Socio-economic Factors of Tax Compliance: An Empirical Study of Individual Taxpayers in the Dhaka Zones, Bangladesh

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Abstract

Tax compliance can be affected by many factors such as magnitude of compliance cost, the extent of penalty, perceived fairness of the tax system, awareness level of taxpayers and perceptions of government spending. The purpose of the study is identifying factors that affect compliance of individual income taxpayers in Bangladesh. The target population of the study is individual income taxpayers of the fifteen zones of Dhaka. The sample size is determined to 385 self-assessment assesse and 376 general procedure return submitted income taxpayers to which the questionnaire was distributed during the period of 1st December 2019 to 15th February, 2020. The results of the ordered logistic regression model reveal that the fairness, tax penalty and relationship with regard to taxpayer's perception of government spending have positive and significant relationships with compliance. It also examines the effects of compliance decisions of referrals on others compliance decisions. The findings show a negative but insignificant relationship between them which implies that individual income taxpayer's make their compliance decisions independent of others' decisions. Finally, the study having evaluated the effect of cost of complying with the tax law on tax compliance and concluded that there is a negative relationship between them implying that higher cost of compliance will lead to lower levels of compliance. Therefore, this paper suggests that maintaining tax fairness, optimum levels of penalty, spending the tax revenue on public development projects, keeping tax rates to the minimum as much as possible and keeping compliance costs to the minimum can enhance the compliance of taxpayers.

Keywords: Taxation, Compliance, Socioeconomic, Fairness, Tax Penalty, Tax Rate, Awareness

1.1 Introduction

Tax is a mandatory charge imposed by the government without any expectation of quid pro quo. In other words, tax is a compulsory payment by the people to the government for which there is no direct return to the taxpayers (Parameswaran 2005). Governments impose taxes for a multiple of purposes, but the major is to raise funds in order to cover public expenditures and on the other hand to properly allocate resources. Tax is the main source of revenue for the government (Beza 2014). Governments impose taxes for a multiple of purposes, but the major is to raise funds in order to cover public expenditures and on the other hand to properly allocate resources. Tax is the main source of revenue for the government (Beza 2014).

There are currently two methods of filing income tax returns in Bangladesh, the first being the general method and the second being the universal self-assessment method. In the case of filing of returns in the manner of universal self-assessment, the taxpayer determines his own income and pays the applicable income tax. A certain class of taxpayer has to file a return within a specified period of each financial year by paying the total tax and charges levied on the total income. If the return is submitted under the universal self-assessment system after fulfilling all the conditions, the acknowledgment of receipt issued to the taxpayer by the Income Tax Department is considered as a tax assessment order. However, the tax assessment officer later processed the return in order to identify errors in certain cases. If as a result of processing the return it is found that the taxpayer has paid less or more income tax and other applicable amounts than the amount payable, then the tax assessment officer informs the taxpayer and takes action in this regard.

In the case of returns filed under the general procedure, the acknowledgment of receipt is not considered as a tax assessment order. After filing the return, the tax assessment officer determines the tax. If the information shown by the taxpayer in the return seems to be correct to the tax assessment officer, he can assess the tax without calling the taxpayer for hearing. Again, if there is not enough information and evidence to support the income shown or if the tax assessing officer deems it necessary, the taxpayer may request the taxpayer to attend the hearing and assess the tax based on the taxpayer's statement, information and evidence. It is to be noted that in case of concealment of income or tax evasion in any return even though it is not under audit, necessary legal action can be taken in case of return of the concerned tax year as per Section 93 of the Income Tax Ordinance, 1984. At the same time the return can be processed.

According to the tax lost ranking, Bangladesh ranked 65 in the world and 18 in Asia (Murphy 2011). National Board of Revenue (NBR 2018) reported that the targeted income tax and travel tax was BDT (Bangladeshi Taka) 251.94 billion and the NBR collected BDT 206.4596 billion. Gap between targeted and collected income tax revenue was BDT 45.4804 billion up to November 2017. There must be factors other than tax morale that influence tax compliance of the people. There is a long run cointegrated relationship between budget deficit and public debt in Bangladesh (Saima & Uddin 2017). If this deficit persists for long, the economy of the country will face constraints in the development path (Sarkar et al 2015). To reduce the deficit, the government can either increase the income tax rate or increase the participation to submit tax returns. However, what will be the focus of the policy is ambiguous. Therefore, it is important to identify the influential factors of income tax compliance.

Developing countries faces vaults in raising revenue to the required level in order to scale up the development endeavors (Tadesse & Goitom 2014). Bangladesh has experienced a steadfast expenditure surplus over revenue for a long period of time. Tax noncompliance is socially harmful, as it can reduce revenue, distort labor market and weaken state stability by enriching perception of cheating and fraud. Reducing noncompliance can be effective if the reason for noncompliance by tax payers is known. Understanding the motivations underlying taxpayers' attitudes and behaviors toward voluntary compliance is valuable to the tax authority by providing them information that can help them which strategy is appropriate and effective to increase compliance (Amina & Saniya 2015).

1.2 Problem Statement

The issue of tax compliance has gained more stress by researchers in the recent couple of decades because of increasing levels of tax noncompliance and its consequence on the capacity of the government to raise revenue. Taxpayer non-compliance is a continual and growing worldwide issue that is not readily addressed, especially in most developing countries, the domestic tax bases are undermined by widespread tax avoidance and evasion (IMF 2011; McKerchar & Evans 2009). Usually, the fastest growing economies with a highly authoritative tax authority has failed to finance its activities by its own means due to non-compliance even after a series of tax system reforms (Samuel & Vismanadham 2013). Moreover, tax evasion and avoidance are problems faced by every tax system and that taxpayers exploit loopholes of tax provisions to minimize or escape tax liability (Abreha & Kahase 2014).

Tax compliance can be affected by many factors such as magnitude of compliance cost, the extent of penalty, perceived fairness of the tax system, awareness level of taxpayers and perceptions of government spending (Olamide & Segun 2018). A recent study revealed that perception on equity and fairness of the tax system, perception on government spending, changes on current government policies, penalties, personal financial constraint, and referral group are factors that significantly affect tax compliance (Tilahun & Yidersal 2014). In regards to the issue of tax non-compliance requires at least some understanding of the factors that are fundamental to the individual taxpayer's decision whether to comply or not with tax laws. In fact, factors which influence tax compliance are different from country to country and also from individual to individual (Kirchler 2008). Due to this, tax compliance has been given a large emphasis by researchers because of increasing non-compliance especially tax evasion and its consequences on the capacity of government in raising public revenue while most of the previous studies are done in developed countries. Tax compliance researches in developing countries are low in number. Therefore the purpose of the study is identifying factors that affect compliance of individual income taxpayers in the specific zones in Bangladesh.

1.3 Research Objectives

The fundamental objective of the study is to identify the factors affecting taxpayers compliance in Dhaka self-assessment income taxpayers. Specifically, to examine the relationship between economic factors and compliance of taxpayers.

2.1 Literature Review

Tax compliance has been defined as compliance with reporting requirements, meaning that the taxpayer files all required tax returns at the proper time and that the returns accurately report tax liability in accordance with the internal revenue code, regulations and court decisions applicable at the time the return is filed (Roth et al 1989). An alternative definition has been offered by James and Alley that considers tax compliance in terms of the tax gap (Tadesse & Goitom 2014). This is the difference between true individual income tax liability and that finally collected on a voluntary basis or by enforcement action. Generally, compliance can be understood as acting in accordance with the law and noncompliance is deviation from the law. Based on the above expressions the definition of tax compliance can be shortly refined as the desire or willingness of the taxpayers to act in accordance with the

tax law and the voluntary effort they exercise to pay their tax liability on a timely basis.

2.2 Theories Relating to Tax Compliance

Tax compliance has been developed by various scholars to show how various conditions enhance the level of tax compliance. Such as, optimal tax theory is that the government likes to collect a given amount through taxation. Emanuele (2012) illustrates that this theory includes several models that concentrate on the characteristic of a tax system. Further, these models aim to achieve an equilibrium level of taxes raised by the government to achieve their revenue targets. In addition to that, these models are formulated to meet certain principles of the good tax system such as equity, stability, flexibility and transparency (Emanuele 2012). Political legitimacy theory illustrates that tax compliance is largely influenced by the extent to which their citizens trust their government (Tyler 2006; Kirchler 2008). Further, according to Persson (2008) emphasized that building national identity is more successful than they become major opponents of politics.

The tax moral theory indicates tax morale which is an individual factor that motivates a person to comply with his or her tax obligations. Many studies have found out that tax evasion can be attributed to tax morale (Mocetti & Barone 2008). This theory further stated that taxpayers are more likely to comply with tax obligations if their friends, relatives and acquaintances comply with these obligations. Also, taxpayers will evade taxes if they feel that other people are getting away with tax evasion. That means if a society concentrates on tax evasion, such a society would encourage tax evasion (Waweru 2004). Theory of planned behavior is an important theory that presents within the scope of social psychology and tries to explain human behaviors. This theory was developed by Ajzen and Fishbein (1991) and it is just the improved form of the Theory of reasoned action suggested by them to explain conscious behaviors. According to this theory, behaviors of the individuals within the society are under the influence of several factors, originate from certain reasons and emerge in a planned way (Benk et al 2002). Nevertheless, the ability to perform a particular behavior depends on the fact that the individual has a purpose towards that behavior.

Fiscal exchange theory illustrates that the government can enhance the level of tax compliance by providing goods and services to its people more efficiently and effectively (Moore 2004). Further, which also provides a good link between the taxpayers and the government (Moore 2004). Therefore, it is more justifiable to assume that taxpayers' behavior is influenced by either their level of satisfaction

or level of dissatisfaction with the provision of public goods and the services. The Allingham and Sandmo theory expresses that the government tries to prevent tax evasion through undertaking a series of actions such as putting extra penalties, undertaking tax audits etc (Kirchler 2008). A taxpayer will decide to evade his or her tax obligations when he or she feels that the cost of evading tax is too low. Taxpayers would also evade tax when he or she feels that the cost of compliance is high.

Economic deterrence theory states that taxpayers' behavior is influenced by a range of factors such as tax rate, penalties etc. According to (Becker 1968) which implies that when the strength of the tax audits and the penalties are high then, very few people will try to avoid taxes. On the other hand, when the strength of the tax audits are less and the penalties are low then, expected to evade the taxes is very high. Further, this theory is highly adopted by tax administrators when developing suitable strategies. The theory of crime states that people are rational actors who behave in a manner that will maximize their expected utility. (Becker et al 1968) argued that authorities needed to and appropriately balances between detection of non-compliers and measures to the point where non-compliance becomes irrational In fact, research has shown that the use of threat and legal coercion, can produce negative behavior; these actions are more likely to result in further non-compliance (Murphy & Harris 2007), creative compliance (McBarnet 2003), criminal behavior or opposition (Fehr & Rokenbach 2003).

2.3 Empirical Evidence on Relationships between Tax Compliance and Other Variables

Perceptions of Government Spending

The problem of tax compliance is as old as taxes themselves. Characterizing and explaining the observed patterns of tax noncompliance and ultimately finding ways to lessen it are of obvious importance to countries (Andreoni et al 1998). Very few studies have been done on the effect of government spending on compliance behavior of taxpayers (Palil 2010). Taxpayers, and especially those who pay high amounts of tax, will be sensitive to what the government spends their money on (Tadesse & Goitom 2014). Since taxpayer's perceptions are important in determining their compliance behavior, the government should spend tax revenue in a careful manner, because the spending pattern of the government causes different levels of compliance (Palil 2010). There is a positive and significant relationship between perceptions of government spending and tax compliance (Niway &Wondwossen 2015).

Tax Penalty

The tax rate and penalty structure determine the financial value of tax compliance, which leads to the taxpayers' compliance behaviors. In addition to that, taxpayers judge the cost that occurs when remaining as a defaulter, penalties occurred for fraud and benefits of not paying taxes, and determine not to pay taxes if the benefit of non-compliance exceeds the costs (Sapiei & Kasipillai (2013; Walsh 2012). If a taxpayer is required to file an income or excise tax return and fails to timely do so, a late filing penalty may be assessed (Oladipupo & Obazee 2015). Lederman (2003) argues that penalizing tax evaders can cause others to feel sure that they are doing the right thing. In addition, Park and Hyun (2003) in their study found that penalizing taxpayers when caught encouraged taxpayers to report the true income they earn. This result shows a positive relationship between penalty and tax compliance.

Compliance Cost

There is a wide perception by the taxpayer that tax is a burden especially the small and medium enterprises (Vihanto 2000). Therefore, the cost of compliance to taxation plays a key role in determining taxpayers willing to pay tax. Tax compliance cost investigations can provide useful feedback on how to reduce compliance costs and risks for small businesses. Surveys conducted in countries like South Africa, the Republic of Yemen, Ukraine, and Peru that measured the burdens on business which helped fine-tune the design of reforms to lower costs for businesses and improve their competitiveness (Coolidge 2010). High compliance costs can result in tax avoidance, tax fraud, and prevent investment coming into the country by way of diminishing competitiveness of the country in terms of taxation attractiveness (Atawodi & Ojeka 2012). According to Eragbhe and Modugu (2015), they have surveyed to evaluate the cost of tax compliance in Nigeria, but ultimately they found that the cost of tax compliance comprises internal compliance cost, external compliance cost and several incidental costs including psychological cost. In a study carried out on tax compliance and simplifications by (OECD 2014) established that compliance costs tend to increase with the number of taxes that an entrepreneur is subject to, the complexity of the tax rules, the frequency of submitting tax returns and the number of levels of government involved in levying and collecting taxes.

Tax Rate

Even though the effect of tax rate on tax compliance is still unclear and questionable, Clotfelter (1983) stated that cutting tax rates is not the mere way of reducing tax

evasion, while Kirchler (2008) views tax rate as an important factor that determines compliance decisions. An increase in tax rates will discourage tax compliance while reducing tax rate doesn't reduce tax evasion (Torgler 2007). The relationship between tax compliance and tax rates and concluded that taxpayer's decision either to comply or not, regardless of tax rates (Kirchler 2008). However, tax rates were negatively correlated with tax compliance (Ajzen & Fishbein 1980) while in line with this Palil (2010) concluded that higher tax rate would lead to lower compliance. The study revealed that the tax rate has a positive and significant influence on income tax compliance (Ali 2018). Moreover, it also revealed that the rate of tax penalties has a positive effect on tax compliance behavior (Yunus et al 2017). In addition, Masud et al (2014) found that there is a significant negative correlation between tax rate and tax compliance.

Fairness of the Tax System

Tax fairness is a concept of having an equitable tax system. Fairness of the tax system is believed by the taxpayers and tax authority as one of the significant determinants of compliance decisions (Amina & Saniya 2015). There are mixed results on the impact of fairness on tax compliance. For instance, perceived inequity in the tax system does not contribute to tax evasion, but it is used to rationalize non-compliant behavior (IMF 2011). If the taxpayers feel that their tax burden is higher than other people within the same income group; their tax compliance probably decreases (Warneryd & Walerud 1982).

Individual taxpayers do not live alone in this world and they have to interact with others in their daily life. Thus, the influence of one person on another in their compliance is an important part of their continuous existence in society. Perception of peers not to comply with the tax laws resulted in the taxpayers' non-compliance action (Hai & See 2011). Decisions to comply or not are sometimes influenced by family members, relatives and friends (Ajzen & Fishbein 1980). A Behavioral research states that peer groups have a strong impact on behavior, preferences and personal values of the individual person (Puspitasari & Meiranto 2014). However, another study found that there is no significant correlation between taxpayer non-compliance and knowing non-compliant peers (Green 2003).

2.2 Research Ethics

The study asked for full consent from participants where we explained the motivation of study to the participated assesses. They had the freedom to leave the study at any time or may remain silent to specific questions if they were not comfortable. User data was anonymized. All our collected data are securely stored in a locked drive, and only researchers have access to it.

3.1 Research Methodology

This study is a cross sectional design with quantitative approach. The actual revenue collection target for the financial year 2017-2018 was set at BDT 87,190 crore and BDT 62,340.42 crore was collected, of which 44.51% was in fifteen zones of Dhaka and it has reached a total of 73.22% when the large taxpayers and the central survey zone were combined (NBR 2018). On the one hand, as Dhaka is the capital of Bangladesh, on the other hand, the highest rate of revenue collection in the country is within this jurisdiction, thus, these tax zones have been considered for this study. The target population of the study is individual income taxpayers of the fifteen zones of Dhaka. According to the National Board of Revenue authority of Dhaka administration, the total individual taxpayers 740,925 where self-assessment assesse 724,063 and general assesse 16, 862 were submitted annual return during the financial year 2017-2018 (NBR 2018). This study selects these categories because they are required by law to maintain and submit books of accounts to the tax authority within the stipulated time. The sample is selected by following the method of proportional allocation under which the sizes of the samples from the different strata are kept proportional to the sizes of the strata. For the purpose of the study sample size is determined by using formula (Krejcie & Morgan 1970):

$$s = X^2 NP(1-P) / d^2(N-1) + X^2 P(1-P)$$

Where

s = required sample size

X^2 =the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N = the population size

P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (0.50)

Therefore sample size is determined to 385 universal self-assessment return submitted taxpayers and general procedure return submitted 376 to which the questionnaire was distributed. This study has followed a convenience sampling method. This sampling method has also been conducted in the context of Malaysia (Ser 2013), the USA and Hong Kong (Chan et al 2000). Convenience sampling

method has the advantage over reliability, time and budget constraint. The sample is allocated to each zone according to the population weight. The study has used primary data collected by using structured questionnaires. The survey was conducted during the period of 1st December 2019 to 15th February, 2020. The questionnaire is composed of closed ended questions designed on mostly a Likert scale. Questionnaires were delivered to people of various income levels. Questions were pre-coded during the survey questionnaire, data processing and analysis. The quantitative data were subsequently entered into STATA for analysis.

3.2 Model Application

Sometimes response categories are ordered but do not form an interval scale. There is a clear ranking among the categories, but the difference among adjacent categories cannot be treated as the same. Responses like these with ordered categories cannot be easily modeled with classical regression. Ordinary linear regression is inappropriate because of the non-interval nature of the dependent variable-the spacing of the outcome choices cannot be assumed to be uniform. Ordinal logit and probit models have been widely used for analyzing such data (Green 2003). Some polychotomous dependent variables are inherently ordered. Although the outcome is discrete, the multinomial logit or probit models would fail to account for the ordinal nature of the dependent variable (Green 2003). The ordered probit and logit models have come into fairly wide use as a frame-work for analyzing such responses. Because of its mathematical convenience and interpretation simplicity the researchers have employed an ordered logit model. Therefore, the model for the determinants of tax compliance of self-assessment income taxpayers is:

TxCom = f {Tr, ComCst, FTxs, Plty, Pgs, Eref, e}

Where:

TxCom=Tax compliance for ordered Likert Scale

Tr=Tax rate

ComCst=Compliance cost

FTxs=Fairness of the tax system

Plty=Penalty

Pgs=Perceptions of Government spending

Eref=Effect of referrals

e=Classical random error term

Thus, the regression equation is shown as follow:

$$TxCom = \alpha_0 + \alpha_1 Tr + \alpha_2 ComCst + \alpha_3 FTxs + \alpha_4 Plty + \alpha_5 Pgs + \alpha_6 Eref + e$$

4.1 Results and Discussions

Table 1.1 presents descriptive statistics of respondents. In total, 761 respondents filled in the questionnaire completely. Standard deviation of the age of respondents was 84.82. The respondents were aged between 41 to 50 (35.22%), followed by 31 to 40 (25.22 %), 51–60 (13.27 %), 21 to 30 (10.11%), 61 to 70 (9.07%) and 71–80 (7.10 %). Among the respondents, male were 83.84% and female 16.16%. Almost half of the respondents (49.41%) were completed graduate level studies, followed by higher secondary level (34.30%), secondary level (10.25%) and 4.47 % completed post-graduation, while 2.26 % had no formal education. Majority (55.32%) respondents were engaged in business, followed by private service (14.85%), self-employe (9.72%) and public service (2.90%). Around one-third (29.30%) of the total respondents had yearly taxable income in between BDT 2,50,000 to BDT 4,00,000 followed by 27.20%, 26.54%, 13.27% and 3.68% of respondents whose income were in between respectively BDT 5,00,001 to 6,00,000, BDT 4,00,001 to 5,00,000, BDT 6,00,001 to 30,00,000 and BDT 30,00,000 and above.

Table 1.1: Descriptive Statistics

Descriptions	Frequency	Percentage
Age		
21-30	77	10.11
31-40	192	25.22
41-50	268	35.22
51-60	101	13.27
61-70	69	9.07
71-80	54	7.10
Standard Deviation		84.82
Gender		
Male	638	83.84
Female	123	16.16
Level of education		
No any formal education	87	11.43
Secondary level	113	14.85
Higher secondary level	261	34.30
Graduation level	377	49.54
Post-graduation level	34	4.47
Employment status		
Public service	22	2.90
Private service	113	14.85
Self-employed	74	9.72
Business	421	55.32
Annual level of income		
2,50,000-4,00,000	223	29.30
4,00,001-5,00,000	202	26.54
5,00,001-6,00,000	207	27.20
6,00,001-30,00,000	101	13.27
30,00,000 and above	28	3.68

The researchers evaluated the findings based on the two key statistical tools, which are the correlation matrix (Table 1.2) and the ordered logit model regression analysis (Table 1.3) and then analyze the results to establish the links between the tax compliance and the other independent variables.

Table 1.2: Results of the Analysis Based on the Relationships between Tax Compliance and the Independent Variables

Independent Variables	Results Based on the Correlation Matrix
Penalty	Reveals that the Coefficient for penalty was 0.012, which mean r value is less than 0.3 therefore, there is a lower level of positive correlation exist between the level of tax compliance and the penalty.
Perceptions of Government spending	Findings reveal that the Coefficient for perceptions of Government spending was 0.280, which means the r value is less than 0.3 therefore, there is a lower level of the positive correlation between the level of tax compliance and the Perceptions of Government spending.
Compliance cost	Found that the coefficient for Compliance cost was -.161, hence there is a negative correlation exist between the level of tax compliance and the Compliance cost.
Effect of referrals	The result reveal that the coefficient for effect of referrals was -.152, hence there is a negative correlation exist between the level of tax compliance and the effect of referrals.
Tax rate	Found that the coefficient for the tax rate was -.010, therefore there is a negative correlation occur between the level of tax compliance and the tax rate.

In below Table 1.3 provides a great emphasis to the ordered logit model regression results. Since the equation in an ordered logit model is non-linear, only the signs of the coefficients can be interpreted. This study found that fairness and compliance have positive and significant relationships. This relation is towards the research objectives.

Table 1.3: Results of Ordered Logistic Regression

TxCom	Regression Coefficient	Standard Error	z	p>z	95% Confidence	Interval
Tr	-0.67123	0.13158	-5.47	0.000	-1.15111	-0.51156
ComCst	-0.34127	0.14864	-2.73	0.005	-0.65418	-0.12856
FTxs	0.32157	0.13112	3.17	0.002	0.15623	0.70514
Plty	0.67183	0.17762	5.04	0.000	0.30212	1.04174
Pgs	0.31076	0.15835	2.38	0.013	0.07860	0.64311
Eref	-0.16716	0.16074	-1.03	0.300	-0.40381	0.14765
/cut1	-3.41748	0.88260			-3.36512	-0.47184
/cut2	1.31358	0.85510			-0.35811	2.20730
/cut3	4.55283	1.15577			2.46177	5.64411

In addition, this paper also found that there is a positive and significant relationship between penalty and tax compliance. This relationship between penalty and tax compliance is also towards the research objectives that severe penalties used to achieve greater compliance level and curbs future actions of tax evaders. This finding is also consistent with others, for instance, Witte and Woodbury (1985) have established a significant relationship between the severity of criminal sanctions and tax compliance and Chau and Leung (2009) indicated that tax penalty is an important factor influencing tax compliance behavior who suggested that the fear of penalties would prohibit the noncompliance tendency.

This study finds a positive and significant relationship with regard to taxpayer's perception of government spending and tax compliance. This result suggests that, if the government is spending the national revenue wisely for basic facilities, such as public health, education, security and public transportation, it is assumed that voluntary compliance of taxpayers will increase. In contrast, if taxpayers perceive that the government is involved in corruption and spending too much on unnecessary budgets; taxpayers may feel cheated and attempt to evade. This result is also similar to the findings of (Amina & Saniya 2015; Niway & Wondwossen 2015; Tilahun & Yidersal 2014; Palil 2010; Kirchler 2008). However, Tadesse & Goitom (2014) found insignificant correlation between tax

compliance and taxpayer's perception of government spending.

The result of the regression shows a statistically significant negative relationship between tax compliance and cost of complying. This finding is consistent with the finding of Mogenti (2014) who concludes that compliance cost is a contributory factor on tax compliance, specifically lower compliance cost is associated with high levels of tax compliance. In addition, Ketema (2013) found that compliance of taxpayers is dominantly affected by high compliance costs in terms of financial and time compliance costs.

Furthermore, the study found a negative and statistically insignificant relationship with regard to the effect of referrals. This explores that taxpayers did not consider the issue of the effect of referent groups to be of essence in making their tax compliance decisions. This finding is also consistent with the finding of Inasius (2015) while this result contradicts previous results shown by (Clotfelter 1983; Palil 2010).

Finally, the study found that the tax rate has had a negative and significant impact on tax compliance. This result is towards the research objective and indicates that tax systems with low tax rates are most likely to be complied. However, in this regards, there are mixed outcomes found, such as, evidences show that high tax rate is positively related with noncompliance and negatively related with tax

compliance (Ali et al 2001; Christian & Gupta 1993; Feinstein 1991) and Lemessa (2005) found that tax non-compliance is positively correlated with high tax rates. On the other hand Modugu et al (2012) found that tax rates do not have either negative or positive impact on tax compliance.

5.1 Conclusion and Recommendations

The results of the ordered logistic regression model reveal a statistical relationship between tax compliance and some of the factors that are considered in the study. The study found a positive and significant relationship between tax compliance and fairness of the tax system. This indicates that making the tax system fair leads to higher levels of tax compliance behavior of the taxpayers. This paper also examines the relationship between tax compliance and perceptions of government spending and shows a positive significant relationship which implies that taxpayer's perception of government spending as good will boost their decision to comply with the tax laws of the country. Evaluation of the effects of awareness level of taxpayers on tax compliance levels reveal that there is a statistically insignificant relationship between them. It also examines the effects of compliance decisions of referrals on others compliance decisions. The findings show a negative but insignificant relationship between them which implies that self-assessment income taxpayers make their compliance decision independent of others' decisions. The effect of organizational strength of the tax authority on tax compliance behavior is also examined in this paper. It shows a positive and significant relation between the two implying that effectiveness and strength of the tax authority in awareness creation, service delivery, tax collection and enforcing tax laws will in turn enhance compliance level of taxpayers. Finally, the study has evaluated the effect of cost of complying with the tax law on tax compliance and concluded that there is a negative relationship between them implying that higher cost of compliance will lead to lower levels of compliance. This study illustrates different views held by various scholars in connection with tax compliance and its relationships with other variables with the aim of gaining new knowledge as well as broaden the knowledge base on this particular subject area, which is important for any future researchers to identify the different concepts and their relative importance to the present context in Bangladesh. Therefore, the conceptual frameworks brought from this paper will set a new direction for future research that will help to understand the significances of these conceptual ideas. If it makes sense in the future studies, then these concepts will apply to different practical situations in Bangladesh as well as internationally.

Based on the findings in order to make the taxpayers more compliant to the tax system, the following measures should be taken by the tax authority:

From the study finding it can be inferred that a perception of government spending has a substantial effect on tax compliance. The finding suggests that perception of government spending as good and important will increase the compliance level of taxpayers. Therefore, the spending of tax revenue by the government should be on social and important projects and information should be forwarded to taxpayers to create a positive image on the spending pattern of the government.

The study finds strong support for the argument that penalty highly affects tax compliance, thus there should be moderate and appropriate levels of penalties to be employed. These way owners of businesses will be encouraged to comply since they will act in accordance with the tax laws in order to avoid penalties.

From the study findings it is deduced that fairness or equity of the tax system has a significant effect on tax compliance. The findings suggest that tax systems that are fair are most likely to be complied. Therefore, the tax system should not be in a way that does not encourage taxpayers to evade.

Finally, Tax compliance will be developed just with the voluntary cooperation of the society with the tax authority. Simply relying only on carrot and stick approach has no sweeping result. Hence, the government and the tax authority have to capitalize on responsible citizens' approach in their effect of increasing the level voluntary compliance. Tax evasion and non-compliance is unavoidable in each general public or country. Therefore, it is worthwhile to recommend that the above approach has to be supported by legal enforcement and the effects must complement each other.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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QUESTIONNAIRE

Surveyor ID: Participation number: Date:

Assessment type: General   Self-assessment

SL	Description				
1.	Gender		*Male*	*Female*	
2.	Age				
3.	Marital status				
	Single	*Married*	*Divorced*	*Widowed*	
4.	What was the last grade of school you completed?				
	Primary level	*SSC*	*HSC*	*Graduation level*	*Post-graduation level*
5.	Could you please describe your profession?				
	Professional	*Business*	*Private service*	*Public service*	*Self-employed*
6.	Please tell me for the following statement whether you think it can always be justified, never be justified, or something in between: Cheating on tax if you have the chance				
	Never	*Sometimes*	*Always*	*Probably*	
7.	Trading or exchanging goods or services with a friend or neighbor and not reporting it on your tax form			*YES*	*NO*
8.	Reporting your main income fully, but not including some small outside income			*YES*	*NO*
9.	Being paid in cash for a job and then not reporting it on your tax form			*YES*	*NO*
10.	Not reporting some earnings from investments or interest that the government would not be able to find out about			*YES*	*NO*
11.	Do you feel it is wrong or not wrong if a taxpayer does not report all of his or her income in order to pay less income taxes?				
	Not wrong	*A bit wrong*	*Wrong*	*Seriously wrong*	
12.	Within the past five years or so, do you think you might have left some reportable income off your federal tax return – even, just a minor amount?				
	definitely have not	*definitely have*	*May be*	*May be not*	
13.	What was the highest tax rate level for the last financial year?				
	10%	*15%*	*20%*	*25%*	*30%*
14.	Could you tell me how much confidence you have in the legal system?				
	a greatly	*quite a lot of*	*not very much*	*none at all*	
15.	Public officials can usually be trusted to do what's right?				
	strongly agree	*mildly agree*	*mildly disagree*	*strongly disagree*	
16.	Could you tell me how much confidence you have in the government in your capital?				
	a greatly	*quite a lot of*	*not very much*	*none at all*	
17.	How much confidence do you have in courts system?				
	a greatly	*quite a lot of*	*not very much*	*none at all*	
18.	Could you tell me how much confidence you have in the legal system?				
	a greatly	*quite a lot of*	*not very much*	*none at all*	
19.	Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?				
	Most people can be trusted		*Can't be too careful*		
20.	Would you say that having a democratic political system is a very good?				
	Fairly good	*Fairly bad*	*Very bad*	*Way of governing*	
21.	Democracy may have problems but it's better than any other form of government?				
	Strongly agree	*Mildly agree*	*Mildly disagree*	*Strongly disagree*	
22.	How satisfied are you with the way the people now in national office are handling the country's affairs?				
	Fully satisfied	*Fairly satisfied*	*Fairly dissatisfied*	*Very dissatisfied*	
23.	Would you please put mark the political system as it is today?				
	Very good	*Fairly good*	*Fairly bad*	*Very bad*	
24.	How satisfied are you with the financial situation of your household?				
	Fully satisfied	*Fairly satisfied*	*Fairly dissatisfied*	*Very dissatisfied*	
25.	Could you tell me if recently you have known someone or have heard someone you know comment about somebody who has: Managed to avoid paying all his tax			*YES*	*NO*
26.	Would you say that a person in our country who has committed an illegal act gets caught?				
	is very possible	*fairly possible*	*a little possible*	*not at all possible*	
27.	Could you please rank the NBR in regards to the processing returns?				
	Excellent	*pretty good*	*only fair*	*poor*	

28. Could you please rank the NBR in regards to the issuing refunds?

Excellent *pretty good* *only fair* *poor*

29. Could you please rank the NBR in regards to the answering questions?

Excellent *pretty good* *only fair* *poor*

30. Could you please rank the NBR in regards to the auditing returns?

Excellent *pretty good* *only fair* *poor*

31. Could you please rank the NBR in regards to the collecting taxes due?

Excellent *pretty good* *only fair* *poor*

32. The NBR employees are honest – you could never bribe them.

Strongly agree *Mildly agree* *Mildly disagree* *Strongly disagree*

33. NBR employees are just as knowledgeable as any private tax expert.

Strongly agree *Mildly agree* *Mildly disagree* *Strongly disagree*

34. I am confident that the NBR would never try to take more money from me than they should.

Strongly agree *Mildly agree* *Mildly disagree* *Strongly disagree*

35. You can depend on the IRS to keep accurate tax records.

Strongly agree *Mildly agree* *Mildly disagree* *Strongly disagree*

36. NBR procedures and practices are fair and reasonable ones that respect the rights of taxpayers.

Strongly agree *Mildly agree* *Mildly disagree* *Strongly disagree*

37. How do you feel about the government income tax system as it applies to the tax return – do you feel it is?

quite fair *reasonably fair* *somewhat unfair* *quite unfair*

38. The present tax system benefits the rich and is unfair to the ordinary working man or woman.

Strongly agree *Mildly agree* *Mildly disagree* *Strongly disagree*

No.	Question		YES	NO
39.	Do you ever talk about NBR and its activities with your family?		YES	NO
40.	Do you ever talk about NBR and its activities with your friends and co-workers?		YES	NO
41.	What is the minimum fine for tax evasion in your jurisdiction?		YES	NO
42.	What is the maximum fine for tax evasion in your jurisdiction?		YES	NO
43.	Do you apply the criminal code in the case of tax fraud?		YES	NO
44.	Is there a monetary fine in the case of tax fraud?		YES	NO
45.	Do you treat tax fraud in the same way as tax evasion?		YES	NO

46. How much attention did you pay to discussions on the media about NBR and its activities?

A lot *Quite a bit* *Some* *Very little* *No attention*

47. How proud are you to be a taxpayer?

Not at all proud *Not very proud* *Quit proud* *Very proud*

48. May I know your annual level of taxable income for the current financial year 2017-2018?

BDT 2,50,000-4,00,000

BDT 4,00,001-5,00,000

BDT 5,00,001-6,00,000

BDT 6,00,001-30,00,000

BDT 30,00,000 and above