knowledge necessary for compliance. According to McKerchar (2001), "Tax education serves as a tool for enhancing taxpayer understanding and compliance; it equips individuals with knowledge about tax laws and filing procedures." McKerchar emphasizes that effective tax education programs can lead to improved compliance outcomes. Taxpayer education has provided a comprehensive awareness and information that has promoted partnership and voluntary compliance and further increased revenue collection for national growth and development as well as broadening the tax base. Greater education potentially increases compliance since educated taxpayers are very aware of their responsibility as well as the sanctions to be imposed on them if they are not compliant with tax laws. Education levels become more important in increasing tax compliance across countries. One of the measures to increase voluntary compliance is by ensuring that taxpayers have a certain level of qualifications, ability and confidence to exercise their tax responsibility (Mohani, 2003). In Douala, implementing robust tax education initiatives can empower SMEs by providing them with the necessary tools and knowledge to navigate the complexities of tax regulations effectively.

### *3.5 Tax Compliance*

Verboon and Dijk (2007) defined tax compliance as the willingness of individuals to comply with relevant tax authorities by paying their taxes. Tax compliance can be defined as an ability of a tax liable body to submit accurate, complete and satisfactory returns in conformity with tax laws and regulations of the state to the authority for the purpose of tax assessment Badara (2012). It had also been defined by the Harvard law school (2015) as paying taxes on time and timely reporting of correct tax information. Sarker (2003) also noted that tax compliance is the degree to which a taxpayer complies or fails to comply with the tax laws of his country. Brown and Masur (2005) stated that tax compliance is a multi-faceted 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 of tax liability).

Kline (2011) defined tax compliance as the willing and complete execution of tax responsibilities as prescribed by law. Tax compliance is the act of compiling statistics and filling out tax return forms, as well as declaring all taxable income and paying all tax responsibilities within the prescribed time frame, without waiting for the authorities to take action. Simply put, tax compliance refers to how well a country's taxpayers adhere to the different tax regulations enacted by policymakers. However, as with many concepts, this definition can be seen from a variety of perspectives. A continuation of definitions can be found in the definition of tax compliance. Tax compliance is a result of taxpayers' attitudes toward government measures aimed at meeting the country's basic infrastructure and social demands. Fishbein and Ajzen, (2010) cited social psychological concerns, business and economic, industry and political, industry as some of the elements that influence tax compliance" behavior.

Palil and Mustapha (2011) defined "voluntary tax compliance behavior "a combination of the readiness of taxpayers to comply with the tax laws, declare the correct income, claim the correct deductions, relief and rebates and pay all taxes on time". Psychological Theory of Attribution (1958) states that, behavior is caused by internal or external influences. Internally influenced behavior is believed to be under the personal control of the individual/taxpayer, while the externally influenced behavior implies that taxpayers/individuals will have to behave because of the demands of the situation or the environment. The readiness of the taxpayer to abide by directives and regulations of the tax authority makes voluntary compliance possible (Kirchler 2007). Voluntary compliance is the readiness to report tax obligations by a taxpayer without deceiving (McBarnett 2003). The (Organization for Economic Cooperation and Development [OECD], 2001); divided compliance into administrative compliance 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 technical requirements of tax laws. Tax compliance can be achieved through the application of public relations, tax education, tax consultation and guidance and examination Sarker (2003).

Tax compliance refers to the degree to which taxpayers adhere to tax laws and regulations by accurately reporting income, filing returns on time, and paying taxes owed. As defined by Kirchler (2007), "Tax compliance is influenced by various factors including individual attitudes towards taxes, perceived fairness of the tax system, and social norms." Kirchler's research highlights that compliance is not merely a legal obligation but also a social behavior influenced by multiple external factors. For SMEs in Douala, understanding what drives tax compliance is essential for improving overall adherence rates. Factors such as perceived fairness in taxation and effective communication from tax authorities play significant roles in shaping compliance behaviors. Finally, this research on online tax filing and tax compliance is quite a new area in research across Africa and in Cameroon in particular. The issue has attracted so many researchers and there exist a relatively huge amount of literature on the topic but these literatures are mostly in the context of the developed countries like Australia, Canada, Italy United Kingdom, Ireland, Germany, France, Netherlands, Ukraine, Finland, Sweden, Switzerland, Norway, Singapore, Brasil, Mexico, Bangladesh, India, China, Thailand, Malaysia and a few African countries like Kenya, Nigeria, Uganda, Sambia, Tansania, Rwanda, South Africa and so on, who had digitalized their tax system for some time Fossung & Warah (2022). There exists little or no literature on the subject matter in relation to the Cameroon context. Since most of the literature that exist have been done by authors in different countries and not Cameroon, this study therefore deemed it necessary to fill the existing gab in literature in Cameroon and to add to the existing literature by examining how online tax filing will affect or influence the level of tax compliance in Cameroon. Again, most SMEs in Cameroon found the process of online tax filing and payment procedures to be complex. Therefore, it is for this reason that the researcher decided to carry out this research study to investigate ways and means of improving tax education, awareness to SMEs in Cameroon and as well improve the levels of voluntary tax compliance by SMEs. Furthermore, Cameroon revenue administrators must ensure that they cover all taxation loopholes to enhance or increase tax compliance levels by SMEs and other taxpayers in the country, as taxation has a fundamental role to play in economic activity and the overall development of a" country.

#### 4. Methodology

The target population of this study was 15,894 businesses operating in the Littoral region of Cameroon, of which some are registered in the formal and others in the informal sector (NIS, 2023). The respondents also include owners and managers of registered SMEs, tax consultancy firms, financial institutions and auditing firms in Cameroon. Businesses in the simplified tax regime are those whose annual turnover tax exclusive ranges from 10,000,000 to

50,000,000FCFA, while businesses in the minimum or global tax regime are those whose annual turnover tax exclusive ranges from 0 to 10,000,000FCFA. This research study used stratified random sampling method in gathering information from the respondents. Stratification was done for taxpayers based on their sector of activities that is trade, manufacturing and service. This study chooses the stratified random sampling because the researcher after going through a series of journal articles realized that this is the most efficient method. Stratified random sampling design ensured that all categories of SMEs in Cameroon are included in the sample. Sample size is important primarily because of its effect on statistical power. Statistical power is the probability that a statistical test indicated a significant difference when there truly is one Morgan (2001) Information from the delegation of small and medium size enterprises of Cameroon (one stop shop center) revealed that there are 15,894 registered SMEs in Cameroon that is the statistics of 2023. This registered number was classified in different tax regimes: the Actual tax regime, the simplified and the global or minimum or discharge tax regime and these regimes they form different categories.

Based on the independent variables (accessibility and reliability, tax awareness, computer literacy level and tax education), looking at how these variables fit into the various tax regimes. The researcher found out that when it comes to the actual regime, it comprises of company's whose annual turnover ranges from 50millionFCFA to 3billionFCFA, with this it is possible for those companies to hire accountants and accountants that have perfect knowledge on tax. Therefore, all the limitations that come with online tax filling are restricted when it comes to the actual regime. The next regime the researcher took into consideration was the simplified regime and based on the total turnover that this regime has, it is more/likely very impossible to hire accountant and therefore it is a major problem when it comes to the simplified regime. When it comes to the global tax regime this regime suffers a lot of limitations. That is why this study focuses on the simplified regime and the global or minimum tax regime and as a result the two samples for the study was the simplified and minimum regimes which form a total sample size of 200. The intended audience is 10000 SMEs in the littoral region registered on the Cameroon e-filing tax system database. This study used a total sample size of 200 as an accurate representation of the desired audience using the stratified random sampling approach. Using a sample to make judgments regarding the population as a whole is standard procedure in research. However, due to the large geographical scope of Douala, the researcher selected some businesses in Akwa, Bonamoussadi, Bonapriso, Bonaberi and Deido.

The instrument used for data collection in this study was a structured questionnaire. This study adopted a questionnaire because of the following reasons; it attempts to standardize the questions answered by different respondents so that the responses can be quantified, measured and compared. Also, the questionnaire is one of the best ways of collecting primary data which in the sole type of data used in this study. The questionnaire was designed to capture both the main and the specific objectives of the research. The questionnaire was made up of both open ended and closed ended questions of likert scale type ranging from Strongly Disagree (SD=1), Disagree (D=2), Not Sure (NS=3), Agree (A=4) and Strongly Agree (SA=5). Section one of the questionnaire sought to obtain data relating to the general background of the participating SMEs; Section two sought to obtain data to meet the main and specific objectives that is identifying the extent to which online tax filing has been embraced and exploring the various online tax filing strategies used by SMEs in Cameroon. Section three was tailored only to SMEs which do not practice online tax filing in order to find out the factors hindering them from practicing online tax filing. The questionnaires were issued and submitted to a range of small and medium size enterprises in the selected areas in Douala, to be filled by owners and managers of registered SMEs, tax consultants, accountants/auditors in financial institutions in Cameroon. In order to include all the business sub sectors or the various industries falling under SMEs, a random sampling technique has been used. The questionnaire was preferred because: It gives the current opinions and impressions of the business operation in relation to the topic under study particularly when it comes to technology which is evolving every day.

#### 4.1 Measurement of Variables

Table 1. Variables of the study and their measurement

Variables	Sub variables	Measurement	Source
Online tax filing/ tax digitalization	Accessibility and reliability of online portals	Can incorrect information be easily corrected	Maisibe and atambo (2016)
		Is the site accessible at any time and any pace	
		Ease of use of the site	
		User friendliness	
		Language barrier	
		Ease of understanding	
	Tax awareness	Use of media and public relation: Panel discussion,	Sarker (2003)
		TV/Radio programs, Magazines/Newsletters	
	Computer literacy level	Able to navigate the system	Knowledge of online tax filing, internet use experience
		Website ease of use and availability of Wi-Fi internet data	
		Providing textbooks to students, Classes on taxes	Sarker (2003)
	Tax Education	Provide courses on tax to university students	
Tax compliance	Timely declaration	Interest of late declaration	Nkwe (2013)
	Timely payment	and payment	
	Proper bookkeeping	Digital prunes	
	Genuine negotiations	Intentions to pay training	
		The intended time to use these site	

Source: Researchers Conceptualization (2024).

Multiple regression analysis measures the effects of multiple independent variables on one dependent variable. The study adopted a multi regression model i.e

$$TC = f(AR, TA, CL, TE) \quad (1)$$

The mathematical model is thus transformed as follows;

$$TC_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 TA_{it} + \beta_3 CL_{it} + \beta_4 TE_{it} + \beta_5 A_{it} + \beta_6 S_{it} + \varepsilon \quad (2)$$

Where TC is Dependent Variable (Tax Compliance)

Independent Variable

AR<sub>it</sub> is Accessibility and reliability

TA<sub>it</sub> is Tax awareness

CL<sub>it</sub> is Computer literacy level

TE<sub>it</sub> is Tax education

Control Variables

A<sub>it</sub> is Age and



$S_{it}$  is Size of SMEs

$\beta_0$  is Constant

$\beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_5 \dots$  are Regression Coefficients to be estimated

$\varepsilon$  is Error term capturing the variables not included in the study.

## 5. Results and Discussion

### 5.1 General Information

#### 5.1.1 Presentation of Demographic Information

From this study, it was deduced that the respondents were aged between 20 and 59 years of age ( $M = 35$  years,  $SD = 5.38$ ). Male constituted 67% while females were 33%. This portrays a gender-balanced economy. The level of education of the respondents was as follows; 18.5% of the respondents were university undergraduates, 16% of the respondents were postgraduates, 21.5% were diploma holders, 30% had ordinary and advanced level certificates (O/L and A/L), while 14% were first school leaving certificate holders (FSLC) as presented in table 2 below.

Table 2. Profile of Respondents

		Frequency (N)	Percent (%)
Gender	Male	134	67.00%
	Female	66	33.00%
	Total	200	100.00%
Age	18–24	50	25.00%
	25-30	26	13.00%
	31-35	32	16.00%
	36-40	29	14.50%
	41-45	46	23.00%
	46 and above	17	8.50%
	Total	200	100.00%
Level of Education	FSLC	28	14.00%
	O/L and A/L	60	30.00%
	Diploma	43	21.50%
	Degree	37	18.50%
	Post Graduate	32	16.00%
	Total	200	100.00%
Sector of the Economy	Service	33	16.50%
	General Trading	48	24.00%
	Manufacturing	40	20.00%
	Agriculture	27	13.50%
	Humanitarian	34	17.00%
	Energy	10	5.00%
	Others	8	4.00%
	Total	200	100.00%
Years of Experience	0 –1	53	26.50%
	1-5	61	30.50%
	5-10	43	21.50%
	10-15	30	15.00%
	15 and above	13	6.50%
	Total	200	100.00%

Source: Field Survey by Author (2024)

### 5.1.2 Descriptive Results of the Research Variables

The study sought to establish how online tax filling influence tax compliance among small taxpayers in Douala. Four main questions were framed and the same given to the respondents i.e. Accessibility and reliability of online portals, tax awareness, computer literacy, and tax education. Each question had several components tested in order to realize the objectives of the study. In order to present the descriptive results of the variables of the study, an analysis of the Means, Standard Deviations, Skewness and Kurtosis was done. Table 3 provides the number of responses, minimums, maximums, means, standard deviations, Skewness statistics and standard errors, and kurtosis statistics and standard errors for the variables of interest. Electronic Tax System had a mean of 3.615 (SD = 1.212). Tax Compliance had a mean of 2.708 (SD = 1.167). Since this study employs quantitative data analysis, two statistical values were checked to assess the normality of the distribution of the variables: Skewness and kurtosis. Skewness is a measure of how responses are distributed, while kurtosis is a measure of how responses cluster around a central point for a standard distribution (Stern et al., 1977). A criterion from the literature is that a Skewness statistic bigger than 3.0 or a kurtosis statistic bigger than 8.0 would imply that the distribution is non-normal (Kline, 2005). The Skewness and kurtosis statistics for all variables in this study were within these acceptable ranges of normality as shown on Table 4 below.

Table 3. Descriptive Statistics

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation	Skewness		Kurtosis	
							Std. Error		Std Error
General Information									
Gender	200	0	1	1.53	0.503	-0.137	0.309	-2.051	0.608
Age Bracket	200	0	1	2.77	1.511	0.229	0.309	-1.461	0.608
Education	200	0	1	3.93	0.989	-0.95	0.309	0.495	0.608
Sector	200	0	1	5.32	4.405	0.696	0.309	-0.911	0.608
Years of Experience	200	0	1	1.97	1.288	0.851	0.309	-1.094	0.608
Average				3.104	1.7392				
Accessibility and Reliability of online Portals									
Having It is easy, simple for me to navigate and file my tax returns using online tax filling system	200	0	1	2.85	1.404	0.2	0.309	-1.283	0.608
Access my tax obligations accurately and faster	200	0	1	2.83	1.291	-0.07	0.309	-1.174	0.608
Level of Security	200	0	1	2.83	1.521	0.124	0.309	-0.541	0.608
Online system must be stable	200	0	1	2.83	1.291	-0.07	0.309	-1.174	0.608
Average				2.815	1.34				
Regarding Tax awareness									
Campaigns to enhance tax compliance	200	0	1	4.22	0.865	-1.253	0.309	2.147	0.608
Public Relation	200	0	1	4.28	1.011	-1.626	0.309	2.465	0.608

Compliance by law	200	0	1	3.62	1.166	-0.458	0.309	-0.583	0.608
Average				4.04	1.014				
Basic computer trouble shooting skills.	200	0	5	2.38	1.136	0.693	0.309	-0.327	0.321
Online tax site navigation process.	200	0	5	3.52	1.282	-0.313	0.309	-1.193	0.488
Taxpayers who have internet use experience	200	0	5	2.78	1.059	0.452	0.309	-0.582	0.674
Website ease of use enhances tax compliance	200	0	1	2.91	1.129	-0.415	0.309	-0.101	0.547
Average		0		2.99	1.152				
Tax Education		0							
Sponsoring high school essays on tax topics	200	0	1	2.85	1.404	0.2	0.309	-1.283	0.342
Organizing seminars on public finance and economy.	200	0	1	2.83	1.291	-0.07	0.309	-1.174	0.563
Tax consultation	200	0	1	2.75	1.144	0.233	0.309	-0.535	0.671
Assisting taxpayers	200	0	1	2.83	1.521	0.124	0.309	-0.541	0.608
Average				2.815	1.34				
Tax Compliance									
Accessibility and Reliability	200	1	7	3.12	1.235	0.712	0.309	-0.47	0.608
Tax Awareness	200	1	7	2.78	1.282	-0.401	0.309	-1.105	0.608
Computer Literacy	200	1	7	2.25	1.096	0.521	0.309	-0.672	0.608
Tax Education	200	1	7	2.68	1.054	0.124	0.309	-0.1174	0.608
Average				2.708	1.167				

Source: Field Survey by Author (2024)

### 5.2 Accessibility and Reliability

Under this question, respondents were asked to state whether, It is easy, simple for me to navigate and file my tax returns using online tax filling system; accessing my tax obligations accurately and faster through the online system; accessibility and reliability of the online system must be stable to handle the high traffic during the peak times and the e-devices (cell phones, computers, laptops) are available for use when filling tax returns online. Each form of question asked is discussed separately where responses from different sectors are presented in forms of bar graphs indicating level of agreement/disagreement in terms of percentages (%) in the following sections.

#### 5.2.1 Accessing my Tax Obligations Accurately and Faster through the Online System

Respondents were asked to state whether accessing their tax obligation through the online system was a problem. As indicated in the bar graph below, majority of respondents could not access the tax obligations accurately representing 67% of the respondents. Only 33% of the respondents agreed that they access the tax obligation accurately and are fast through the online system with in their businesses. Among the sectors of the economy, trade and service had tax obligation at all. It was followed by energy, agriculture and transport sectors with 89%, 82% and 79% respectively. On

the other hand, manufacturing, humanitarian and general trading sectors were leading with internet connectivity as: 67%, 60% and 56% respectively.

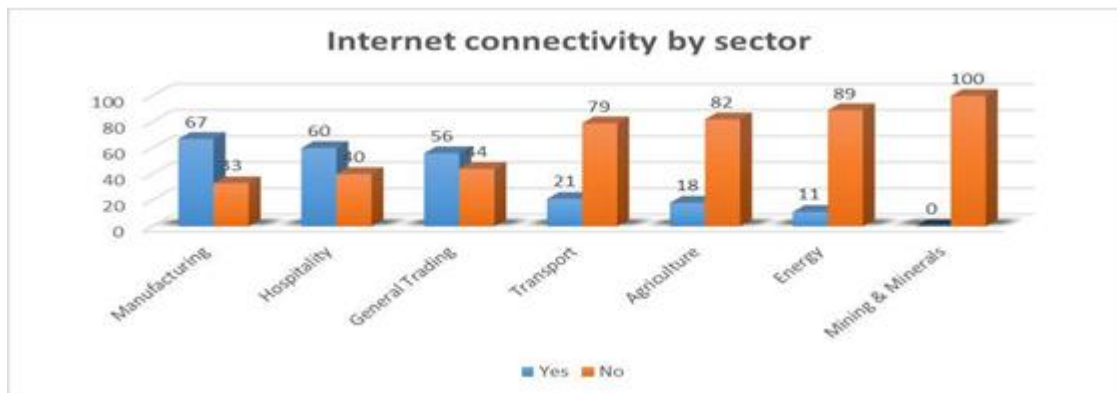


Figure 1.

Source: Elaborated by Author (2024)

The findings above indicate that while accessibility and reliability are a key component of online tax system impacting compliance levels of taxpayers in Littoral Douala, as at now majority of such taxpayers seem not yet ready to embrace online tax platform.

#### 5.2.2 Accessibility and Reliability of the Online System must be Stable to Handle the High Traffic during the Peak Times

Respondents were asked to state in addition to rank their priorities in term of how stable the online system would manage the traffic during the peak times, whether their companies had embraced automation as a way of doing business as a result of the stability in the system during peak times. This question was necessary because during peak times of tax return, accessibility and reliability of the online system remains a huge challenge. The bar graph below shows that despite a number of respondents, many of the tax payers still face issues of high traffic during peak times. They explain how sometime the systems are not accessible and not stable for them to compliance with their tax return.

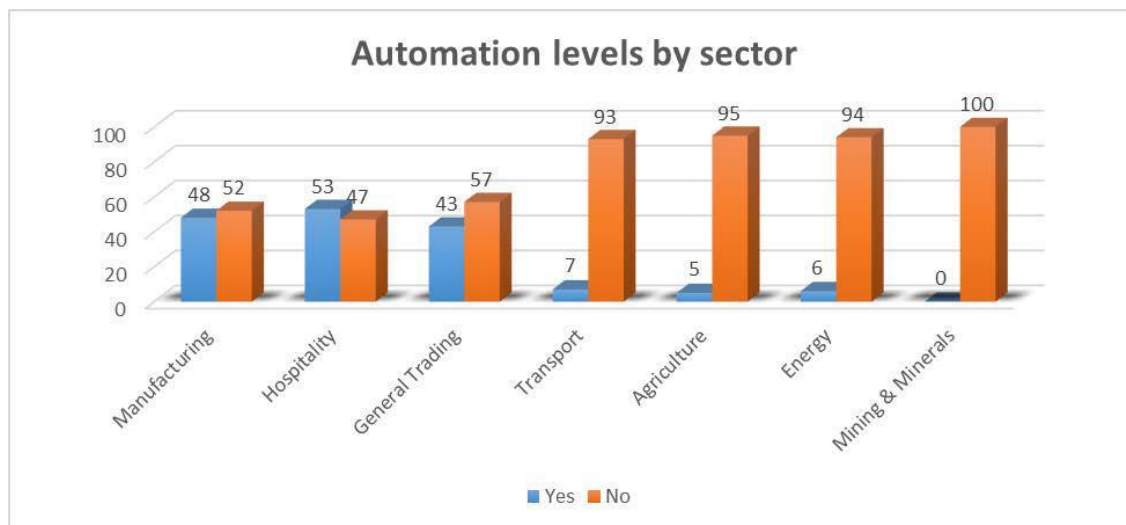


Figure 2.

In General, result indicates that on average, only 23% of respondents were express their opinion that the online system is stable to manage the traffic during peak times. Meanwhile majority (77%) of respondents express very negative opinion regarding the online system. These respondents negative express their opinion that the online system is not accessible and reliable during peak times as there are traffics which make compliance almost very difficult and sometimes impossible in the Littoral Region.

### 5.2.3 The Online System does not Share my Information with other Websites (Security)

Respondents were asked to state the reasons whether the online system does not share tax payer information with other websites in term of security, which might put some fear in tax payer during their declaration. From the figure below, (30%) of the respondents explained that the reason why they have not embraced online tax filing is because they are afraid of sharing their information to internet hackers (scammers) and their businesses are very small. This was followed by 23% of respondents who said that automation is expensive. 22% of the respondents feared that embracing automation will expose them to online tax audits, while 16% cited lack of skills and knowledge pertaining to automation as the reason for not embracing automation. Uniquely, 9% of respondents stated other reasons like, the business has always been done like that, no need as it will not lead to increase in profits etc.

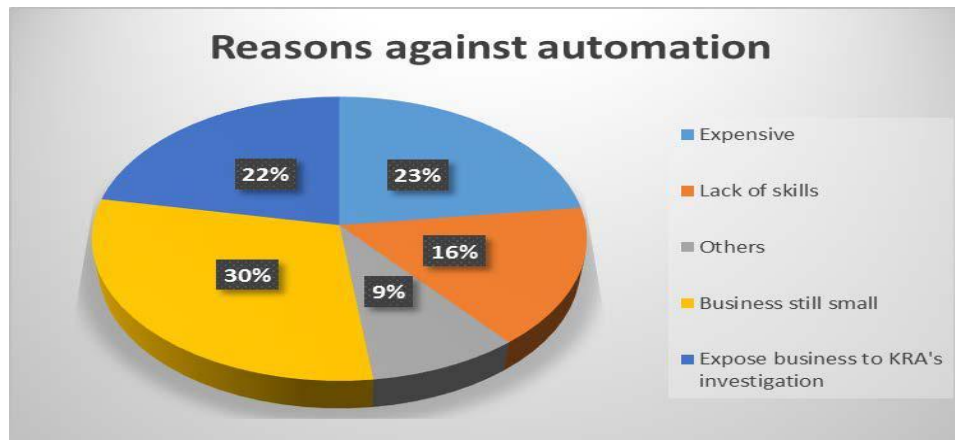


Figure 3.

Source: Elaborated by Author (2024)

### 5.2.4 The E-devices (Cell Phones, Computers, Laptops) are Available for Use when Filling Tax Returns Online

Respondents were asked to state the reasons whether they have e-devices (cell phones, computers, laptops) are available for use when filling tax returns online. From the figure below, approximately (80%) of the respondents explained that their e-devices like cell phone, computers and laptops to ready when filling tax return online but they lack the knowledge which posts a problem during compliance. They were not satisfy with the system because even though their e-devices are available for compliance, they lack the necessary knowledge to enable them comply with their tax return on time. However, 20% of respondents who were accountants in company express great satisfaction with the system as they have e-devices and could facilitate them when filing the online tax return.

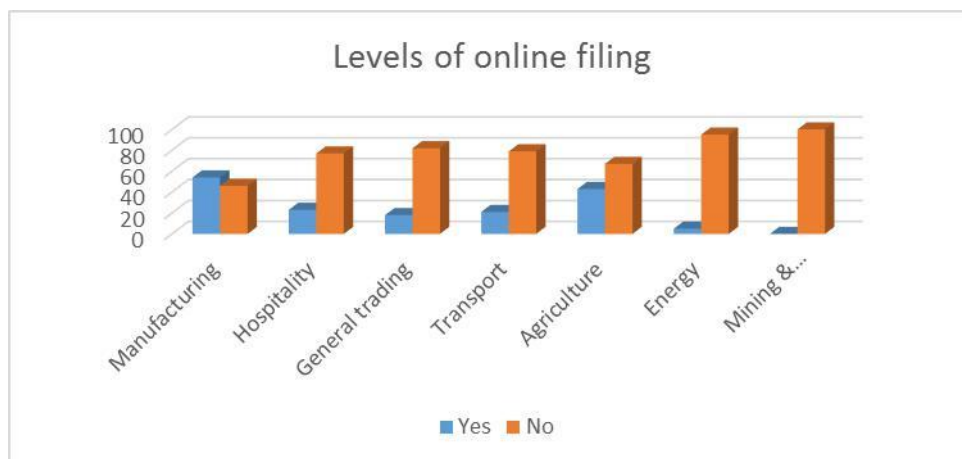


Figure 4.

Source: Elaborated by Author (2024)

### 5.3 Tax Awareness

Respondents were asked whether campaigns on online tax filing can enhance tax awareness thus increase the level of compliance; Public relations/use of media enables understanding and cooperation from mass media for administration; public of tax deadlines through the media enhance compliance level; mutual understanding and trust between tax payers and tax authorities; introducing automated systems to record and/or answer taxpayer queries. Both likert-scale type questions and level satisfy and not satisfy questions were used to answer this research question.

#### 5.3.1 Campaigns on Online Tax Filing can Enhance Tax Awareness

Respondents were required to answer either yes or no as to whether campaigns on online tax filing can enhance tax awareness thus increase the level of compliance. As shown in the graph above most respondents do not file their tax returns using online. On average 78% of respondents do not file online returns because there was no enough campaign on the online tax filing, thus it most of the tax payers are not informed which reduces the rate of compliance. Only 22% have been filing returns online because most of the respondents were accountants of companies and therefore they had awareness of the online filing system. In terms of sectors, mining and minerals has never filed online at 100%, followed by energy at 95%, general trading at 82%, transport 79%, hospitality 77% and manufacturing at 46%. On the other hand, manufacturing recorded highest filing rate at 54% followed by hospitality at 33% with mining and minerals reporting 0%.

#### 5.3.2 Taxes Registered for Online

Respondents were asked to state the taxes they have registered for. As shown in the graph below, 78% of online users from Littoral are registered for PAYE, 51% registered for VAT, 34% registered for Turn Over Tax, while 15% registered for Corporate Tax. Only 5% individual taxpayers from East of Nairobi are registered for Income.

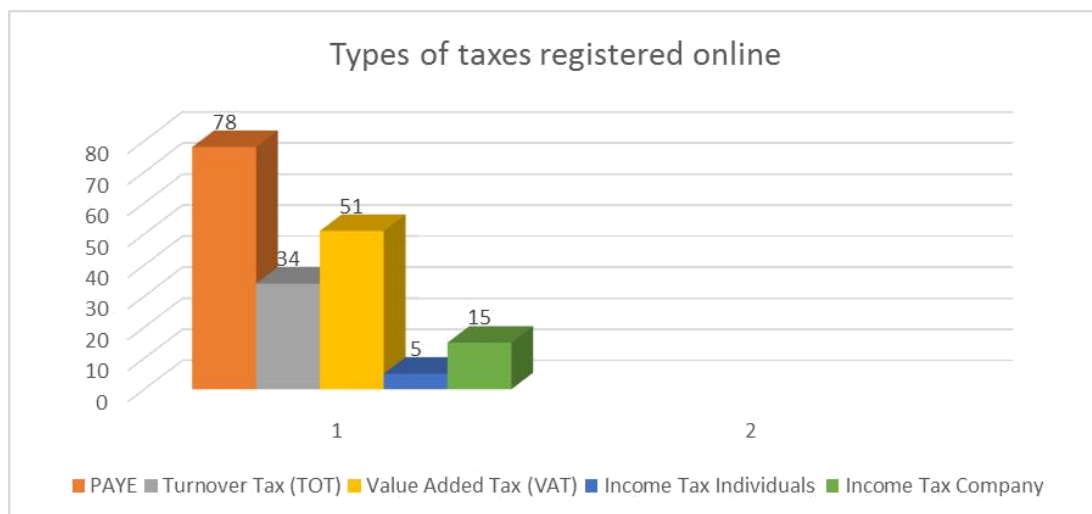


Figure 5.

Source: Elaborated by Author (2024)

#### 5.3.3 Filing of Taxes Levels

Respondents were asked to state their degree of agreements that they file various taxes registered for online and by due dates, 50% of respondents agreed that they do file both VAT and PAYE online and by the set due dates. While another 50% were not sure whether they file VAT by due dates only 40% disagreed that they don't file corporation tax online, with none strongly disagreeing. It can therefore, be concluded that despite a small number having embraced online system, the same small number has seriously embraced online filing. However, those not yet sure should be targeted and brought on board.

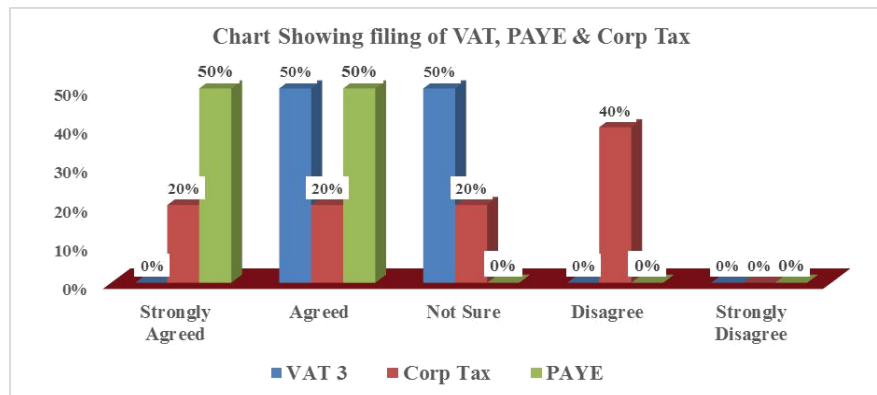


Figure 6.

Source: Elaborated by Author (2024)

#### 5.3.4 Reminding the Public of Tax Deadlines through the Media Enhance Compliance Level

Respondents were asked whether they informed through the media regarding the deadline when filling tax returns online. From the figure below, approximately (80%) of the respondents explained that they have notification through the media as per the tax deadline. That is, if there was a medium of communication for tax, it would help to enhance compliance. They were not satisfying with the system because the system doesn't have a way of informing the tax payer on time but once time passes, the tax payer is left with a penalty. However, 20% of respondents who were accountants in company express great satisfaction with the system as they have e-devices and could facilitate them when filing the online tax return.

#### 5.3.5 Mutual Understanding and Trust between Tax Payers and Tax Authorities

Respondents advanced that the unfriendly relationship between tax payer and tax authority is a serious problem that must be taken into consideration. The respondents added that this have made compliance very difficult as every tax officer see tax payer as their source of revenue which therefore cause compliance very difficult. (30%) of the respondents explained that the reason why they have not embraced online tax filing is because the tax officer keeps the information to themselves, and sometimes, even when a tax payer need help, it might turn to extortion of huge amount of money. This was followed by 23% of respondents who said that automation is expensive.

#### 5.4 Computer Literacy Levels

As shown in the chart below, respondents were asked to state whether they are computer literacy because it might help to improve their compliance levels. They were to state level of agreement with three questions: basic computer trouble shooting skills enhance tax compliance; understanding of online tax site navigation process; taxpayers who have internet use experience comply with their tax returns; website ease of use enhances tax compliance and saves time. On the first question, as to basic computer trouble shooting skills enhance tax compliance, 50% confirmed yes (17% strongly agreed and 33% agreed), only 33% were not sure with another 17% arguing to the contrary. Perhaps those were not sure have never embraced computer skills and are not using it so could not take a stand on it. Another question was asked whether taxpayers who have internet use experience comply with their tax returns, majority (75%) strongly agreed and 25% agreed, meaning internet use experience affects compliance of taxpayers in Littoral. Finally, as to whether website ease of use enhances tax compliance improves, 90% supported the idea and explained that that is realized only once one is used to the system, the remaining 10% was shared between those who disagreed and those who were not sure.

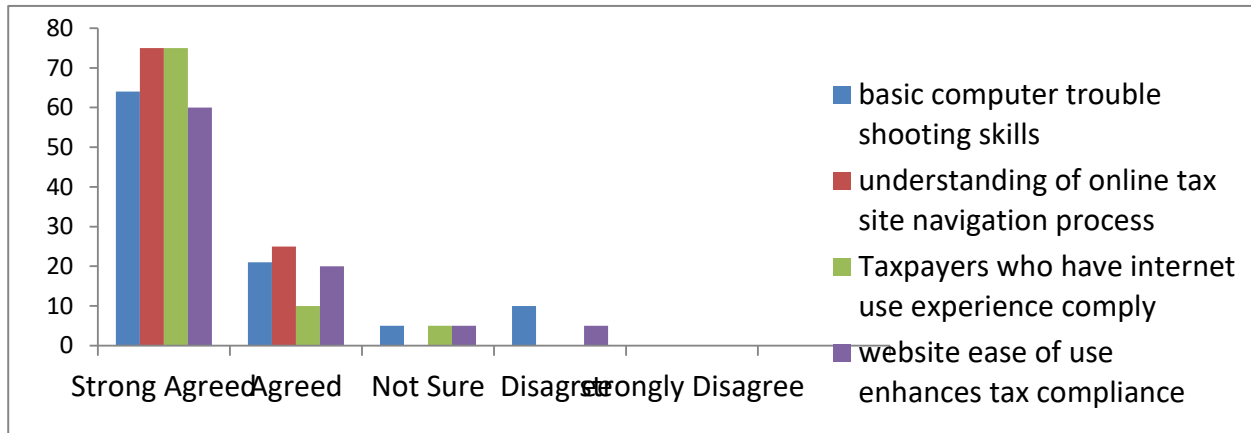


Figure 7.

Source: Developed by Author (2024)

### 5.5 Tax Education

Another measure of tax compliance based the level of tax education. This variable was measured using likert-scale comprising of four questions. The questions tested respondents' level of agreement with regards to the tax education which effect on their general compliance levels. For instance, the variable measured compliance in terms of the sponsoring tax education; organizing seminars; tax consultation and assisting taxpayers.

#### 5.5.1 Sponsoring Tax Education

Respondents were to state whether if the directorate general sponsoring tax education, they will have the knowledge to efficiently perform their tax return. From the findings as presented in the chart below, 85% agreed (64% strongly agreed and 21% agreed), 5% were not sure while only 10% disagreed with the question. This scenario could be explained by several complaints leveled against payment gateway of the online system as found by Eva (2010).

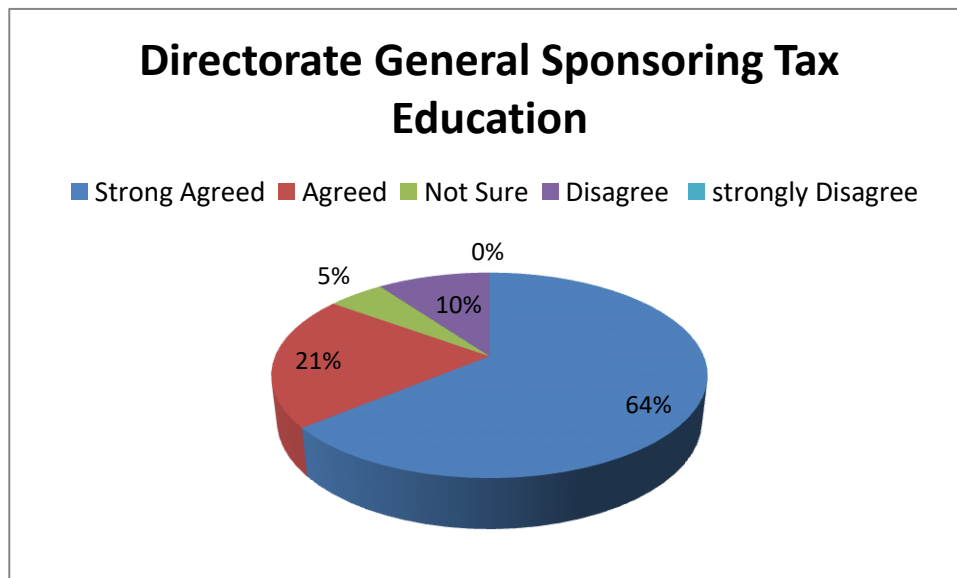


Figure 8.

Source: Developed by Author (2024)

#### 5.5.2 Organizing Seminars

As shown in the chart below, respondents were asked if the tax officials do organised tax seminars to show the population their tax rights and privileges, thus, enhance tax compliance.



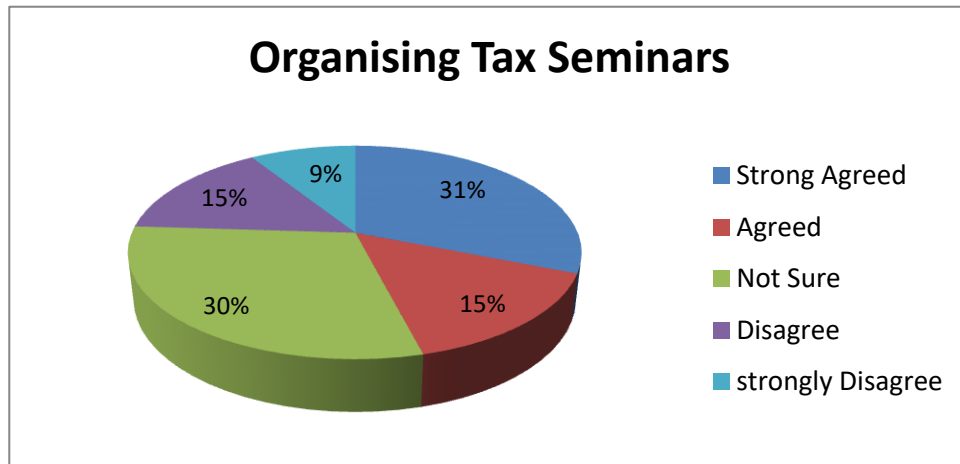


Figure 9.

Source: Developed by Author (2024)

As shown, 46% agreed that tax seminar enhance tax compliance (i.e. 31% strongly agreed, 15% agreed). On the other hand, 24% disagreed (i.e 15% disagreed, 9% strongly disagreed) while only 30% were not sure. Indicating that by majority of respondents believe that if tax seminar is organized by the tax officials will result to increase compliance.

#### 5.5.3 Tax Consultation

Majority of respondents agreed that tax consultancy when carry out help the tax payers on the various tax systems which will enhance tax compliance, this was supported by 85% of the respondents (64% strongly agreed and 21% agreed), while 5% were not sure, the rest 10% and 0% respectively disagreed and strongly disagreed.

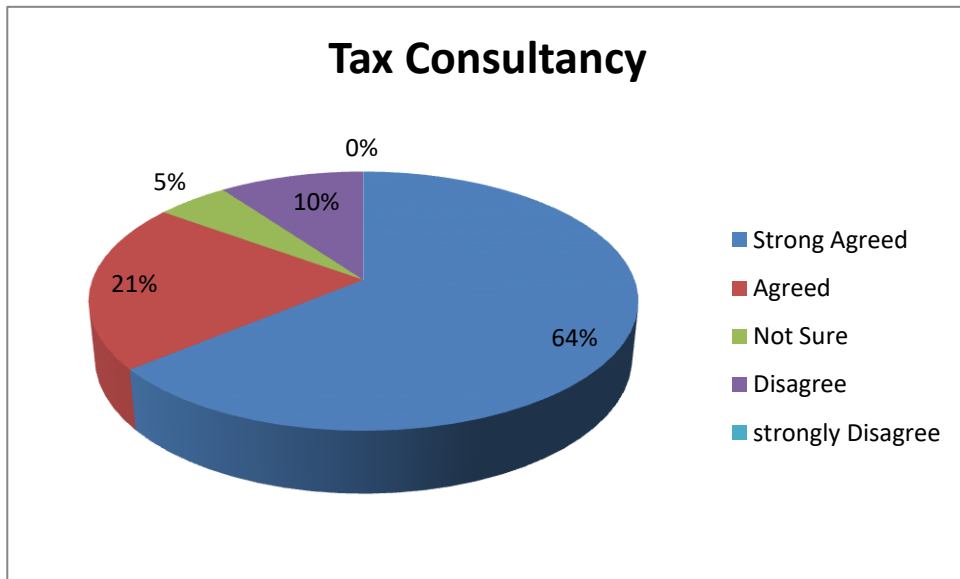


Figure 10.

Source: Developed by Author (2024)

#### 5.5.4 Assisting Taxpayers

Majority of respondents agreed that a platform should be created by tax official where tax payer can post their problem and get immediate response with 62%. With this type of assistance, help in resolving the challenges tax pay face during their tax return. This will then enhance compliance. A total of 32% did not experience any server downtime while only 6% were not sure whether server downtime in any way affects online system without assistance.

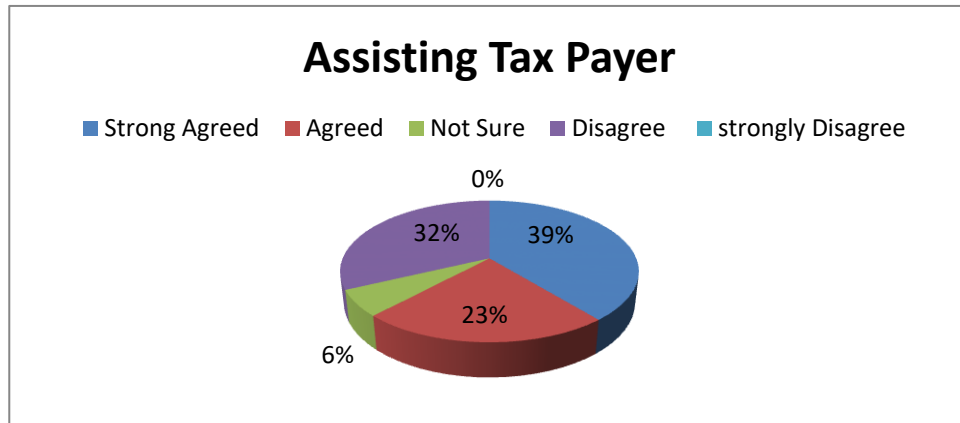


Figure 11.

Source: Developed by Author (2024)

### 5.6 Correlation Analysis

Correlation analysis and regression analysis were both done to establish the relationship and strength of such relationships among the variables in the study. The one consistency of the subscales was neither agrees nor disagrees: Cronbach's alphas results were as follows, for tax compliance = 0.67, for accessibility and reliability = 0.54, for tax awareness = 0.71, and for computer literacy = 0.69 and for tax education = 0.55. All these findings agreed with Cronbach and Meehl (1955) who found that cronbach of .70 and above are good measures of internal consistency and reliability.

### 5.7 Regression Analysis

Linear regression was done in order to determine the explanatory power of independent variables (online system in the variance of dependent variable (tax compliance)).

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.674 <sup>a</sup>	.603	.589	.1585

a. Predictors: (Constant), Accessibility and Reliability, Tax Awareness, Computer Literacy, Tax Education

Adjusted R squared is the coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in the above, the value of adjusted R squared is 0.589, an indication that there was a variation of 58.9% on tax compliance due to change accessibility and reliability; tax awareness; computer literacy; and tax education at 95% confidence interval. R is the correlation coefficient which shows the relationship between study variables. From the finding shown in the table above, there is moderate positive relationship between the study variables as shown by 0.674.

Table 5. ANOVA Statistics

	Sum of squares	df	Mean square	F	Sig
Regression	0.576	4	0.254	2.09	0.002
Residual	21.584	195	0.129		
Total	22.16	199			

a. Dependent Variable: Tax Compliance

b. Predictors: (Constant), Accessibility and Reliability, Tax Awareness, Computer Literacy, Tax Education

From the ANOVA statistics in table above, the processed data which is the population Parameters had a significant level of 5% which showed that the data was ideal for making conclusion on the population parameters as the value of significance (P-Value) was less than 5%. It also indicates that the model was statistically significant and that

accessibility and reliability, tax awareness, computer literacy and tax education, were significantly influencing tax compliance.

Table 6.

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	sig
1	(Constant)	0.674	1.002	0.571	1.367	0.035
	Accessibility and Reliability	0.439	3.13	0.401	5.392	0.059
	Tax Awareness	0.651	2.557	0.599	4.289	0.046
	Computer Literacy	0.586	1.344	0.502	2.250	0.023
	Tax Education	0.342	4.761	0.268	3.961	0.001

a. Dependent Variable: Tax Compliance

b. Predictors: (Constant), Accessibility and Reliability, Tax Awareness, Computer Literacy, Tax Education

From the above regression coefficients, it was revealed that accessibility and reliability, tax awareness, computer literacy and tax education, to a constant zero, tax compliance would stand at 67.4%. The regression coefficients and t-statistics show the relationship between each of the online tax filing and tax compliance by SMEs in Littoral, Douala. Based on these values, we can estimate the changes in tax compliance among SMEs caused by each individual online tax filing variables. Also, from the corresponding p-value for each t-statistics, it can be seen that online tax filing has a statistically significant effect on tax compliance among small and medium size enterprises in the Littoral region of Cameroon since the p-value of 0.035 is less than the 5% threshold. Based on the overall results, online tax filing has a statistically significant effect on tax compliance among small and medium size enterprises in the Littoral –Douala.

#### 5.7.1 Hypothesis One

The first hypothesis tested was that Accessibility and reliability of online portals have no significant effect on tax compliance among SMEs in the Littoral region of Cameroon. The coefficient of Accessibility and reliability is 0.439 which shows that Accessibility and reliability have a positive effect on tax compliance among SMEs in the Littoral region. That is, a unit increase in accessibility and reliability would lead to increase in tax compliance among small tax payers in Littoral by 43.9%. Testing for significance, this effect is statistically insignificant at 5% given that the p-value of 0.059 is significantly higher than the 5% threshold. Based on this finding, we fail to reject the null hypothesis and conclude that Accessibility and reliability of online portals have no significant effect on tax compliance among SMEs in the Littoral region.

#### 5.7.2 Hypothesis Two

The second hypothesis tested was that tax awareness has no significant effect on tax compliance among SMEs in the Littoral region of Cameroon. The coefficient of tax awareness is 0.651 which shows that tax awareness has a positive effect on tax compliance among SMEs in the Littoral region. That is, a unit increase in tax awareness would lead to increase in tax compliance among small tax payers in Littoral by 65.1%. Testing for significance, this effect is statistically significant at 5% given that the p-value of 0.046 is significantly lower than the 5% threshold. Based on this finding, we reject the null hypothesis and accept the alternative hypothesis implying that tax awareness has a significant effect on tax compliance among SMEs in the Littoral region.

#### 5.7.3 Hypothesis Three

The third hypothesis tested was that computer literacy level has no significant effect on tax compliance among SMEs in the Littoral region of Cameroon. The coefficient of tax awareness is 0.586 which shows that computer literacy level has a positive effect on tax compliance among SMEs in the Littoral region. That is, a unit increase in tax awareness would lead to increase in tax compliance among small tax payers in Littoral by 58.6%. Testing for significance, this effect is statistically significant at 5% given that the p-value of 0.023 is significantly lower than the 5% threshold.

Based on this finding, we reject the null hypothesis and accept the alternative hypothesis implying that computer literacy level has a significant effect on tax compliance among SMEs in the Littoral region.

#### 5.7.4 Hypothesis Four

The third hypothesis tested was that tax education has no significant effect on tax compliance among SMEs in the Littoral region of Cameroon. The coefficient of tax education is 0.342 which shows that tax education has a positive effect on tax compliance among SMEs in the Littoral region. That is, a unit increase in tax education would lead to increase in tax compliance among small tax payers in Littoral by 34.2%. Testing for significance, this effect is statistically significant at 5% given that the p-value of 0.001 is significantly lower than the 5% threshold. Based on this finding, we reject the null hypothesis and accept the alternative hypothesis implying that tax education has a significant effect on tax compliance among SMEs in the Littoral region. Conclusively, this shows that there was a positive association between accessibility and reliability, tax awareness, computer literacy and tax education and tax compliance. The study found that tax awareness, computer literacy and tax education variables significantly influenced commercial tax compliance while accessibility and reliability insignificantly influenced commercial tax compliance in Littoral, Douala.

## 6. Conclusion

### 6.1 Discussion of Findings

This study aimed at establishing the effect of online tax filing on tax compliance among small taxpayers in Littoral, Douala. "With some specific objectives which were to examine the effect accessibility and reliability, tax awareness, computer literacy level and tax education of tax payer on tax compliance among SMEs in Littoral Douala. Taxpayers were categorized into various sectors of the economy for ease of analysis i.e. agriculture, energy, hospitality, transport, general trading, manufacturing and mining in the Littoral region in Cameroon. The first objective was to examine the effects of accessibility and reliability of the online platform on the level of tax compliance in the Littoral region of Cameroon, the results revealed that accessibility and reliability have a positive effect ( $B = 0.439$ ,  $t = 5.392$ ) on tax compliance among SMEs in Littoral Douala. This indicates that a unit increase in accessibility and reliability would lead to increase in tax compliance among small tax payers in Littoral by 43.9%. This result confirms the apriori theoretical expectation of the study which states that accessibility and reliability influence tax compliance among SMEs. Testing for significance, this effect is statistically insignificant at 5% given that the p-value of 0.059 is significantly higher than the 5% threshold. Based on this finding, we fail to reject the null hypothesis and conclude that Accessibility and reliability of online portals have no significant effect on tax compliance among SMEs in the Littoral region. Relating the findings to other studies, the findings is not in line with the study of Fossung and Warah (2022), who investigated the relationship between digitalization and the level of tax compliance in Cameroon and found out that accessibility and reliability have a positive and significant relationship with tax compliance. The study also deviates from Manshura et al. (2022), who evaluated the effectiveness of electronic tax filing systems on compliance rates among Ukrainian SMEs and found out that electronic filing significantly improved compliance rates among SMEs. The above variations may be as a result of the sectors under which, the national differences and the sample size adopted in the studies.

The second area of investigation concerned tax awareness on tax compliance among SMEs in Douala, the results revealed that tax awareness has a positive effect ( $B = 0.651$ ,  $t = 4.289$ ) on tax compliance among SMEs in Littoral Douala. This indicates that a unit increase in tax awareness would lead to increase in tax compliance among small tax payers in Littoral by 65.1%. This result confirms the apriori theoretical expectation of the study which states that tax awareness influence tax compliance among SMEs. Testing for significance, this effect is statistically significant at 5% given that the p-value of 0.046 is significantly lower than the 5% threshold. Based on this finding, we reject the null hypothesis and accept the alternative hypothesis implying that tax awareness has a significant effect on tax compliance among SMEs in the Littoral region. From the analysis presented above, majority of taxpayers strongly agreed that tax awareness is very important and if the tax official continues to implement tax awareness, it will cause tax compliance to be enhanced. The latter nevertheless registered a positive outcome. Therefore, the study also confirmed that online tax filling enhances tax compliance as far as tax awareness is concerned, with humanitarian sector in Littoral region in Cameroon scoring the highest among the sectors analyzed. Relating the findings to other studies, the findings confirm to that of Omondi & Theuri (2019) who investigated how tax awareness affects compliance with tax among SMEs in Kenya and found out that awareness of tax effect positively compliance with tax. The studies done by Maluma (2020); Ondara, Kimani and Kwasira (2016) and Night and Bananuka (2020) came up with similar results and found that, a positive correlation will exist between online tax filing on tax compliance if parameters are properly in place.

Also, the study sought to establish the effect of online tax filing on tax compliance with regards to computer literacy levels. They were to state level of agreement with three questions: basic computer trouble shooting skills enhance tax compliance; understanding of online tax site navigation process; taxpayers who have internet use experience comply with their tax returns; website ease of use enhances tax compliance and saves time. The results revealed that computer literacy level has a positive effect ( $B = 0.586$ ,  $t = 2.250$ ) on tax compliance among SMEs in Littoral Douala. This indicates that a unit increase in computer literacy levels would lead to increase in tax compliance among small tax payers in Littoral by 58.6%." This result confirms the apriori theoretical expectation of the study which states that computer literacy levels influence tax compliance among SMEs. Testing for significance, this effect is statistically significant at 5% given that the p-value of 0.023 is significantly lower than the 5% threshold. Based on this finding, we reject the null hypothesis and accept the alternative hypothesis implying that computer literacy levels has a significant effect on tax compliance among SMEs in the Littoral region. Relating the findings to other studies, the findings confirm to that of Oladele et al. (2020) who investigated the influence of digital tax administration on tax compliance among SMEs in Nigeria and found a positive correlation between digital tax administration and tax compliance, emphasizing that online filing simplifies the tax process. The studies done by Kiringa and Jagongo (2018); and Bird (2018) came up with similar results and found that, a positive correlation will exist between online tax filing on the level of SMEs tax compliance if parameters are properly in place.

Finally, the study sought to establish the effect of online tax filing on tax compliance with regards to tax education. The questions tested respondents' level of agreement with regards to the tax education which effect on their general compliance levels. For instance, the variable measured compliance in terms of the sponsoring tax education; organizing seminars; tax consultation and assisting taxpayers. The results revealed that tax education has a positive effect ( $B = 0.342$ ,  $t = 3.961$ ) on tax compliance among SMEs in Littoral Douala. This indicates that a unit increase in tax education would lead to increase in tax compliance among small tax payers in Littoral by 34.2%. This result confirms the apriori theoretical expectation of the study which states that tax education influence tax compliance among SMEs. Testing for significance, this effect is statistically significant at 5% given that the p-value of 0.001 is significantly lower than the 5% threshold. Based on this finding, we reject the null hypothesis and accept the alternative hypothesis implying that tax education has a significant effect on tax compliance among SMEs in the Littoral region. Thus, the responses from the participants show that tax education enhances tax compliance. Thus, we can conclude that online filing tax has a significant effect on tax compliance with regard to tax education. Relating the findings to other studies, the findings confirm to that of Nayaho, Andrew and Saratiyeri (2020) that assessed the effect of Taxpayer Education on Voluntary Tax Compliance by SMEs in Zambia and found out that tax education has a significant positive impact on voluntary tax compliance by Small and Medium Enterprises (SMEs). The studies done by Rahayu and Kusdianto (2022); and Lubua (2022) came up with similar results and found that, a positive correlation will exist between online tax filing on the level of SMEs tax compliance if parameters are properly in place.

## 6.2 Conclusion

This study aimed at examining the effect of online tax filing on tax compliance among small taxpayers in Littoral, Douala. With some specific objectives which were to examine the effect accessibility and reliability, tax awareness, computer literacy level and tax education of tax payer on tax compliance among SMEs in Littoral Douala. Among the variable tested, the result shows that accessibility and reliability have a positive and insignificant effect on tax compliance among SMEs which implies that accessibility and reliability does not have an effect on tax compliance among SMEs to an extent. The result also shows that tax awareness, computer literacy level and tax education have a positive and significant effect on tax compliance among SMEs which implies that tax awareness, computer literacy level and tax education have an effect on tax compliance among SMEs to an extent and thus a perfect predictor of tax compliance among SMEs in Littoral. Thus, for every policy measure taken by SMES to improve online tax filing, tax awareness, computer literacy level and tax education should be taken into consideration because failure to do so may lead to detrimental effect on tax compliance. The study managed to test the objectives of the study and answers the research questions positively. The concern as to the effect of online tax filing on tax compliance among SMEs tax payers in Littoral region Cameroon has been confirmed. All the four research questions presented in the summary above have confirmed that there is a positive correlation between online tax filing on tax compliance among SMEs taxpayers under study.

## 6.3 Recommendations

After all analysis and research findings have been presented, the study makes the following recommendations in relation to the objectives and research outcomes. The study recommends that small businesses should improve system reliability and provide ongoing support. The study also recommends increased outreach and education about

online filing benefits among SMEs. It is also recommended that more training and or marketing of the online tax filing should ensure that taxpayers who embrace tax awareness and tax education. Internet is key for effective implementation and administration of online tax system, despite this fact only 33% of the respondents had internet connection. The government should therefore improve connectivity to enhance compliance among small tax payers. The more taxpayers are brought on board to use the system, the more efficiency will be achieved in terms of tax administration and more taxes paid to the government. The study recommends that computer literacy levels should be emphasized by SMEs in order to improve on tax compliance levels. This was due to high levels of significant between computer literacy levels and tax compliance levels. The researcher makes recommendations for improved training to raise awareness and make a simple web-based platform to reduce non-compliance.

The government should make the site to be user friendly that is very easy to use and accessible by all Cameroonian tax payers.

## References

- Ada, A. (2009). Effects of Information Technology on the Efficiency of Tax Administration A Case Study of Enugu State Board of Internal Revenue). *International Journal of Business and Management Invention*, 3(1), 1-10.
- Aydoğan, B., Ayat, B., & Yüksel, Y. (2013). Black Sea wave energy atlas from 13 years hindcasted wave data. *Renewable energy*, 57, 436-447. <https://doi.org/10.1016/j.renene.2013.01.047>
- Alm, J., & Torgler, B. (2006). Culture Differences and Tax Morale in the United States and in Europe. *Journal of Economic Psychology*, 27(2), 224-246. <https://doi.org/10.1016/j.joep.2005.09.002>
- Alasfour, F., Samy, M., & Bampton, R. (2016). The determinants of tax morale and tax compliance: Evidence from Jordan. In *Advances in taxation* (Vol. 23, pp. 125-171). Emerald Group Publishing Limited. <https://doi.org/10.1108/S1058-749720160000023005>
- Auyat, M. (2013). E Tax Service System and Its Adoption at Uganda Revenue Authority. *Interdisciplinary Journal of Contemporary Research in Business*, 2(4), 36-39.
- Asmi, A., & Bee, N. (2011). The Acceptance of the e-Filing System by Malaysian Taxpayers: A Simplified Model. *Electronic Journal of E-Government*, 8(1), 13-22.
- Asmi, A., & Kamarulsaman, Y. (2010). Adoption of tax e-filing : A conceptual paper. *African Journal of Business Management*, 4(3), 599-603.
- Butt, F. S., Liaqat, M., Khan, M. R., Nisar, W., & Munir, E. U. (2013). Common factors in the successful software projects in pakistan's software industry. *World Applied Sciences Journal*, 23(9), 1176-1185.
- Carroll, C. D., Hall, R. E., & Seldes, S. P. (1992). The buffer-stock theory of saving: Some macroeconomic evidence. *Brookings papers on economic activity*, 1992(2), 61-156. <https://doi.org/10.2307/2534582>
- Chindengwike, H., & Kira, A. (2021). "Effectiveness of Online Tax Filing Systems on Compliance Rates Among Tanzanian SMEs." *African Journal of Business Management*, 12(4), 134-150.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340. <https://doi.org/10.2307/249008>
- Delgado-Rodríguez, M. J., & De Lucas-Santos, S. (2022). Tax compliance, public spending and happiness in Europe. *Corporate Governance: The International Journal of Business in Society*, 22(3), 577-591. <https://doi.org/10.1108/CG-05-2021-0202>
- Elly, T. (2017). Attitude towards tax compliance among SMEs in Tanzania. *Orsea Journal*, 5(1), 55-75.
- Evans, C., & Joseph, S. A. (2015). The South African tax system: Fit for purpose? *Journal of Tax Administration*, 1(2), 26-56.
- Evans, C., et al. (2022). "Barriers to Effective Online Tax Filing Among South African SMEs." *South African Journal of Accounting Research*, 16(3), 212-229.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Addison-Wesley.
- Ford, J., & Schmidt, R. (2022). Digitalisation's Effect on Tax Compliance Attitudes Among European SMEs. *Journal of International Business Studies*, 23(1), 45-60.

- Fjord, L. B., & Schmidt, P. K. (2022). The Digital Transformation of Tax Systems Progress, Pitfalls, and Protection in a Danish Context. *Indiana Journal of Global Legal Studies*, 30(1), 227-272. <https://doi.org/10.2979/gls.2023.a886168>
- Fossung, M. F., & Warah, C. N. (2020). An Assessment of Tax Digitalisation and Tax Compliance Relationship in Cameroon: The Mediating Role of Behavioural Intentions. *Journal of Tax Research*, 10.
- Hussein, R., Mohamed, N., Ahlan, A. R., Mahmud, M., & Aditiawarman, U. (2010). G2C adoption of e-government in Malaysia: Trust, perceived risk and political self-efficacy. *International Journal of Electronic Government Research (IJEGR)*, 6(3), 57-72. <https://doi.org/10.4018/jeqr.2010070105>
- Gupta, D., & Denton, B. (2008). Appointment scheduling in health care: Challenges and opportunities. *IIE transactions*, 40(9), 800-819. <https://doi.org/10.1080/07408170802165880>
- Gwaro, O. T., 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>
- Geetha, R., & Sekar, M. (2012). E-Filing of Income Tax: Awareness and Satisfaction level of individual Tax payers in Coimbatore city, India. *Research Journal of Management Sciences*, 2319, 1171.
- Gherghina, R., et al. (2020). "E-Filing Impact on Tax Compliance Behavior Among European SMEs." *European Journal of Taxation*, 9(3), 78-90.
- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). *Diffusion of Innovations in Health Service Organisations: A Systematic Literature Review*. Blackwell Publishing. <https://doi.org/10.1002/9780470987407>
- Hodgson, G. M. (1998). The approach of institutional economics. *Journal of economic literature*, 36(1), 166-192.
- Kamarulsaman, Y., & Asmi, A. A. C. (2010). Tax e-filing adoption in Malaysia: a conceptual model. *Journal of E-Government Studies and Best Practices*, 2010, 1-6.
- Kearney, A. T. (2017). The Impact of Digital Tax Filing on Compliance. *Journal of Taxation*, 125(2), 45-52.
- Kirchler, E. (2007). *The Economic Psychology of Tax Behaviour*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511628238>
- Kariuki, G. (2013). An Assessment of Internet Usage on Small and Medium Enterprises (SMEs) in Nakuru Town Constituency. *International Multidisciplinary Journal*, 2(3), 52-64.
- Lai, M. L., & Choong, K. F. (2010). Motivators, barriers and concerns in adoption of electronic filing system: survey evidence from Malaysian professional accountants. *American journal of applied sciences*, 7(4), 562-567. <https://doi.org/10.3844/ajassp.2010.562.567>
- Lubua, M. (2022). "Online Tax Administration Effects on Compliance in Sambian SMEs." *Sambian Journal of Business Studies*, 8(1), 55-70.
- Maluma, J. (2020). "Online Tax Filing and Compliance Rates in Kenyan SMEs." *East African Journal of Business Management*, 5(2), 100-115.
- Manshura, O., et al. (2022). Effectiveness of Electronic Tax Filing Systems on Compliance Rates Among Ukrainian SMEs. *Ukrainian Journal of Finance*, 7(3), 30-47.
- Mandola, V. I. V. I. A. N. (2013). *Factors influencing the adoption and use of integrated tax management system by medium and small taxpayers in Nairobi Central Business District, Kenya* (Doctoral dissertation, University of Nairobi).
- Mallick, S. (2021). E-Tax Systems Impact on Small Business Compliance in Bangladesh. *Bangladesh Journal of Accounting*, 10(4), 88-102.
- McKerchar, M. (2001). The Impact of Tax Education on Compliance Behavior. *Australian Tax Forum*, 16(2), 143-168.
- Michael Forseh Fossung, & Chi Njoya Warah. (2022). An Assessment of Tax Digitalisation and Tax Compliance Relationship in Cameroon: The Mediating Role of Behavioural Intentions. *Journal of Finance and Accounting*, 10(1), 30-43. <https://doi.org/10.11648/j.jfa.20221001.14>

- Mokandu Osebe, R., Orayo, J., & N Muthoka, J. (2018). *Management of archives in public universities of Kenya*, Kisii University.
- Moghissi, E. S., Korytkowski, M. T., DiNardo, M., Einhorn, D., Hellman, R., Hirsch, I. B., ... Umpierres, G. E. (2009). AACE/ADA Consensus Statement. *Endocrine Practice*, 15(4), 353-369. <https://doi.org/10.4158/EP09102.RA>
- Molla, A., & Licker, P. S. (2001). E-Commerce Adoption in Developing Countries: A Model and Instrument. *International Journal of Electronic Commerce*, 6(2), 61-78.
- Muhangi, G. T. (2017). Violence in Ugandan secondary schools. *American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS)*, 27(1), 291-308.
- Mbise, K. S. (2021). The Usefulness of Mobile Compilers for Learning Computer Programming. *The Journal of Informatics*, 1(1), 43-57. <https://doi.org/10.59645/tji.v1i1.18>
- Mkumbo, D. R., & Mbise, K. S. (2022). The Influence of Social Media Advertisements on Fast-Food Consumption. *The Journal of Informatics*, 2(1), 22-32. <https://doi.org/10.59645/tji.v2i1.62>
- Nkwe, N. (2013). Tax payers' attitude and compliance behavior among small medium enterprises (SMEs) in Botswana. *Business and Management Horizons*, 1(1), 113-137. <https://doi.org/10.5296/bmh.v1i1.3486>
- Night, J., & Bananuka, J. (2020). Digital Taxation Effects on Compliance in Ugandan SMEs. *Ugandan Journal of Business Studies*, 4(1), 50-68.
- Odongo, J. (2014). Lending terms and financial performance of small medium enterprises in Uganda: Case of Soroti District. *Research Journal of Finance and Accounting*, 5(2).
- Oladele, A., et al. (2020). Digital Tax Administration and Tax Compliance Among SMEs in Nigeria. *Journal of Accounting Research*, 15(2), 45-67.
- Ojo. (2022). Online Tax Filing Effects on Compliance Levels in Nigerian SMEs Post-COVID. *Nigerian Journal of Economic Studies*, 14(2), 120-135.
- Ofori, E. G. (2009). *Taxation of the informal sector in Ghana: A critical examination* (Doctoral dissertation).
- Osambo, A. (2009). *Effects of Taxation on SMEs*. Unpublished master's thesis, School of Economics, Kenyatta University.
- Osebe, R. (2013). An Analysis of Factors Affecting Tax Compliance in the Real Estate Sector in Kenya: A Case Study of Real Estate Owners in Nakuru Town. *Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB)*, 1(4), 7-9.
- Ramayah, T., & Jaafar, M. (2008). Technology usage among construction students the moderating role of gender. *Journal of Construction in Developing Countries*, 13(1), 63-77.
- Rahayu, S., & Kusdianto, A. (2022). "The Role of Digital Platforms in Enhancing Tax Compliance Among Indonesian SMEs." *International Journal of Finance and Accounting*, 11(1), 23-35.
- Ramoo, V. (2006). Determinants of perceived ease of use of e-filing. *Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB)*, 3(1), 17-20.
- Semlambo, A., Lubua, E. W., & Mkude, C. (2022). Information Systems security policy framework for enhanced ICT governance in public institutions of Tansania. *The Journal of Informatics*, 2(1), 54-68. <https://doi.org/10.59645/tji.v2i1.91>
- Simiyu, D. (2013). Challenges Affecting Collection of Turnover Tax in Nairobi County-Kenya. *International Journal of Business and Social Research*, 3(4), 25-27.
- Rogers, E. M. (1962). *Diffusion of Innovations*. Free Press.
- Turner, L., & Apelt, C. (2004). Globalisation, innovation and information sharing in tax systems: The Australian experience of the diffusion and adoption of electronic lodgement. *eJTR*, 2, 241.
- Van Deursen, A. J., & Van Dijk, J. A. (2014). The Digital Divide in Digital Skills: The Role of Social Resources. *New Media & Society*, 16(1), 31-51. <https://doi.org/10.1177/1461444813487959>
- Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186-204. <https://doi.org/10.1287/mnsc.46.2.186.11926>



- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478. <https://doi.org/10.2307/30036540>
- Venkatesh, V., & Shang, X. (2010). Unified theory of acceptance and use of technology: US vs. China. *Journal of global information technology management*, 13(1), 5-27. <https://doi.org/10.1080/1097198X.2010.10856507>
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Bolding the Future: Implications for Research and Practice. *MIS Quarterly*, 36(1), 157-178. <https://doi.org/10.2307/41410412>
- Venkatesh, V., Thong, J. Y., & Xu, X. (2016). Unified theory of acceptance and use of technology: A synthesis and the road ahead. *Journal of the association for Information Systems*, 17(5), 328-376. <https://doi.org/10.17705/1jais.00428>
- Young, N. (2012). The Effect of Global E Commerce on Taxation Legiuslation and The Permanent Establishment Concept in South Africa. *International Journal of Economics and Finance*, 3(3), 10-12.

### Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).