

DEMOGRAPHIC FACTORS AND TAX COMPLIANCE IN YENAGOA, BAYELSA STATE

By

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Abstract

This study examined the effects of demographic factors on tax compliance level in Yenagoa, Bayelsa state. The study is survey in nature and adopted the correlation and regression techniques to examine this influence. The adopted demographic factors are gender of taxpayers, income levels of taxpayers, educational levels and marital status. The correlational analysis showed that only marital status had negative association with tax compliance, although not significant, while income levels, educational levels and gender all had positive association with tax compliance. Also with the regression analysis, it was found that marital status has no significant influence on tax compliance, while the influences of income level, educational level and gender was found to be significantly positive. The study suggests that government tax policies should not prioritize marital status, as it is not significant. Instead, policies should focus on increasing income levels to improve tax compliance. Gender plays a positive role in tax compliance, so the government should focus on tax education for women. Lastly, the government should continue promoting education to increase tax compliance, as it benefits the people.

Keywords: Tax compliance, Demographic, Gender, Income level, Education level, Marital status

Introduction

The subject of tax cannot be overemphasised due to the all- important role it plays in an economy. Tax issues are taken very seriously by climes that are bent on making meaningful progress to advance the course of its people because it has been adjudged the main source of revenue to the government (Saidinet *al.*, 2016). Tax is an integral source of government's revenue which is used for the financing of its developmental agenda. However, even though the tax laws are expressly spelt out, popular assumption is that it is difficult to persuade taxpayers to make their tax payments and also to make tax returns in compliance to the tax laws (James & Alley, 2002). One area which has been a source of concern, especially in the developing countries is tax compliance. Since tax payers have the responsibility of paying their taxes to the relevant tax authorities, some scholars have tried to ascertain the factors enhance tax compliance. Factors that influence compliance to tax can be linked to economic, social and psychological (Brooks, 2001), or can be grouped into four cutting across different disciplines, and these groups are the economic factors that consist of tax rates, tax audits and perception of government spending. The second is institutional factors which consist of tax authority's roles, tax return's simplicity and administration and probability of detection. Social factors group make up the third group, which include ethics and attitude, equity and fairness's perceptions, political affiliation and changes in government's policy, as well as referent groups. Personal factors group completes the list, and it consist of individual's financial limitations, knowledge of the offences and their penalties (Kirchler, 2007).

Tax payers owe the state a duty to pay their tax in compliance with the provisions of the law. Tax compliance has become a topical issue, arising from the fact that the state requires fund to boost its revenue and enhances its spending ability in order to meet the yearnings of its citizens. While some tax payers willingly file their tax returns and pay their taxes accordingly, some others do not, and most often than not, are not desirous to pay their tax. What could be responsible for this non-compliance, and to those who willingly pay their taxes, what could be the underlying factor behind their wilful compliance to their tax obligations. Do demographic factors in any way influence the tax payers in their compliance to tax? Tax payers are of different gender, does their gender status in way contribute to their tax compliance? Does being a male stimulate compliance to tax, or that being a female limits their tax compliance rate? Another area of insinuation that may have some level of influence to tax compliance is the educational level of the tax payers, and it vary from one tax payer to the other. Does this educational level in any way contribute to their tax compliance? Will it be true that a person that is learned stand a higher chance of compliance to tax, or vice-versa? It is unarguable that tax payers are of different income level standings. Could the difference in income level in any way contributory to their compliance to tax? Since tax payers do not all share the same marital status, does the marital status of the tax payers enhance their compliance to tax? Since it is believed that certain factors are the underlying tonic that results in tax compliance, could any of these highlighted factors be attributable to that tonic?

This study therefore looks at demographic factors of tax payers in relation to tax compliance. The Business Dictionary defines demographic factors as the socioeconomic characteristics of a population expressed statistically, such as age, sex, education level, income level, marital status, occupation, religion, birth rate, death rate, average size of the family, average age at marriage (www.businessdictionary.com). This study is set to establish if demographic factors contribute to the compliance to tax by the tax payers.

In Australia, Devos (2008) examined tax evasion behaviour and demographic factors. The study concluded that there is a significant relationship between the demographic variables considered and the attitude of taxpayers. In the same vein, Widiyanto (2015) examined the effects of demographic factors on individual taxpayers in Indonesia and found that there is a significant relationship between demographic factors and tax compliance.

In Nigeria, Peter and Ferdinand (2017) studied demographic factors and taxation in Cross River state, the study held that, while age, gender and religion did not have any impact on revenue generation, employment status, income level and educational level on the other hand, have impact on tax compliance.

Hypotheses

Based on the questions put forward, the following hypotheses are thus formulated which will be empirically tested later in the study.

H01: Taxpayer's gender does not affect compliance to tax.

H02: The educational level of the tax payer has no relationship with tax compliance.

H03: Taxpayer's income level has no impacton tax compliance.

H04:Taxpayer's marital status does not contribute to tax compliance.

Conceptual Review

Tax is a compulsory levy imposed by a public authority on incomes, consumption and production of goods and services (Ishola, 2011). A good tax system should have tax laws, tax policy and tax administration in order to expect tax compliance. Marti (2000) posits that where there is a good tax system, it will compel the individuals and organizations to pay a portion of their income to the government as their payment of tax.

Tax Compliance

Tax compliance can be seen as the capability and desire in obeying the tax laws. Tuncer (2002) opines that it is the realisation of tax liability from the various taxpayers in a legal manner. It is the willingness of individuals and other taxable entities to act in accordance with the spirit as well as letter of the law and administration without the application of enforcement activity (James & Alley, 2002). Kirchler (2007) asserts that tax compliance is the taxpayer's willingness to pay and report their tax return in order to aid the country's developmental strides. Magiya (2016) classified compliance to tax into two forms, which are administrative compliance which is the compliance to all administrative roles that is not limited to just lodging but also in the payment of taxes, and technical compliance which is the compliance to the requirements of the tax laws from the technical perspective that may include the computations of taxes, understanding the tax law provisions in the payment of their portion of tax.

Gender

According to the World Health Organization (WHO), gender refers to the socially constructed characteristics of women and men – such as norms, roles and relationships of and between groups of women and men. Gender is the range of characteristics pertaining to, and differentiating between, masculinity and femininity. Depending on the context, these characteristics may include biological sex (i.e., the state of being male, female, or an intersex variation), sex-based social structures (i.e., gender roles), or gender identity. In an attempt to explain the gender traits and it constitute their behaviour in different spheres of life, Torgler and Valev (2006) posits that there exist possible differences in both male and female as a result of their criminological sides like drug abuse and cases of automobile accidents incidents. According to Dollar et al. (2001), females' presence in the parliament results in statistically negative impacts on corruption. The differences of tax morale levels between male and females may be attributable to the kind of tax treatment, or even female labour participation rate (Torgler, 2004).

Educational Level

According to Statistics Canada (2016), educational level is referred to that highest level of educational attainment that a person has successfully achieved. Successful completion of a level of education refers to the achievement of the learning objectives of that level, typically validated through the assessment of acquired knowledge, skills and competencies. According to Fredrick and Peter (2019), education is the tax payers' ability to understand and to either comply to tax payment or not. Some empirical studies have shown mixed results with respect to education and tax compliance. Richardson (2006) and Dubin and Wilde (1998) found positive relationship between education and tax compliance, whereas, Jackson and Milliron (1986) and Dubin et al. (1990) concluded that highly educated taxpayers have the capacity to exploit loopholes in tax laws to reduce their tax liabilities. In Nigeria, the educational level could be either primary school certificate, secondary school certificate, National Diploma, B.Sc/HND, M.Sc/MBA or Ph.D.

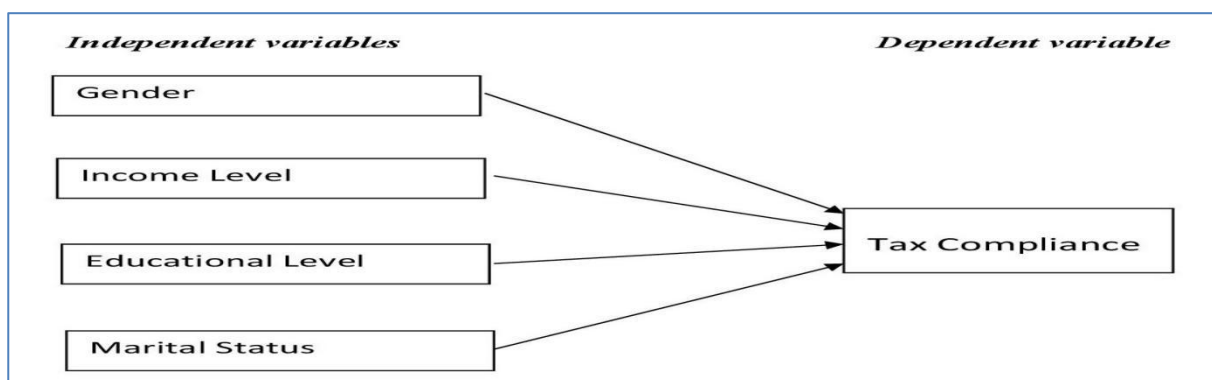
Income Level

Income level is that level of consumption and saving opportunity an entity received over a particular period of time, and its expression is globally quantified in monetary terms. On the part of households and individuals, the level of income is the level of the summation of wages, salaries, profits, interest received, rent received, as well as other forms of earnings that are gotten over a specified time period. This is usually described as the gross income of that individual or household. It is from this gross income that taxes and other forms of deductions are made in arriving at the net income. The World Bank in 2018 classified income level into four income groups — high, upper-middle, lower-middle, and low. Studies like that of Jackson and Milliron (1986), Christian and Gupta (1993) and Hite (1997) argues that income level has a mixed and unclear impact on tax compliance. Engida and Baisa (2014) posits that progressive tax rates might encourage the higher income group to evade rather than the lower income group because their (higher income group) tax rates and taxable income are high, thus, making the tax liabilities much higher than lower income group. Mohani (2001) asserts that in a country where income redistribution is not satisfying, the higher income group tends to evade more because the high income earners might feel betrayed and unfairly treated.

Marital Status

Marital status is that distinct option that describes a person's relationship with a significant other. Marital status is what describes if a person is married, single, divorced, or widowed. Usually, while filling forms or other crucial documents for documentation purposes, marital status is used to ascertain if a person is married or single. A person classified as married simply means that the person has been legally wedded by a competent jurisdiction. Research in marital status as a demographic factor in tax compliance explores how being married, single, divorced, or widowed may influence an individual's likelihood to comply with tax obligations. Different researchers came up with different results in relation to marital status. Torgler (2003) asserts that marital status and family size influences tax compliance, with married individuals often showing higher compliance rates. Almet *al.* (1992) found that individuals who are married or have families are generally more compliant due to both economic and psychological factors. On his part, Richardson (2006) concluded that married women comply more to tax than single or divorced women.

Figure 1: Conceptual Framework



Source: Researcher's Desk

Theory of Reasoned Action

This theory provides explanation on the relationship that exists between attitudes and behaviours in the actions of humans. It is used for predictive purpose as to how an individual's behaviour will be due to their already known attitude and behavioural motives. The theory emanated from the work of Martin Fishbein and Icek Ajzen in 1967. The essential motive of this theory is to have understanding of individual's voluntary behaviour by critically evaluating the underlying essential drive to perform an action. According to the theory, a person's intention to exhibit a particular behaviour forms the major predictor whether or not such behaviour was performed, and that the intention of a person to show a specific behaviour comes before the behaviour is actually displayed. Hence, the relevance of this theory to this study is to understand what factor(s) that triggers the taxpayer's intention resulting to his tax compliance behaviour.

Fiscal Exchange Theory

This theory posits that where government's expenditures are visible, it will serve as a motivating factor to tax compliance. Since taxpayers are basically concerned with what benefit they can derive from the tax they pay in terms of public goods and services even though there is no exact commensurate benefit of the tax paid, taxation can be viewed as a form of relationship between the taxpayer and the government that has contractual connotation (Moore, 2004). Though this theory has been widely accepted and used, empirical evidence to back-up the theory is ambiguous (D'Arcy 2011). Compliance should be increased by the government by way of efficiently providing goods demanded by the citizens and accessibility of such goods should be unambiguous (Moore, 2004).

Empirical Review

Sulestiyono *et al.* (2024) carried out a study on Taxpayer compliance level; influencing demographic factors on MSMEs in Semarang city. A total of 100 MSMEs were used as sample upon which questionnaire were administered with the purpose of obtaining the required data. Analysis was conducted using regression and correlation analysis. The result proved that while age have no significant effect on tax compliance, age, happiness and altruism have significant effect on tax compliance.

Dhakalet *al.* (2023) examined the impact of demographic on tax compliance with evidence from Hetauda. The study used a sample of 300 taxpayers from the population of the taxpayers in the city, drawing data through the use of questionnaire from the sample. The study employed the binary logistic regression model and the Pearson correlation matrix in the analysing of the obtained data through SPSS and E-views. The result revealed that both income level and gender have significant effect on tax compliance, while age and level of education does not have any significant effect on tax compliance.

Ikhsanet *al.* (2023) studied demographic characteristics and tax compliance in the Province of West Kalimantan, Indonesia. Using 20 persons as its population for the study, and data drawn from them, analysis was done through the use of multiple regression analysis. The result indicated that age has a significant but negative effect on tax compliance, both altruism and happiness have significant and positive effect on tax compliance, whereas, gender has no effect on tax compliance.

Schoeman (2023) examined the impact of demographic variables on value added tax compliance in South Africa. A total of 131 respondents were used for the study from which the study's data were obtained. The

analysis was conducted using Pearson's Chi-Square test of independence and the Fisher Exact test. Results from the test indicated that gender, education and tax knowledge have effect on the tax compliance decision.

Umoffonget *al.* (2020) conducted a study on demographic and socio-economic factors as determinantsof tax compliance in self-assessment system in AkwaIbom State, Nigeria. The study identified 3,800 MSMEs as registered with the State Board of Internal Revenue, but using the Taro Yamane formula to arrive at 400 respondents that constituted the sample size. A well-structured questionnaire was distributed to the respondents, and the data obtained were analysed using regression analysis. Results from the analysis reveals that level of education has a positive and significant relationship with tax compliance, while income level showed a negative influence on tax compliance.

Widianto (2015) carried out a study on the effect of demographic factors on individuals'tax compliance in Duren Sawit, Indonesia. The study used a total of 2,383 taxpayers as its population, basing the variables on age level and taxpayer gender as demographic factors as well as service sector taxpayers, tax return status in 2011, and also tax return status in 2012 as other variables. Data for the study was obtained from Directorate General of Taxes in Indonesia. Analysis was conducted with the use of three different statistical methods, and these methods are the Probit, Logit and Linear Probability methods. Findings from the first model reveal that the whole of the explanatory variables are significant statistically in influencing of tax compliance of individuals. On the other hand, the second model revealed that service-sector variable alone showed statistical significance in the explanation of compliance by the individual taxpayer. The study concluded that there is a significant correlation between sector of the taxpayers and compliance to tax by individuals in Indonesia.

Tazegul (2016) in his study on the evaluation of factors having impact on tax compliance as regards to taxpayers in Kars, in Turkey, the study identified demographic factors, legal factors, social-economic factors, political-managerial factors, factors relating with tax ethics, and factors relating with accounting application. From a total of 421 questionnaire that were administered, 386 were returned and analysis was conducted on these 386 taxpayers through the use of Analysis of Variance (ANOVA) in order to ascertain whether there exist any significant difference between the views of the taxpayers in relation to the assertions inherent in the various criteria as per the independent variables which are monthly income, education level and age.Of the 386 taxpayers studied, 301 are men, representing 78%, while 85 of them are women, representing 22%. Findings on the study revealed that there exists reasonable difference in the opinions of the taxpayers on their demographic factors and the other factors considered.

Maranduet *al.* (2015) in their study "determinants of tax compliance: a review of factors and conceptualizations", sought to know why people pay taxes imposed on them while others fail to pay as expected. The study was based on previous works of other researchers wherein the data obtained from those works were analysed using meta-analysis. On question as to whether behavioural control is necessary while determining tax compliance, the result showed that there is a relationship between behavioural control and tax compliance. On the question on whether social norm is important in determining compliance to tax, the result showed that there exists a relationship between the variables. As to if attitude is important in the determination of tax compliance, the result revealed that there is every possibility that a relationship exist between attitude and tax compliance.

In a similar quest in determining factors which shapes taxpayers' compliance, Engida and Baisa (2014), in their study on the factors influencing taxpayers' compliance with the tax systemin Mekelle city, in Ethiopia,

examined a total of nine compliance factors. These factors which are in no particular order are: change of government's policy, tax authority's role, chances of getting audited, views on equity and fairness, knowledge of tax, referral group, penalties involved, constraints of finance, and views on government's spending. Research design adopted for the study was the cross-sectional survey approach, while 102 respondents' responses formed the data that was analysed using regression analysis. The result revealed that compliance to tax was influenced by the chances of being audited, government policy changes, as well as constraints of finance.

Devos (2008), in his study on tax evasion behaviour and demographic factors in Australia, examined the relationship that exists between demographic variables and individual taxpayer's attitude towards evasion of tax. The demographic factors adopted for the study were gender, age, ethnicity, occupation, income level, location and tax return filling experience. A total of 300 taxpayers were drawn for the study from which data were obtained and analysed using Chi-square, the result indicates that there is significant relationship between the demographic variables considered and the attitudes of taxpayers in Australia with respect to tax evasion.

Peter and Ferdinand (2017) examined demographic and taxation in Cross River state in a bid to ascertain such demographic factors which have influence on taxation in the state and its rural suburbs. The study examined compliance to tax behaviour differences using certain taxpayers' demographic variables to form the foundation for the data to be analysed. These data were obtained from a secondary source and analysed through a trend analysis, the result indicates that certain demographic factors like age, gender, religion/ethnicity, and population, adopted for the study didn't seem to have any form of influence on the revenue generated from taxation in the entire state. However, other demographic variables of the study like status of employment of the taxpayer, level of income of the taxpayer, and also the taxpayers' educational history showed that they have influence on tax compliance among the taxpayers in the rural areas of the entire state.

Al-Mamun *et al.* (2014) examined the impact of demographic factors on tax compliance attitude and behaviour in Malaysia, using age, gender, ethnicity, education level and employees' income as the demographic factors. A total of 92 respondents from Johor Bahru, Johor were used for the study, while regression analysis was employed to analyse the data obtained from the questionnaire administered. The result showed that both male and their female counterpart possess the same compliant attitude. However, ethnicity, academic qualification and attitude towards compliance revealed a statistically significant relationship with tax compliance.

Olowookere and Fasina (2013), isolated taxpayers' education as a demographic variable in their study on taxpayers' education as a key strategy in achieving voluntary compliance in Lagos state, with the aim of ascertaining the importance of tax education on the compliance to tax payments. With the use of a simple random technique, a total of 250 taxpayers were drawn and questionnaire administered to them from which the data for the study was obtained. Analysis of Variance (ANOVA) was employed as the statistical tool for the analysis, and the result asserts that programmes on tax education that are geared towards the sensitization of taxpayers on the socio-economic implications of the opportunities of tax evasion and accountability in the use of the income from taxation have significant impact on the voluntary compliance of the taxpayers in Lagos state.

In his quest to ascertaining the factors that influences voluntary tax compliance in Gedeo, Ethiopia, Deyganto (2018), examined some demographic, social, individual, economic and institutional factors. 323 taxpayers from the zone were examined and data was obtained from both primary and secondary sources through questionnaire administered and published and unpublished works respectively. Analysis of the data was carried out through the use of Binary logistic regression, and the result indicated that some demographic variables adopted for the study like the age and gender of the taxpayers are essential factors that influences voluntary compliance to tax system, which is in contrast to the findings of Peter and Ferdinand (2017). However, other demographic variables examined in the study like level of education, occupation of the taxpayer, taxpayers' level of income, showed no significant influence on voluntary compliance attitude of the taxpayers.

Gap in Literature

While studies on demographic factors have been conducted covering certain countries in Europe, Asia, Africa and other continents of the world, as earlier discussed, here in Nigeria, studies that are conducted are centred on individual states like Lagos and Cross River, leaving a number of states to be covered. Hence, this study is centred on Yenagoa, the Bayelsa state capital, expecting to examine certain demographic factors among taxpayers in the state and how they influence tax compliance.

Methodology

For the purpose of this study, the survey method of research was adopted. The projected population of Yenagoa city, Bayelsa state for 2022 was ascertained from the National Population Commission (NPC) which gave a figure of 524,400. Of this figure, a portion of it was estimated to be the percentage of taxable persons, which is 48 percent. The 48 percent was applied on the population to arrive at 251,712. Again, the unemployment rate in the state as given by the National Bureau of Statistics (NBS) is 32.6% was applied to the taxable population to arrive at 169,654, which then formed the population for this study. The National Bureau of Statistics (NBS) defines unemployment as "the number of people within the labour force who did not have a job and did nothing.

The age range population of between 20-69 years was used as an assumption to be the taxable persons. This was done as a result of unavailability of data in this regard from the State Board of Internal Revenue.

The Taro Yamene formula was employed to obtain a sample size of 399 persons. A well-structured five-point Likert scale questionnaire was administered to the 399 persons that were chosen at random in order to obtain the required data, but only 360 were returned. Questions like 'taxpayer's gender have impact in his tax compliance', 'the educational level of the taxpayer influences his tax compliance', etc. the questions asked touches on the various variables in the work. Data obtained was analysed using the Pearson Product Moment correlation coefficient with the aid of Statistical Package for Social Sciences (SPSS).

The relationship between demographic factors and tax compliance is defined by the regression analysis as below:

$$\text{tax compliance (TXCMPL)} = f(\text{demographic factors})$$

If the demographic factors are marital status (MARTS), income level (ILV), education level (EDL), and gender (GND), the then above model will be respecified as:

$$TXCMPL = f(MARST, ILV, EDL, GND)$$

By expansion, the model becomes:

$$TXCMPL = \alpha + \beta_1 MARST + \beta_2 ILV + \beta_3 EDL + \beta_4 GND + \mu$$

Where,

TXCMPL	-	tax compliance
MARST	-	marital status
ILV	-	income level
EDL	-	educational level
GND	-	gender
α	-	model intercept
$\beta_1 - \beta_4$	-	model coefficients

Analysis and Results

In this section, the data obtained from the questionnaire was gathered and put in a usable form to give room for analysis. A total of ten carefully structured questions were asked to suit the four hypotheses of this work. Questions one and two are related to hypothesis one, questions three and four are related to hypothesis two, questions five, six, seven and eight are related to hypothesis three, while questions nine and ten are related to hypothesis four. The questionnaire was based on a five-point Likert Scale with Strongly Agree (SA) weighted as 5 points, Agree (A) as 4 points, Neutral (N) as 3 points, Disagree (D) as 2 points, while Strongly Disagree (SD) as 1 point and the result is presented below:

Out of the three hundred and ninety-nine (399) questionnaires that were distributed, three hundred and sixty (360) were returned. This constitutes about ninety percent (90.23%) of the sample size as against 9.77% that were not returned. From the researcher a total of 399 survey respondents and collected questionnaires of 360 taxpayers, therefore, this study had a response rate 90.23%. The responses from the questionnaires were used to analyse the data and write the report for this study. Mugenda and Mugenda (2003) suggest that a response rate of 50% and above is adequate for analysis and reporting. So, this was considered acceptable standard for analysing collected data. Moving forward, the response volume of three hundred and sixty (360) were represented in frequency values and simple percentage. This section presents the frequency values and simple percentage indexes of responses of respondents to each item on the questionnaire.

Table 1: Response rate of Questionnaire

Number of Questionnaires Distributed	Number of Returned	Percentage of Returned (%)	Number not Returned	Percentage not Returned (%)
399	360	90.23	39	9.77

Source: Researcher, 2024

From the returned questionnaires, the study findings on the gender of respondents indicated that majority of respondents, 73.06% (263), were males compared to their female counterparts who composed of 26.94% (97). The researcher got information from both sexes.

The study results on the age of respondents indicated that 36.97% (133) of respondents were aged between 18 and 30 years, 26.94% (97) of the respondents were between 31 and 40 years, 17.22% (62) of the respondents were between 41 and 50 years, 16.39% (59) of the respondents were between 51 and 60 years, and 2.5% (9) where the oldest number of respondents were between 61 and above years of age. The researcher considered the age of respondents with the aim of documenting dependable information based on respondents' age in terms of varying years of lifetime experience and understanding with the study problem being investigated.

Again, the marital status of the respondents was also taken to account. Results showed that 136 of the respondents representing 37.78% of the respondents were single, 122 or 33.89% were married, 41 or 11.39% of them fell under the heading of either divorced or separated from marriage, and 61 or 16.94% were either widows or widowers. From the analysis, it showed that stability in relationship tends to be the outcome of taxpayers given that majority of them are either single or married.

Presentation of Respondents' Demographic Data

Table 2: Demography of respondents

	Demography	Respondents	Proportion (%)
Gender	Male	263	73.06
	Female	97	26.94
	Total	360	100
Age Distribution	18-30	133	36.94
	31-40	97	26.94
	41-50	62	17.22
	51-60	59	16.39
	61>	9	2.50
	Total	360	100
Marital Status	Single	136	37.78
	Married	122	33.89
	Divorsed/Seperated	41	11.39
	Widowed	61	16.94
	Total	360	100
Level of Education	Primary education	103	28.61
	Secondary education	142	39.44
	Tertiary education	115	31.94
	Total	360	100

Source: Researcher's survey, 2024

The study findings on the level of education indicated that 28.61% (103), the largest number of respondents had finished secondary school education and represent 39.44% (143), the last category of respondents, representing 31.94% (115), had tertiary education certificate. The researcher considered the levels of education attained by respondents in order to determine the appropriate data with regard to respondents' levels of literacy and understanding. In as far as the title of study was concerned with education, the results imply that the respondents were expected to understand the questionnaire and give valid response since they had better understandings of the questions being asked. In the event that they could not provide answers themselves, the researcher oversaw the administration of the questionnaires.

Descriptive Statistics of ICT and SME development

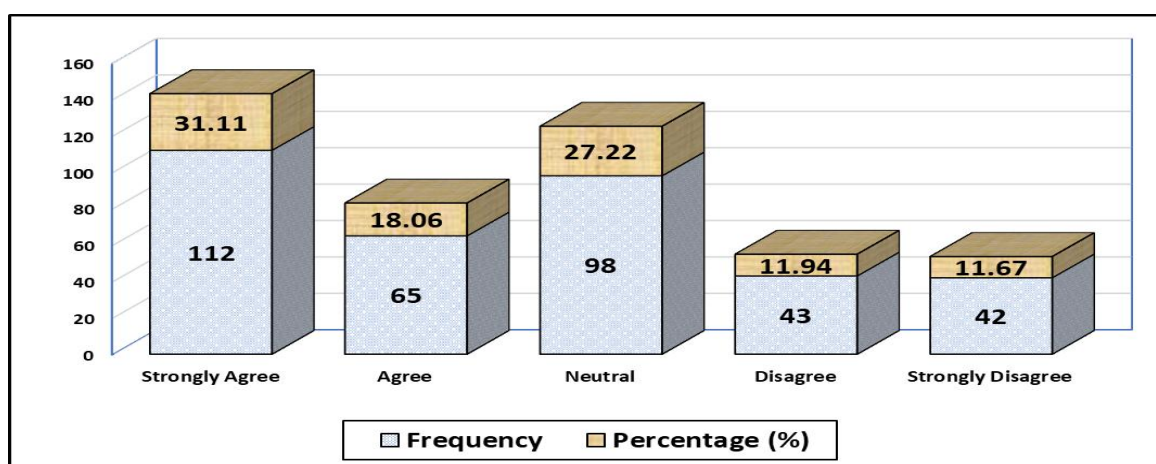
Table 3: Descriptive statistics of tax compliance level from taxpayers

Tax compliance level	Frequency	Percentage (%)
Strongly Agree	117	32.50
Agree	78	21.67
Neutral	57	15.83
Disagree	79	21.94
Strongly Disagree	29	8.06
Total	360	100

Source: Researcher's survey, 2024

As observed in Table 3 above, it can be deduced that majority of the respondents under study strongly agreed that they comply with paying tax in Yenagoa, Bayelsa state Nigeria. This represents a 32.50% of the 360 respondents. Also, 78 respondents or 21.67% complied with paying tax in Yenagoa, Bayelsa state Nigeria. While 57 or 15.83% of respondents were undecided about complying with tax payment in Yenagoa, Bayelsa state Nigeria, 79 or 21.94% disagreed and 29 or 8.06% strongly disagree to complying with paying tax in Yenagoa, Bayelsa state Nigeria. In summary, more respondents of Yenagoa agree to complying with tax payment in Yenagoa, Bayelsa state Nigeria.

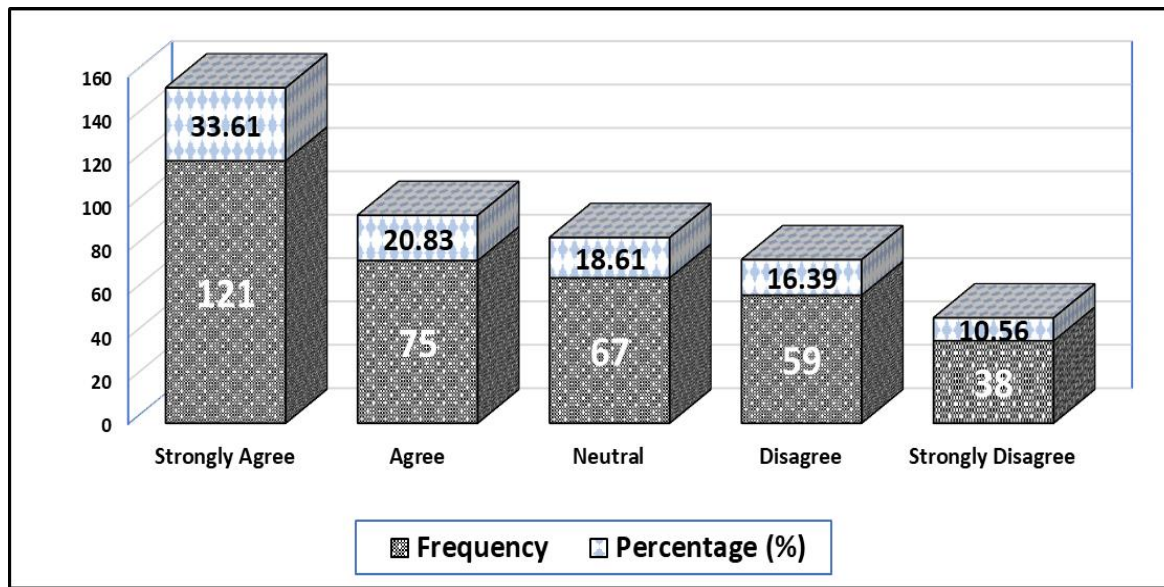
Figure 2: Descriptive statistics of Taxpayer's gender (GND) does not affect compliance to tax



Source: Researcher's survey, 2024

As observed in figure 2 above, it can be deduced that majority of the respondents under study strongly agreed that taxpayer's gender has influence on tax compliance level in Yenagoa, Bayelsa state. This represents a 31.11% of the 360 respondents. Also, 65 respondents or 18.06% agree that taxpayer's gender has influence on tax compliance level in Yenagoa, Bayelsa state. While 98 or 27.22% respondents were undecided about the importance of taxpayer's gender on tax compliance level in Yenagoa, Bayelsa state, 43 or 11.94% disagreed and 42 or 11.67% strongly disagree that taxpayer's gender has influence on tax compliance level in Yenagoa, Bayelsa state. In summary, more taxpayers agree that taxpayer's gender has influence on tax compliance level in Yenagoa, Bayelsa state.

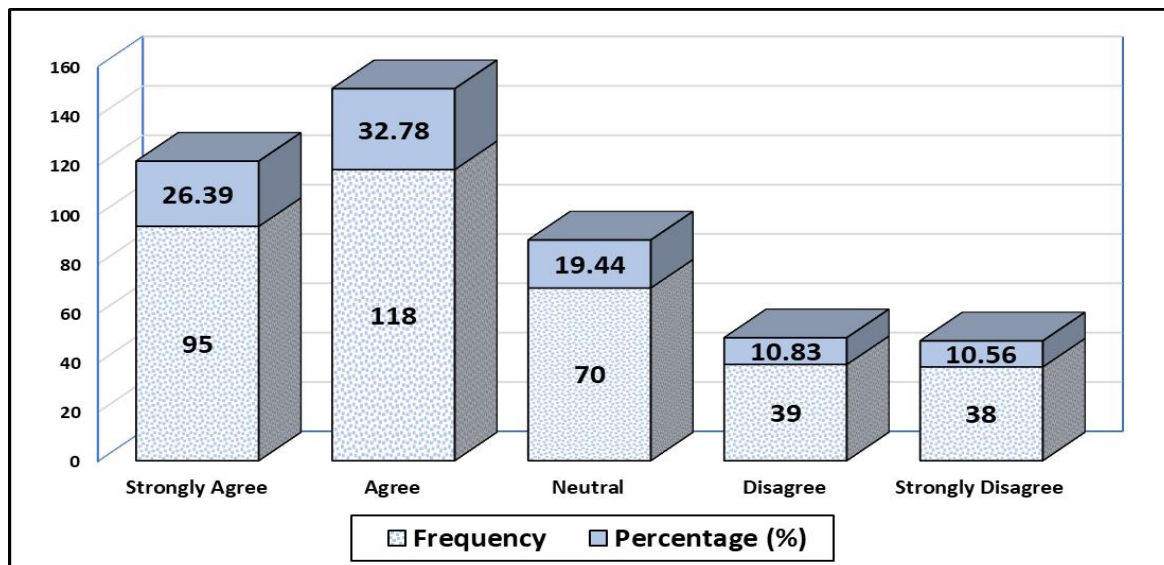
Figure 3: Descriptive statistics of the influence of educational level of the tax payer (EDL) on tax compliance



Source: Researcher's survey, 2024

As observed in figure 3 above, it can be deduced that majority of the respondents under study strongly agreed that taxpayer's educational level has influence on tax compliance level in Yenagoa, Bayelsa state. This represents a 33.61% of the 360 respondents. Also, 75 respondents or 20.83% agree that taxpayer's educational level has influence on tax compliance level in Yenagoa, Bayelsa state. While 67 or 18.61% respondents were undecided about the importance of taxpayer's educational level on tax compliance level in Yenagoa, Bayelsa state, 59 or 16.39% disagreed and 38 or 10.56% strongly disagree that taxpayer's educational level has influence on tax compliance level in Yenagoa, Bayelsa state. In summary, more taxpayers agree that taxpayer's educational level has influence on tax compliance level in Yenagoa, Bayelsa state.

Figure 4: Descriptive statistics on the influence of taxpayer's income level (ILV) on tax compliance

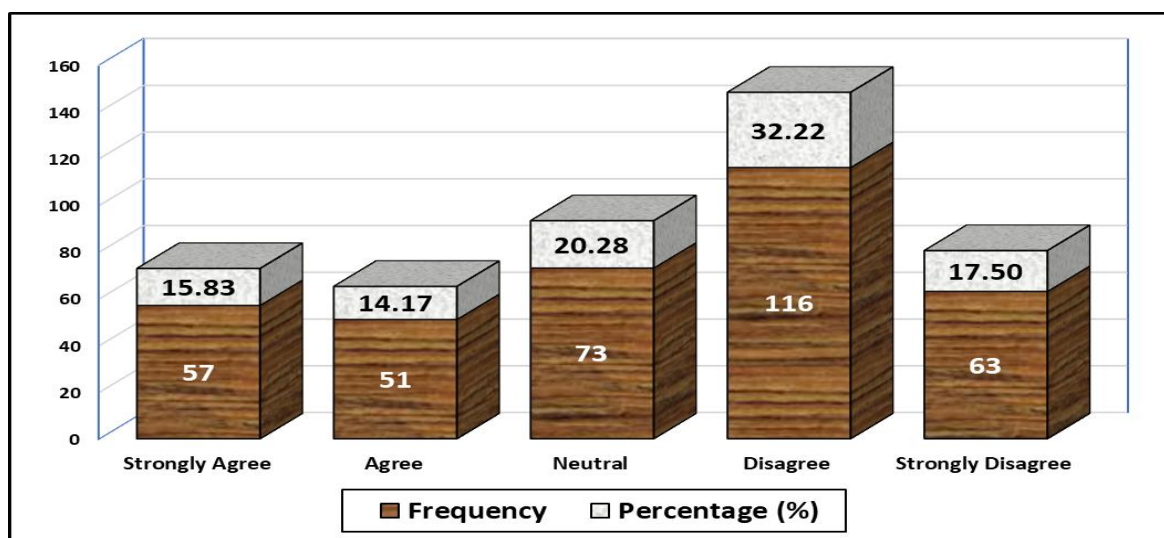


Researcher's survey, 2024

Source:

As observed in figure 4 above, it can be deduced that majority of the respondents under study strongly agreed that taxpayer's income level has influence on tax compliance level in Yenagoa, Bayelsa state. Specifically, 95 or 26.39% of the 360 respondents strongly agreed to the influence income level have on tax compliance. Also, 118 respondents or 32.78% agree that taxpayer's income level has influence on tax compliance level in Yenagoa, Bayelsa state. While 70 or 19.44% respondents were undecided about the importance of taxpayer's income level on tax compliance level in Yenagoa, Bayelsa state, 39 or 10.83% disagreed and 38 or 10.56% strongly disagree that taxpayer's income level has influence on tax compliance level in Yenagoa, Bayelsa state. In summary, more taxpayers agree that taxpayer's income level has influence on tax compliance level in Yenagoa, Bayelsa state.

Figure 5: Descriptive statistics on the influence of Taxpayer's marital status (MARST) on tax compliance



Source: Researcher's survey, 2024

As observed in figure 5 above, it can be deduced that majority of the respondents under study disagree that taxpayer's marital status has influence on tax compliance level in Yenagoa, Bayelsa state. This represents a 116 or 32.22% of the 360 respondents. Also, 63 respondents or 17.50% disagree that taxpayer's marital status has influence on tax compliance level in Yenagoa, Bayelsa state. While 73 or 20.28% respondents were undecided about the importance of taxpayer's marital status on tax compliance level in Yenagoa, Bayelsa state, 51 or 14.17% disagreed and 57 or 15.83% respectively agree and strongly agree that taxpayer's marital status has influence on tax compliance level in Yenagoa, Bayelsa state. In summary, more taxpayers disagree that taxpayer's marital status has influence on tax compliance level in Yenagoa, Bayelsa state.

Multicollinearity Test

The study tested multicollinearity using Variance Inflation Factor (VIF) or Tolerance, with a threshold of 10 for VIF. This threshold is supported by previous studies, which suggest that values exceeding 10 may indicate multicollinearity problems. The Variance Inflation Factor (VIF) measures the degree of multicollinearity in a coefficient, with values ranging from 1 to 10, and value between 5-10 indicate potential

issues. The tolerance, the reciprocal of VIF, also reports high or low multicollinearity, when its values are close to 0, it indicates high multicollinearity, while a tolerance value of 1, or close, indicates low multicollinearity.

Table 4 displays the results of the multicollinearity test on the predictor variables and the moderating variable.

Table 4: Results of Multicollinearity Test

Variable	VIF	Tolerance (1/VIF)
Gender (GND)	1.0255	0.9752
Educational Level (ELV)	1.0599	0.9435
Income Level (ILV)	1.0634	0.9404
Marital Status (MARST)	1.0889	0.9183

Source: Researcher's survey, 2024

The results shown in table 4 above show that all of the variables taken into consideration had VIF values less than 10 and that all of the variables had tolerance values above 0.1, that is 0.9752, 0.9435, 0.9404 and 0.9183. This suggested that the independent variables' intercorrelation variables were all within the acceptable range, indicating that multicollinearity was not a risk for this investigation.

Correlation Matrix Analysis

A correlation matrix is a table that displays the correlations between all possible values, making it a useful tool in survey research (Epor, 2024). It helps researchers identify relationships between variables, predict future trends, identify outliers, and test hypotheses. The correlation matrix for this study is presented in table 5.

Table 5: Results of Correlation Analysis

Probability	TXCMPL	MARST	ILV	GND	EDL
TXCMPL	1 -----				
MARST	-0.0318 (0.5474)	1 -----			
ILV	0.3082 (0.0000)	-0.0039 (0.9411)	1 -----		
GND	0.1469 (0.0052)	0.0013 (0.9802)	-0.0445 (0.4004)	1 -----	
EDL	0.7443 (0.0000)	0.0178 (0.7359)	0.2459 (0.0000)	0.1063 (0.0439)	1 -----

Note: () represent probability values

Source: Researcher's survey, 2024

The study found a negative and insignificant association between marital status and tax compliance in Yenagoa, Bayelsa state, with a correlation coefficient of -0.0318 and a p-value of 0.5474. This suggests that more family commitments tend to reduce tax compliance level from taxpayers in Yenagoa, Bayelsa state. Financial burdens from family responsibilities, such as paying for healthcare, schooling, or supporting aging relatives, might cause people to put their urgent needs ahead of their tax duties. Non-compliance or tax evasion may follow from this. Contrary to marital status, income level, educational level and gender have positive and significant linear relationship with tax compliance level in Yenagoa, Bayelsa state. This is evident in the associated probability values with the correlation values. This means that as more males are educated and earn more incomes, the level of tax compliance tends to increase.

Regression Analysis

Correlational studies offer insights into the relationship between variables, but they cannot establish causation (Epor, 2024). Regression analysis is a statistical method used to estimate the relationships among variables, determining the strength and direction of the relationship between a dependent variable and one or more independent variables. It allows researchers to control for other variables, establishing cause-effect relationships. By holding constant all other variables except the one they are interested in, researchers can see how changes in that variable affect the dependent variable. Given this, this study will estimate the regression model and parameters specified in the methodology. The estimates are provided in table 6.

In the first instance, results from the joint test analysis showed that the R-squared, which measures the proportion of variance in tax compliance explained by the demographic factors of taxpayers in Yenagoa, Bayelsa state, is 57.86%, while that is the adjusted R-squared provides the chosen demographic factors specifically explains 57.38% variations in tax compliance. The probability of the F-statistic, that is 0.0000, showed that taxpayers' gender, income levels, educational levels and marital status fit and valid for the model. The probability of the Jarque-Bera statistics, being 0.4779, showed that the model for this study is normally distributed, and hence there is no statistical evidence of no normality in the demographic-tax compliance model for Yenagoa, Bayelsa state.

Table 6: Regression analysis for the effects of demographic factors on tax compliance

Variable	Coefficient	t-Statistic	Prob.
MARST	-0.0271	-1.2740	0.2035
ILV	0.1388	3.8934	0.0001***
GND	0.1352	2.2571	0.0246**
EDL	0.6486	19.6167	0.0000***
C	0.6735	3.3469	0.0009***

Joint Test Analysis

R-squared	0.5786
Adjusted R-squared	0.5738
Prob (F-statistic)	0.0000***
Prob(Jarque-Bera Test)	0.4779

Note: *, **, and *** represent significance at 10%, 5% and 1%

Source: Researcher's survey, 2024

Since the p-value for marital status (MARST) in the demographic-tax compliance model (0.2035) is greater than the significance level (0.05), it means that marital status does not significantly decrease tax compliance levels despite the negative coefficient value ($\beta = -0.0271$). Hence, the null hypothesis that marital status (MARST) has no significant effect on tax compliance levels in Yenagoa, Bayelsa state is accepted and we conclude that marital status (MARST) does not significantly decrease tax compliance levels in Yenagoa, Bayelsa state. Again, given that the p-value for income level (ILV) in the demographic-tax compliance model (0.0001) is less than the significance level (0.05), it means that income level has significantly increased tax compliance levels with the positive coefficient value ($\beta = 0.1388$). Hence, the null hypothesis that income level (ILV) has no significant effect on tax compliance levels in Yenagoa, Bayelsa state is not accepted and we conclude that income level (ILV) significantly increases tax compliance levels in Yenagoa, Bayelsa state.

Further, as the p-value for gender (GND) in the demographic-tax compliance model (0.0246) is less than the significance level (0.05), it means that gender (GND) has significantly increased tax compliance levels with the positive coefficient value ($\beta = 0.1352$). Hence, the null hypothesis that gender (GND) has no significant effect on tax compliance levels in Yenagoa, Bayelsa state is not accepted and we conclude that gender (GND) significantly increases tax compliance levels in Yenagoa, Bayelsa state. Finally, given that the p-value for education level (EDL) in the demographic-tax compliance model (0.0000) is less than the significance level (0.05), it means that education level (EDL) has significantly increased tax compliance levels with the positive coefficient value ($\beta = 0.6486$). Hence, the null hypothesis that education level (EDL) has no significant effect on tax compliance levels in Yenagoa, Bayelsa state is not accepted and we conclude that education level (EDL) significantly increases tax compliance levels in Yenagoa, Bayelsa state.

Findings, Conclusion and Recommendation**Findings**

From the empirical results, it was found that marital status does significantly influence tax compliance levels in Yenagoa, Bayelsa state. This finding means that taxpayers are indifferent to tax compliance whether they are committed in marriage or not. This finding is in variance with Widiyanto (2015), who earlier established that all demographic factors are significant to tax compliance. In Yenagoa, Bayelsa State, marital status does not significantly impact tax compliance, as it is not directly related to tax calculation and payment. The main determinants are income level, taxable transactions, and individual or entity responsibility. In Nigeria, each individual files and pays taxes based on personal income or business transactions, not on marital status. In another instance, it was found that income level significantly increases tax compliance levels in Yenagoa, Bayelsa state. This finding means as taxpayers' incomes increase, tax compliance levels are likely to increase. This finding agrees with that of Engida and Baisa (2014) who had earlier established that, financial constraints significantly determine tax compliance. For taxpayers in Yenagoa, Bayelsa state, higher income levels lead to greater tax compliance levels due to the progressive nature of the tax system. As income increases, the tax rate also increases, resulting in more substantial tax payments, thus positively affecting tax compliance levels in Yenagoa, Bayelsa state.

Further, it was established that gender status significantly increases tax compliance levels in Yenagoa, Bayelsa state. This finding means as taxpayers' gender are more of men, there is increase in tax compliance levels. This finding is not consistent with study carried out by Sulestiyono *et al.* (2024). They came to the

conclusion that this was because men and women had comparable views about the advantages of taxes and their responsibility to pay them. This is not the case in Yenagoa, Bayelsa state, as males are more likely to increase tax compliance levels. This sense of responsibility is synonymous with the sense of responsibility carried by males in the African society. Finally, it was found that educational level significantly increases tax compliance levels in Yenagoa, Bayelsa state. This finding means as taxpayers' educational level increase, tax compliance levels is likely to increase. This finding agrees with that of Peter and Ferdinand (2017) who had earlier established that taxpayers' education history showed have influence on tax compliance among the taxpayers in the rural areas of the entire state. Bayelsa state is known to be advanced educationally with the level above 67%. Higher education enhances understanding of tax laws, regulations, and obligations, leading to better financial literacy, critical thinking, and problem-solving skills. It also promotes a sense of civic duty and social responsibility, encouraging tax compliance as a way to contribute to society's well-being. Access to information and resources, such as financial advisors and tax professionals, also helps individuals understand their tax obligations and comply effectively.

Conclusion

This study examined the effects of demographic factors on tax compliance levels in Yenagoa, Bayelsa state. The study is survey in nature and adopted the correlation and regression techniques to examine this influence. The adopted demographic factors are gender of taxpayers, income levels of taxpayers, educational levels and marital status. The correlational analysis showed that only marital status had negative association with tax compliance, although not significant, while income levels, educational levels and gender all had positive association with tax compliance. Also with the regression analysis, it was found marital status has not significant influence on tax compliance, while the influences of income level, educational level and gender was found to be significantly positive.

Recommendations

In line with the findings/conclusion made in this study, the following recommendations are put forward:

- I. Based on the empirical result from marital status, it is recommended that government tax policies should not emphasize marital status as it has shown not to be important.
- II. Since our empirical result revealed that income level, government, in seeking to improve tax compliance, should support policies that increase incomes for the people.
- III. From the empirical result, it was found that gender has positive influence on tax compliance, so since most of our respondents are males, government should consider more tax education on women to increase their tax awareness.
- IV. Finally, government should not relent on promoting education for the people as it serves to benefits it by more tax compliance.

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