How compliant are the large corporate taxpayers? The Bangladesh experience

Zakir Akhand[1]

Abstract

Several tax compliance approaches have been designed to improve the tax compliance of large corporate taxpayers. In many tax administrations, Large Taxpayer Unit (LTUs) have been set up to closely monitor the assessment and collection of revenues from the large corporations. There has not been any research conducted to investigate how compliant the large corporations have been under the LTU model of tax administration. This research is an attempt to fill this gap taking Bangladesh LTU as an example. Using original survey data, this paper finds that the finance sector corporations achieve the highest compliance in return filing, while the manufacturing and service sectors corporations achieve the highest compliance in payment and reporting compliance respectively. In overall compliance, manufacturing sector corporations are the top compliers. The study findings would be different if tax compliance as a variable is measured differently. Additionally, differences in legal and regulatory structure of tax audits might limit the study findings further.

Keywords: *Tax compliance, LTU, large taxpayers, corporate sector, Bangladesh*

---

[1] Associate Research Fellow, Tax Administration Research Centre, Room 0.31, School of Business, University of Exeter, Rennes Drive, Exeter, EX4 4ST, UK
e-mail: zha202@exeter.ac.uk

1. INTRODUCTION

Taxpayers are not homogeneous in their risk and revenue characteristics. Each group of taxpayers poses different risk and revenue potentialities to the tax base and therefore requires a different set of compliance tools to regulate them. Tax compliance models employed to induce tax compliance by the large corporations include the Co-operative Compliance Model (CCM), Horizontal Monitoring Approach and Real Time Compliance Approaches etc. The unique feature of these compliance models is that they can be tailored according to the risk and revenue characteristics of the taxpayers (Braithwaite, 2007). To incite compliance, the CCM, for example, employs self-regulation through consultation and taxpayer services on the one hand and audit and prosecution on the other, depending on the compliance history and behavioural pattern of the taxpayer (Brondolo, 2009; Andreoni and Feinstein, 1998;Song and Yarbrough,1978). The main driver of the CCM and other models (elaborated in section 4) is enhanced commitment towards a professional relationship between tax administrations and large corporations in order to increase voluntary compliance and reduce compliance costs (Braithwaite, 2007).

However a deep concern is how useful these compliance models have been in improving large corporate tax compliance. Shover et al. (2003) argue, despite the Australian Tax Office (ATO) providing sufficient resources to implement the CCM model, there is huge ambivalence among field-level tax officials about its long-term effect on tax compliance. Braithwaite and Braithwaite (2001) state that sixty percent of large corporations in Australia were found to be underpaying taxes in the 1990s and their compliance level seemed to be below the Organisation for Economic Co-operation and Development (OECD) average. A newspaper report shows that almost half of the 1100 largest corporations, of which 20 per cent made a profit, did not pay any taxes between the tax years 2005 and 2008 (The Sunday Morning Herald , 2010).

Similarly, in the UK, of the 700 largest business taxpayers with the Large Business Service (LBS), 181 did not pay any taxes in the tax year 2005–2006 (House of Commons, UK, 2008). The House of Commons report states that, 'businesses pay little or no corporation tax because, for example, they have made a loss, or had losses in previous years, or they are using tax reliefs, or engaging in tax avoidance'. It is also reported that UK multinational corporations largely avoid and underpay taxes. In 2007, the LBS estimated a tax evasion of £8.5 billion by large businesses and successfully detected £2.7 billion of false claims for capital allowances and tax relief. Recently, global large corporations such as Google, Starbucks and Amazon have come under fire for avoiding taxes on their sales in the UK (Barford & Holt, 2013).

As for the US large corporations, the tax compliance scenario is equally unsatisfactory. The US International Confederation of Free Trade Unions (ICFTU) report in 2004 shows that one third of the 275 largest multinationals in the US did not pay any taxes from 2001 to 2003. In 2003, 46 of these corporations paid no taxes or were entitled to a refund, despite the fact that they disclosed profits of US$ 42.6 billion. Other multinationals paid taxes at a falling effective tax rate during the period mentioned. The ICFTU found that large multinationals paid an effective federal tax rate of 26.5 per cent in 2001 and 21.4 per cent in 2003. The ICFTU report is apparent evidence that the large multinationals are underpaying taxes, although reasons could be other than tax administration issues.

Such evasive tax culture among large corporations call into question the contribution of cooperation and gentle persuasion for improving tax compliance among the large corporations (CATA 2006).

One of the ways to examine the contribution of this soft, persuasion-based LTU compliance models is to see whether the corporate tax compliance in the LTUs have increased or decreased over time. Thus the purpose of this paper is to measure the level of tax compliance achieved by large corporations, taking Bangladesh as the case, to understand the usefulness of LTU compliance model. The paper is mainly divided into four sections. The first section discusses the nature of large corporations and the Large Taxpayer Units (LTUs). The second section presents the research methodology. The third section produces the analysis and research findings, and the fourth section presents the conclusion of the study.

2.   LARGE CORPORATE TAXPAYERS: DEFINITIONS AND SELECTION CRITERIA

In general, big taxpaying corporate entities are treated as large corporate taxpayers. Watts (1978, p. 22) comments that, 'defining a large industrial enterprise is beset with problems. For example, size can be measured in several ways–number of staff employed, net assets (capital employed), value added (net output), turnover, issued capital and market capitalisation'. Watts (1978) identifies six characteristics by which large businesses can be distinguished from small and medium businesses in the non-corporate sector: separation of ownership and control; formal organisational structure; special influence on the national economy; multi-national exposure; varied outputs; and control from overseas. The distinguishing criterion changes with the variations in organisational forms of business because, firstly, in all large corporations ownership and management are separate due to public float of shares; secondly, many large corporations have international operations controlled under a parent-subsidiary relationship.

According to the OECD (2009, 6), 'large business or large taxpayer differs from one tax administration to another' as 'the identification criteria for large businesses vary from country to country'. The most frequently used criteria, according to the OECD (2009, p. 7) are: 'gross business turnover or sales; value of assets; amount of taxes paid; businesses belonging to certain industrial categories (banks, petroleum etc.); volume of international trade; and number of employees'. For Joulfaian and Mark (1999), the simple measure for organisation size is revenue receipts.

Using tax payments as a basis for identifying large corporate taxpayers is risky. Corporations may successfully underreport income to remain outside LTUs; or use tax holidays to end up with zero tax liability. This leads Baer et al. (2002, p. 14) to suggest, 'taxpayers who regularly underreport or underpay tax, large firms who enjoy a tax holiday and large exporters with significant amounts of refunds' should be excluded from LTUs. The exclusion of corporations from the LTU may however exacerbate the problem: in a non-LTU tax system. Large corporations may easily outsmart the tax administration and take advantage of its unprofessionalism (US GAO, 1997, p. 7).

However, the development of trade and commerce and the shifting state of tax revenues have generated a set of criteria that provides a general guidance on whether to define a business as large or medium. Some of them are net worth, number of

foreign affiliates, weighted average of all taxes–income tax, employment tax and value added tax (VAT) or state sales taxes for the US. Moreover, in its life cycle, a corporation may drop down in size to medium or small due to changes in business activities or changes in the set of defining criteria. Hamilton (1994, p. 6) mentions that, 'large taxpayers are not simply a large version of small taxpayers and large taxpayers continually evolve'.

In Bangladesh, yearly turnover or sales is the main criteria to identify the large corporations. In addition, the whole of the finance and banking sector corporations are placed under LTU, irrespective to their levels of turnover. When the LTU came into being in Bangladesh in 2003, the National Board of Revenue (NBR), by its special order placed 254 large corporate taxpayers under the LTU's jurisdiction, while in tax year 2011–2012, the number increased to 317 as a result of the initiative that placed merchant banks under the LTU's jurisdiction. This suggests that the LTU has had an increase of (317-254) = 63 corporate taxpayers during the last 9 years. Similarly, the LTU Lahore and Islamabad started with large businesses from banks, garments, cements, oil and gas and a few other specialised sectors (FBR, 2014). While in India the basis for selecting large corporations for LTU was tax payment over a certain amount, including excise tax, service tax and income tax, rather than turnover or sales (Ministry of Finance, India, 2014). Thus the selection criteria of large corporations for Bangladesh LTU are mixed which is more similar to the case of Pakistan than India.

3.   LARGE TAXPAYER UNITS (LTUs): DEFINITIONS AND HISTORICAL BACKGROUND

To measure the effectiveness of the LTU compliance models through measuring the corporate tax compliance, an understanding of LTU as a tax administration unit and its historical background would be crucial.

In general, an LTU is a self-contained tax administration office, parallel to or embedded in the tax system, which attempts to provide one-stop services in most tax jurisdictions. In some countries, LTUs, however, deal with a single tax. For example, LTU in Canada, Norway, and the US deal only with income tax (see Table 1). Similarly, in Bangladesh and Pakistan, there are separate LTUs to administer VAT and income tax liabilities.

The broad consensus among researchers and academics on the definition of an LTU is that it deals only with the largest taxpayers. In Perry's view, large taxpayer units are 'designed to provide full management of a small percentage of the biggest taxpayers in the country … a subset of taxpayer-segment-based organizational structure' (2004, p. 382). Some researchers view LTUs as a nucleus for tax administration reform (McCarten, 2004). Their existence brings a complete change in the tax administration and opens up new windows for modernisation. McCarten (2004, p. 2) describes an LTU as 'a potential Trojan horse for reform in tax administration … an institutional reform substitute for a semi- autonomous revenue agency' (SARA) and as a public sector analytical tool to manage public revenues. In the changing regulatory environment, LTUs are a glaring example of how power-based techniques can be supplanted by soft approaches that reduce the cost of compliance and increase compliance (Tuck, 2004). LTUs have a comparatively efficient and less corrupt workforce, and their organisation follows a functional design. In particular, their collection efforts through intensive monitoring of filing, and collection of arrears,

make LTUs an essential organ of tax administration (Bodin, 2003, quoted in Ainsworth, 2006; Santos, 1994).

The concept of the LTU was introduced in Argentina in the late 1970s (McCarten, 2003). In the early days, LTUs used to audit high turnover corporations to increase reporting compliance. During the early 1980s, the concept of the LTU was adopted in Bolivia and Peru, with the sole aim of increasing filing compliance. Vazquez-Caro (1996) emphasises two issues in the spread of the LTU in Latin America: first, close monitoring of those taxpayers with the highest revenue concentrations; and second, a shift of assessment and collection responsibilities from the public to the private sector. LTU expansion got its momentum in the early 1990s, under IMF patronage. By 2002, 50 countries, and by 2006, 67 countries, had established LTUs as an independent unit or as a special wing within the semi-autonomous revenue administrations (Baer et al., 2002; CATA, 2006).

Table 1: Tax collection by LTUs in OECD countries for 2006–2007

Country	Tax collected (Figures in billion Euros)	Percentage of tax collected	Taxes administered
Australia	€29.3	64.5%	Corporate income tax (CIT)
Canada	€12.9	53%	CIT
France	€118	33%	CIT and business local tax, VAT, local Tax
Ireland	€18.8	41.3%	CIT, VAT, employment tax, excise, customs, vehicle registration tax, stamp duties
Netherlands	€80	60%	CIT, VAT, employment withholding tax
Norway	€1.25	16%	CIT
UK	€160.8	70%	CIT, VAT, employment tax, petroleum tax
US	€228.4	90%	CIT

Source: OECD, 2009.

A review of revenue collection in selected OECD countries (see Table 1 above) shows that LTU corporate taxpayers' share of corporate income tax revenues ranges from a minimum of 16 per cent (Norway) to a maximum of 90 per cent (the US). The US Large Business Unit collected €228.4 billion of corporate income tax in the tax year 2006–2007, which equals 14.6 per cent of US national tax revenues, and 90 per cent of corporate tax revenues. Australia collects 64.5 per cent of corporate income taxes from LTUs and Canada 53 per cent. In some countries, for instance the UK and

France, LTUs collect more than one tax, including income tax, VAT, customs, excise and employment taxes. Seventy percent of the aforementioned taxes in the UK and 60 per cent in the Netherlands are provided by the LTUs.

In the developing countries, the potentiality of revenue collection from the large taxpayers is also very high. The International Monetary Fund (2011) finds that usually a few hundred large corporations in the developing countries can secure 60 per cent to 80 per cent of domestic taxes. Table 2 shows that in Africa and in the Middle Eastern countries large corporations are less than one per cent of the total taxpayers, but they provide over 70 per cent of tax revenues. One reason for this, as the International Tax Dialogue (2007) explains, is that the large corporations act as the withholding agents for medium and small taxpayers, so some of the tax payments made by the large corporations constitute the advance taxes and prepayments made by the smaller enterprises.

Table 2: Concentration of tax revenues in large corporations (selected countries)

Country	Percentage of taxpayers	Percentage of tax revenues
Brazil	0.3	80.0
Argentina	0.1	49.0
Benin	1.0	90.0
Bulgaria	0.1	51.4
Kenya	0.4	61.0
Spain	0.1	40.2

Source: International Tax Dialogue, 2007.

4.   TAX COMPLIANCE MODELS USED IN THE LTUS

The leading compliance models employed to induce large corporate tax compliance are examined in this section. The ultimate objective of these models is to increase the level of self-assessed voluntary compliance, focusing more on the motivational postures of tax compliance than the hard actions.

4.1   Co-operative Compliance Model (CCM)

This compliance model was developed by the ATO. The unique feature of the model is that it can be tailored according to the risk and revenue characteristics of the taxpayer (Braithwaite, 2007). To control compliance, the CCM encourages self-regulation through consultation and taxpayer services on the one side and audit and prosecution on the other (Brondolo, 2009). The idea that this model restricts the capacity of tax agencies to examine tax compliance through coercive actions is therefore not correct. In practice, audits are conducted on a random basis and prosecutions are used as a last resort. The basic philosophy of this compliance approach is to prioritise community cooperation and confidence-building.

The compliance pyramid presented below in Figure 1 shows that the vast majority of taxpayers are managed at the bottom by motivational procedures, and the non-compliant at the top are managed by coercive procedures.

Figure 1: Regulatory practice of ATO cooperative compliance mode
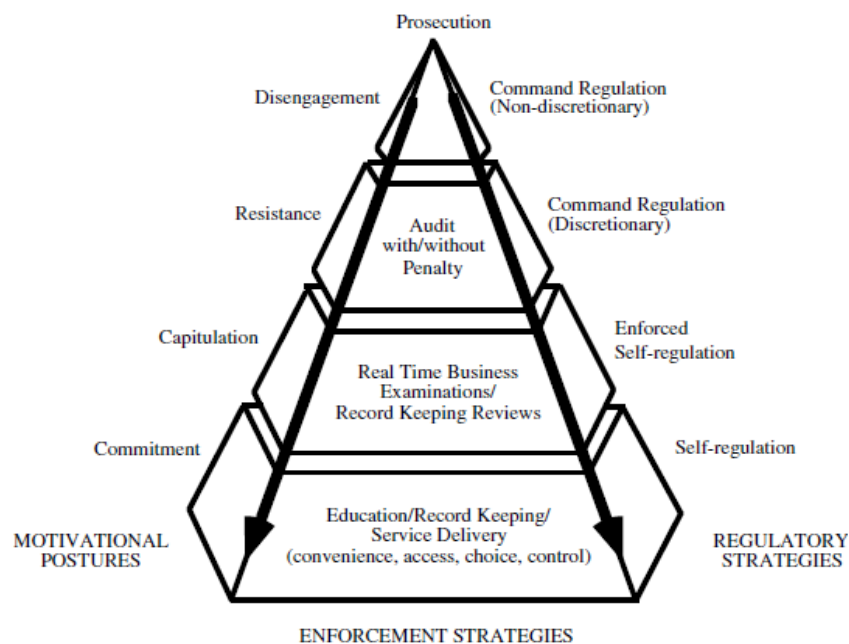
Source: Braithwaite, 2003.

The main driver of this model is the committed professional relationship between tax agencies and large corporations that reduces compliance costs, increases voluntary compliance, and improves the clarity of the law. Most of the LTUs, including Bangladesh, India and Pakistan, use this model to manage tax compliance.

4.2 Horizontal monitoring approach

Developed by the Netherlands Tax and Customs Administration (NTCA), this compliance model focuses on corrective measures to improve large taxpayer compliance and assumes that risk-based approaches do not solve all compliance problems. Based on findings about risk-based approaches, changing social norms and values, and the behaviour of taxpayers, the following have been quoted as the essentials of the horizontal monitoring approach (CIAT, 2009, p. 2): mutual trust; understanding and transparency; shared responsibility; real-time working; advance ruling; cooperation with other authorities; and focus on outcome rather than output.

In effecting its changes, this approach replaces the traditional vertical approaches of compliance monitoring. It decides which compliance instruments are to be used to change particular compliance behaviour. It emphasises proactive rules and taxpayer services instead of audits and investigations. The proactive tools attempt to avert non-compliance before it happens to bring long-term improvements in tax compliance.

The approach is successful where taxpayers have been persistently failing to comply because of a lack of knowledge of tax laws, enhanced communication or quality taxpayer services. However, in some cases the approach demonstrates the need for audit measures to increase awareness among the taxpayers.

During compliance supervision, this approach proceeds thematically through tax and non-tax issues. For example, for measurement of tax risks in the labour market, issues of illegal labour, including human trafficking, are studied in order to understand the problem comprehensively. In the supervision mechanism for tax compliance, the roles and responsibilities of all partners are well-defined, and issues of transparency, equality, and mutual trust are acknowledged. Mutual trust lies at the centre of this compliance approach, and is nurtured through transparency and understanding between large corporations and tax agencies. For the most part, the role of the tax agencies is corrective, motivational and persuasive in the actualisation of higher tax compliance.

4.3   Real time compliance approaches

This approach belongs to the cooperative compliance model. The essence of this approach is to address a compliance problem before it arises and resolve it immediately. The approach is different from others in that it does not depend on post-facto analysis of risk.

Some of the methods and programmes commonly in use are as follows:

4.3.1   Forward compliance agreement (FCA)

This model was developed by the ATO to offer early resolution of compliance issues. It allows taxpayers to discuss return-filing and tax payment issues easily, in order to avoid penalties and interest. The method is expensive and time-consuming, and has recently been replaced with the Annual Compliance Agreement (ACA).

4.3.2   Advance ruling

Slightly different from the above, this approach interprets tax laws, and their revenue and non-compliance implications, for specific business transactions by large corporations, usually cross-border transactions. The major objective of this approach is to cut the high cost of forward compliance agreements and at the same time solve real compliance issues. For example, in order to handle potential compliance risks in transfer pricing, the tax agency may define the pricing methodology in consultation with the concerned parties through an Advance Pricing Agreement (APA) (Arnold & Mclntyre, 2002). The rulings frame the transaction procedure to be followed under certain terms and conditions for a certain period, failing which sanctions and penalties will be attracted.

Apparently these models focus more on the softer measures than the tougher ones to improve tax compliance. However, few, if any, studies exist regarding the effectiveness of these models in boosting tax compliance, especially among the large corporations which is challenging for many tax administrations.

The next section discusses the challenges and the benefits the tax administrations face in improving tax compliance by large corporations.

5.   CHALLENGES AND BENEFITS OF MANAGING LARGE CORPORATE TAXPAYERS

This research is conducted in the context of developing countries' tax administration, whose common features are: a small revenue base, low tax compliance, high collection costs and a huge informal sector (Joshi & Ayee, 2008). In developing countries, tax administrations suffer from serious problems of poor record-keeping, inefficiency and bureaucratically designed corporate governance systems (Moore, 2004).

In tackling these problems, the assessment, collection and enforcement of the taxes of large corporate taxpayers in LTUs have been separated through the functional distribution of the work. A big challenge however is that enforcement actions towards large corporate taxpayers in many developing countries including Bangladesh are weak compared to the other functions. For instance, the Ugandan Large Taxpayer Department (LTD) failed to achieve its monitoring and enforcement goals after an initial success, like other sub-Saharan revenue authorities (DFID, 2001; Kangave, 2005). In evaluating the performance of the Ugandan LTD, the DFID (2001, p. 34) states, 'it is still too soon to judge the impact on revenue of the Large Tax-payer Department in Uganda, but so far this appears to have been limited'.

Another challenge, often argued, is that the explicit focus on large corporations may have an adverse effect on small taxpayers which as a result may weaken the LTUs' capacity to raise tax compliance in a socially cohesive manner (Terkper, 2003; Phillips, 2008). The strategy of specialization may sometimes be at the expense of other parts of the organizations, as the LTUs usually require and attract the most senior and skilled officials (Alink & Kommer, 2011).

In addition, large corporate taxpayers' view of tax law complicates the compliance issues further. McBarnet (1992) argues that the tendency of large taxpayers is to follow tax law by its intention, rather than by letter of the law. Large taxpayers actively try to transform the law into routes of tax avoidance, or finally break the law in such a way, with the help of hired expertise and political contacts, that they are not caught (Braithwaite & Wirth, 2001; Brondolo, 2009; Phillips, 2008; Clinard and Yeager, 1980; Conley and O'Barr, 1997). Sometimes the LTU officials or the tax administration has an involvement in the misinterpretation of tax laws so as to have a share of the potential gain arising from such connivances (McCarten, 2004). Braithwaite and Wirth (2001) note that managing large corporate tax compliance is more daunting than managing that of individual taxpayers because of the differences in their compliance patterns.

Figure 2: Patterns of individual (left) and corporate (right) tax compliance
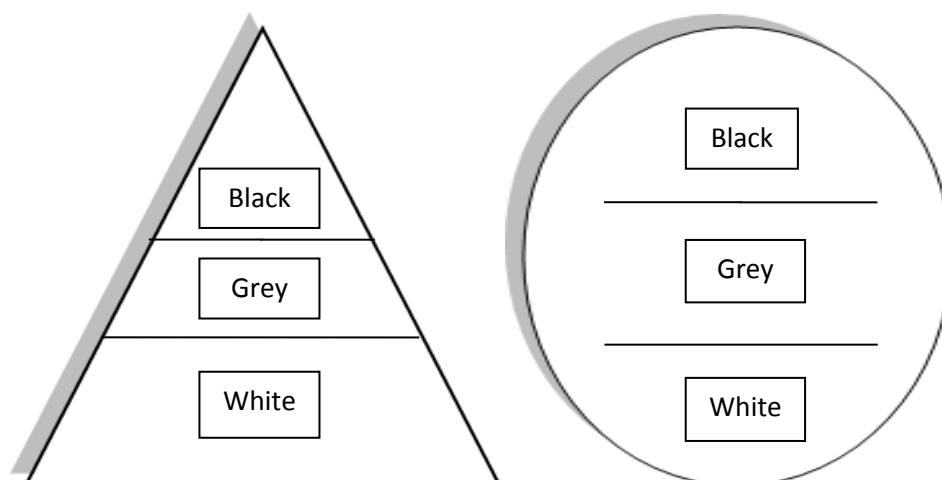
Source: Braithwaite & Wirth, 2001.

As shown above in Figure 2, the pyramid depicts the tax compliance pattern of individual taxpayers, while the oval depicts the tax compliance patterns of the large corporations. The individual tax compliance pattern is pyramidal; most taxpayers are lying at the bottom, whereas the large corporate tax compliance pattern is oval, with most of the taxpayers falling within the grey area in the middle. What is needed to make the compliance pattern pyramidal, according to Braithwaite and Wirth (2001), is to push the middle group towards the bottom. Braithwaite and Wirth (2001) argue that an acceptable way to achieve pyramidal compliance for the large corporations is to apply more of the self-regulatory instruments (that is, taxpayer education, service delivery etc.) instead of command regulations (penalty, tax audit etc.).

A further challenge for large corporate tax compliance management is a continued lack of professionalism, widespread corruption and political intervention. Many large taxpayers successfully hide income by setting up 'shell' offshore corporations or having a partnership with their parent corporation instead of a subsidiary relationship (Easter, 2008), or enjoying tax holidays through undue political intervention (McCarten, 2004). A survey of US corporations shows that nearly all large corporations and more than half of medium sized corporations have been offered safe transfer of money by tax shelter promoters (Slemrod, 2004). According to Christian Aid (2010), as a result of trade mispricing by the multinational companies, the poor countries are deprived of US$160 billion of tax revenues every year and Bangladesh is one of the five low-income countries suffering the biggest tax losses (£186m).

The 'good side' of managing large corporations is that, due to the requirement of high-quality financial and accounting standards set by local and international accounting bodies, large corporations have to follow strong reporting requirements with respect to their investment, revenue and profit (Kieso et al., 2011, p. 6). These control mechanisms ensure access to the transaction records needed to make the auditing process transparent. Also, large corporate taxpayers are particularly helpful in collecting taxes from other taxpayers under the withholding tax arrangement.

6.   METHODOLOGY

6.1   Data sources and sample descriptions

The purpose of this paper is to measure the level of tax compliance achieved by the large corporate taxpayers in the LTU of Bangladesh. This will help with evaluating and understanding the contribution of the LTU compliance model in encouraging tax compliance from large corporations. It is worth noting that this study will not assess the success or failure of LTUs as a unit of tax administration. Measuring the performance of the LTU as a tax administration unit and measuring its compliance models is somewhat different. Measuring the overall performance of the LTU or any tax administration office would require developing a comprehensive set of performance indicators including taxpayer service and education, returns processing and payments, arrears collections, audit and investigations and appeals, in addition to the compliance scenario of the large taxpayers (Crandall, 2010).

The population of corporate taxpayers in the LTU of Bangladesh is 275, which includes finance, manufacturing and service sector corporations. This paper takes tax compliance data of 2010 tax year–the year in which the LTU reform ended and the year considered to be comparatively stable in terms of collection, assessment and audit actions. A written approval was granted by the Bangladesh LTU authority to use their database (see Appendix 1). Real tax office records and documents provided primary data which gave valuable information on return filing, tax payment, and audit adjustments. In studying tax compliance in Australia, Tran-Nam et al. (2000, p. 243) state, 'the ability to use the tax authority's database instead of commercial mailing … represents a significant improvement'.

For in-depth information on the research context and explanations on compliance behaviour, one-to-one personal interviews based on semi-structured questions were conducted. The interview technique enables clarification and elaboration of a respondent's observations and confirms or rules out ways of reasoning (Kvale, 1996). In a tax compliance study like this one, as Hasseldine et al. (2007) argue, field interviews allow the researcher to probe taxpayers' attitudes to sanctions and motivational issues, and to gain an in-depth understanding of the research problem.

A stratified random sampling was adopted for this study, where every item of the strata would have an equal chance of being selected. In social science research, the alpha level applied in determining sample size is either 0.05 or 0.01, with 0.05 used more commonly, and for categorical data the standard margin error being five per cent (Lohr, 2010). Israel (2009) suggests using the following formula to determine the sample size for a given population.

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

where, n= sample size, N= population, e = alpha level.

Using the above formula, the sample size derived for the study is: n = $275/[(1+275(.05)^2] = 162$.

Table 3: Descriptive statistics on sample corporations (N = 154)

Characteristics	Categories	Frequencies	Percentages	Cumulative ratios*
Ownership Structure	Public limited	115	74.7	74.7
	Private limited	39	25.3	100
Corporate sector	Finance	80	51.9	51.9
	Manufacturing	43	27.9	79.9
	Service	31	20.2	100
Corporate location	Local	129	83.8	83.8
	Multinational	25	16.2	100
Corporate size	A (assets) <$3m	25	16.2	16.2
	$3m<A<$7m	36	23.4	39.6
	$7m<A<$25	31	20.1	59.7
	$25m<A<$80m	24	15.6	75.3
	$80m<A<$500m	17	11.0	86.3
	A>$500m	21	13.7	100
Incorporation age	3–6 years	13	8.4	8.4
	7–10 years	52	33.7	42.1
	11–14 years	28	18.1	60.2
	15 years or more	61	39.8	100

* For all characteristics, cumulative percentages are calculated on valid percentages, for example, 154.

Table 3 above shows the demographic composition of the sample large corporate taxpayers. The sample size for the study is 162. Since the tax files of some corporations were either not produced or pertaining to matters currently before the appeal courts, sample size was reduced to 154. As it shows, 74.7 per cent of the corporations had public limited ownership, with only 25.3 per cent being private. Of these, finance sector corporations constituted the majority (51.9%) followed by the manufacturing sector (27.9%) and service sector (20.1%) corporations. Large corporations with multinational locations numbered only a few (16.2%), with local corporations being the majority (83.8%). Corporations with assets between US$3

million and US$7 million comprised the largest band (23.4%), followed by assets within the range of US$7 million to US$20 million (20.1%). Statistics for incorporation age (for example, age group) show that large corporations in the 15 years or more group formed the principal category (39.8%).

6.2   Tax compliance: Definitions and measurement

In its simplest form, tax compliance means filing returns for all taxes at the appropriate time, as required by income tax laws (Roth et al., 1989). According to Brown and Mazur (2003), tax compliance has three levels: filing, reporting and payment. Filing compliance refers to the proportion of registered taxpayers submitting returns. In calculating the percentage of filing compliance, large taxpayers registered within the LTU has been used as the basis. There may be large taxpayers in other tax jurisdictions of Bangladesh, although according to the NBR notification all large taxpayers have been placed with the LTU. Assessing payment compliance involves measuring the percentage of taxes paid by the due date. Finally, reporting compliance measures whether income is concealed or expenses are overcharged or any inadmissible expenses are claimed as admissible.

These three compliance segments maintain a mutually exclusive relationship in the sense that filing compliance by a corporation does not necessarily mean that it is reporting and payment compliant. The opposite, a mutually inclusive and concurrent relationship, may also prevail among the three segments, for example, the return is filed on time, all income is declared, and taxes are paid in full. Another possibility for the relationship of the components is that returns are filed on time and incomes are reported properly, but taxes are not paid in full; for reporting fully does not mean paying fully. The only possible absurdity in the relationship would be for taxes to be paid in full but income not to be reported or tax returns not to be filed.

Given the above components of tax compliance, the measurement of full or overall tax compliance is only possible by summing up compliance achieved for each of the three components. However the process of summation depends on how compliance is defined in a particular context. In the extant literature, tax compliance is defined as a continuous variable. For example, Hamm (1995) and Palil (2010) measured tax compliance as a ratio or proportion. In their formula, reported income is divided by the total taxable income to measure the extent to which the taxpayer is compliant in its reporting obligation. The same technique can be applied to measure payment compliance, but for measuring filing compliance this technique is potentially flawed. This is because filing is either full or zero–a taxpayer cannot be partially filing compliant. Thus filing compliance would be best measured as a dichotomous variable. A variable is dichotomous when it can have only two possible values (Nachmias & Guerrero, 2011).

Similar argument can be made in the measurement process of reporting and payment compliance, namely, after taking into account all disclosed incomes and tax payments, the final status of a taxpayer is either compliant or non-compliant–a binary outcome as presented in Table 4.

Table 4: Binary measurement of tax compliance

Compliance type	Compliant	Non-compliant
Filing compliance	1	0
Reporting compliance	1	0
Payment compliance	1	0
Overall compliance, if shown	3	-
Overall non-compliance, if shown	-	0, 1 or 2

Table 4 demonstrates that corporations filing tax returns within time are filing compliant and are assigned a value of 1; those failing to file tax returns within the time are filing non-compliant and assigned a value of 0. Filing compliance was measured directly from the tax office records that showed whether tax returns had been filed in time or not. According to the Income Tax Ordinance 1984 (Bangladesh), all corporate taxpayers, small, medium or large, are required to submit annual tax returns by 15 July. However, if 15 July precedes the expiry of six months from the end of the income year then filing should be made within six months from the end of that income year. Filing non-compliance is difficult for a corporate taxpayer, especially a large one, since getting registered with the tax authority is a pre-condition to incorporation by the Joint Stock Office of Bangladesh.

Similarly, reporting compliance was measured from LTU audit adjustments. The LTU audit records contain information as to whether there was audit adjustment. Any adjustment imposed on a firm means that there has been a case of underreporting of income. For measurement purposes, no audit adjustment means the taxpayer has been found to be 'clean' in its income declaration, although practically it may mean that the audit measures have failed to uncover any unreported income or over claimed deductions. No audit adjustments means the taxpayer is reporting compliant (value = 1), whereas audit adjustments means reporting non-compliant (value = 0). Finally, payment compliance was also measured from the LTU payment registers, which showed whether taxes have been paid fully on the correct taxable income. Taxes here imply only income tax, not VAT, employment and other taxes. No shortfall between the payable and the paid taxes makes a taxpayer payment compliant (value = 1). Any shortfall between these two makes a taxpayer payment non-compliant (value = 0).

Based on the above arguments, a taxpayer is considered overall compliant if each of the components has scored 1 (filing = 1, reporting = 1 and payment = 1), that is, a total score of 3. Taxpayers will be overall non-compliant if their total score is less than 3 (for example, score from 0 to 2). Obviously, the number of overall compliant taxpayers is likely to be less as this approach necessitates compliance in all three areas at the same time. However, to ascertain the extent of tax compliance accurately, the fate of audit adjustments or other non-compliances in the appellate forums needs to be taken into account.

The next section discusses the impact of appeals on the measurement of tax compliance.

6.3   Effects of appeals on compliance measurement

In consideration of the high appeal rate and its probable impact on study results, adjustments were made in the measurement of tax compliance. Without considering the effects of appeals, the tax collections reported in the LTU annual reports and studies based on such reporting are going to be misleading and methodologically inappropriate.

As in the LTU of Bangladesh, corporations declared non-compliant for any compliance component may opt for an appeal to the Taxes Appellate Authority (TAA). If a taxpayer fails at the TAA stage, it may opt for a second appeal to the Taxes Tribunal Authority (TTA). Finally, there may be an appeal to the High Court (HC) of Bangladesh. The LTU also reserves the right to challenge any appellate or tribunal judgment passed in favour of a taxpayer.

Table 5:   Appeal outcome on cases found non-compliant by desk and comprehensive audit (N=154).

Appeal cases	Frequency	Percentage	Valid percentage	Cumulative percentage
Dismissed	58	37.7	37.7	37.7
Allowed	14	9.1	9.1	46.8
Others	13	8.4	8.4	55.2
Total	85	55.2	55.2	
Not an appealable case	61	39.6	39.6	94.8
Did not opt for an appeal	8	5.2	5.2	100.0
Total	154	100.0	100.0	

Of the 154 sample large corporations as reported in Table 5, 85 lodged appeal cases against the LTU's audit decisions, of which 58 appellants failed, 14 won and 13 had their appeal cases set aside or re-assessed. Of the remaining large corporations (154-85) = 61 were happy with the LTU's decision and 8 corporations did not opt for an appeal, although there were grounds for one. All the 14 appeals yielding positive outcome relate mainly to reporting non-compliance. While measuring reporting compliance, corporations that were treated as non-compliant by the LTU but were later judged compliant by appeals courts were considered reporting compliant. LTU records show that only 68 corporations were reporting compliant, but when the appeal and re-assessment effects were included, the number of reporting compliant

corporations increased to 83. If this adjustment had not been made, the measurement of both reporting compliance and overall compliance would have been affected. However, no records were found on how many of those who failed in the first appeal opted for further appeals in the TAA or HC levels. Since some appeals were still pending in the TAA and HC levels, at the time the survey was conducted, it was not possible to take into account the effects of these appeals on the study design. Therefore the adverse effect of high appeals on the study outcome could be mitigated largely, but not fully.

Another issue related to the accuracy of this measurement is the quality and neutrality of appeal judgments. It was argued by a respondent that 'the appellate authority is outright corrupt and they sell judgments for money' (Respondent 26). Another respondent stated, 'Large corporations know that if the LTU does not accept the audit report, they have to go for an appeal and have to spend money in the appellate forums to get justice' (Respondent 9). Other respondents commented that the money taxpayers spent in buying justice made them underreport income. The next section discusses the analysis and findings about the level of tax compliance achieved by the large corporations.

6.4   Methodological limitations and constraints

It is important to keep in mind several limitations regarding this study before claiming any authoritative conclusions. The first limitation is that there may be taxpayers with highly tax-averse nature with respect to 'grey areas' of taxation for which it's difficult to account. Second, filing returns in time may be beyond the control of the taxpayer. In some cases the tax authority may fail to register the taxpayer in time. Recently, many taxpayers in Bangladesh failed to register in time due to technical difficulties in mandatory e-TIN (Taxpayers' Identification Number) software. Third, there are concerns about the audit adjustments made on immaterial technical grounds (Fuest and Riedel, 2009). Fourth, determining tax liabilities for large corporations requires specialised knowledge. Lack of professional knowledge and understanding by the LTU officials may give rise to instances of reporting and payment non-compliance (elaborated in section 7.2). Again, tax evasion and corruption are endemic in Bangladesh (Khan, 1996; Chowdhury, 2006) which raises a basic concern about the effectiveness of tax audit as a measure of reporting compliance. Fifth, a major limitation is the non-compliances occurring due to complex technical interpretation, a new court decision or unintentional mistakes committed by the taxpayers.

7.   ANALYSIS AND FINDINGS

7.1   Tax compliance by components

Based on the interrelationship between tax compliance components and the measurement process, this section measures the level of compliance for each of the compliance components created by large corporate taxpayers.

Table 6 below provides summary statistics for compliant and non-compliant taxpayers. The first important observation is that filing compliance is the highest among the three compliance components (84.4%). Second, as large corporate taxpayers move to the next compliance component, that is from filing to reporting, the rate goes down; and it goes up again from reporting to payment compliance. Tax compliance by income

reporting is 53.9 per cent and by payment of taxes is 75.3 per cent. Filing compliance has a mean of 0.84 which means that 84 per cent of taxpayers are filing compliant, since the higher code 1 is treated as tax compliance and 0 as non-compliance. The mean value for any nominal variable that has only two categories has meaning (Leech et al., 2008). In the case of tax payment, mean compliance (M = 0.75) falls as compared to filing compliance; and for reporting compliance, mean value falls further (M = 0.54). In each case, the modal group is 1, which represents tax compliance.

Table 6: Descriptive statistics on the tax compliance levels of large corporations (N = 154)

Tax compliance components	Compliance status	Frequencies	Percentages	Cumulative percentages
Filing compliance **(FC)**	Compliant	130	84.4	84.4
	Non-compliant	24	15.6	100
Reporting compliance **(RC)**	Compliant	83	53.9	53.9
	Non-compliant	71	46.1	100
Payment compliance (PC)	Compliant	116	75.3	75.3
	Non-compliant	38	24.7	100
Overall compliance	Compliant	57	37.0	37.0
	Non-compliant	97	63.00	100

In measuring overall tax compliance for a particular taxpayer, the individual component scores are added. Table 7 below shows that 96 large corporate taxpayers in the sample are both filing and payment compliant. If reporting compliance were not included, then overall compliance, based on the filing and payment components, would be 62.3 per cent, but the number of taxpayers who are both filing and reporting compliant is 65, which reduces the level of overall compliance to 42 per cent. There are only 57 taxpayers who are filing, reporting and payment compliant, making 37.0 per cent of large corporate taxpayers compliant in overall terms. Thus, the mean composite compliance is 0.37 and the modal group is 0, meaning in overall terms large corporate tax compliance is not impressive.

Table 7: Cross-tabulation on measurement of overall tax compliance

Compliance types			Payment		Reporting		Overall	
			Com	**Non-com**	**Com**	**Non -com**	**Com**	**Non-com**
Filing by payment, reporting and overall compliance	Filing	Com	96	34	65	65	57	73
		Non-Com	20	4	18	6	0	24
Payment by reporting and overall compliance	- -	Payment	Com	72	44	57	59
			Non-com	11	27	0	38
Reporting to overall compliance	- - - - - -		Reporting	Com	57	26
				Non-com	0	71

To make the above findings robust, binomial test statistics are derived, which show whether the proportion of compliant and non-compliant large corporations differed by chance or by pre-specified probability (Bryman and Cramer, 2005). The test results show that there is a statistically significant difference in the proportion of compliant and non-compliant taxpayers in the cases of filing, payment and overall compliance (p = 0.001). But for reporting compliance, the difference is not statistically significant (p = 0.375). Again, a McNemar test, conducted to see the marginal frequencies of two binary outcomes, reveals that there is a statistically significant difference in the proportion of compliant and non-compliant taxpayers between component and overall tax compliance (p = 0.001). Finally, the value of phi and Camri's V, measuring correlation between binary variables (Argyrous, 2011), are found to be weak between filing and overall compliance (phi and V = 0.329, p = 0.001) and between payment and overall compliance (phi and V = 0.439, p = 0.001). But between reporting and overall compliance, the relationship is found to be strong (phi and V = 0.709, p = 0.001)–meaning most of the non-compliance came from the reporting component.

7.2   Audit adjustments and additional tax revenues

Large corporations in Bangladesh LTU are subject to auditing on a selective basis once the deadline for return of submissions has passed. The audit programme is based on those returns submitted within the time stipulated by tax law. Those who fail to submit returns on time incur a penalty. Before the audit decisions are made, the tax returns are screened through the revenue accounting departments to detect any apparent non-compliance, for example, miscalculation of tax liabilities. The audit rate–the percentage of filed returns to be audited—is not made known to the corporations; but the audit rate of large corporate taxpayers in Bangladesh is usually high, given the possibility of revenue leakages from non-reporting. It is important to note that the rate of large corporate audit actions is high across the world. For

example, in Hungary all large corporations are audited every second year (Pitti & Vazquez-Caro, 1998). In the US, the audit rate for large corporations in 2006 was nearly 50 percent up from 2003 (IRS, 2006), although in the recent years there has been a decline in the number of large business audits (TRAC, 2011). However, as Table 8 reveals, the amount of audit demands (column 6) and collections from these (column 7) have decreased over the years, except in tax year 2005–2006.

Table 8: Annual audit outputs from large corporate taxpayers in millions of Bangladeshi Taka

Tax year (1)	Completed audits				Audit demands created (6)	Collected from audit demands (7)
	Desk verification audit		Comprehensive audit			
	Files targeted to audit (2)	Files audited (3)	Files targeted to audit (4)	Files audited (5)		
2003–2004	80	80	0	0	5,340.0	3,320.0
2004–2005	193	193	6	6	1,501.1	752.0
2005–2006	196	196	6	6	3,142.3	1,527.1
2006–2007	180	180	3	3	1,012.5	542.5
2007–2008	84	26	0	0	112.3	23.5
2008–2009	201	86	0	0	350.4	54.6
Total	934	761	15	15	11,458.4	6,219.7

Source: LTU Annual Report, 2009.

For example, in tax year 2003–2004, additional tax of 5,340.00 million Bangladeshi Taka was demanded from the tax audits of 80 files (column 2), that is, the per file audited tax demand was 66.75 million Taka. In 2005–2006, per file audit demand decreased to 16 million Taka, and in 2007–2008 to 1.33 million Taka.

Declining audit demands may have two potential explanations: first, audit actions have been successful in reducing the amount of income underreporting. Second, the deterrent effect of tax audit has fallen in the face of complicated game-playing techniques by the corporations. It should be noted that roughly half of the demands created in every tax year remained uncollected (column7), may be because the audit demands were fictitious or the enforcement measures were weak or ineffective. Aside from enforcement measures, political instability and the quality of institutions might be associated with the tax compliance and audit of the large companies (Tsibouris et al, 2006).

The other explanation for the declining audit demands may be the huge knowledge and skills gap between the audit teams and the representatives of large corporations. An investigation was carried out into the taxation and accounting knowledge of tax officials (see Appendix 2), which many respondents identified as a potential barrier to make undisputed audit adjustments. Fourteen tax were officials interviewed, only 4 of whom had academic knowledge of accounting and taxation. The remainder had only in-service training on tax law.

To address this significant accounting and tax knowledge deficit, the respondents argued that tax officials must have a thorough understanding of financial and tax accounting standards and rules. A respondent made the following observation about an occasion on which penalty was wrongly allowed as an admissible expense, when it should have been added as income.

> Because of poor knowledge of a mobile operator's business and its accounting software, we foolishly allowed penalty as an admissible expense that was imposed on the income from hidden business operations. We failed to understand that the concealed income had to be added to the income of the corporation. Such non-compliances arose only due to our lack of understanding of the mobile operator's business. (Respondent, 27).

In the same vein, another respondent stated:

> LTU tax officials don't know their job properly and want too many papers. Sometimes they lack proper accounting knowledge and arrive at a wrong understanding of the books of accounts. This creates mistrust between the tax officials and the large corporate taxpayers. (Respondent, 17).

7.3   Tax compliance by corporate demographic features and interview responses

Demographic issues are important to contextualise an analysis of organisational studies (Cordes et al., 1999; Hernes, 2004). Morris and Lonsdale (2004) argue that business type, size–sole-proprietor, partnership or corporation–and industry location influence tax compliance. Corporate size, ownership structure, and membership of a corporate sector emerge as some of the most significant demographic features in this study. Table 9 shows the tax compliance performance of large corporations based on their salient demographic features. It demonstrates that overall compliance is higher in private limited corporations (43.6%) than in public limited corporations (34.8%). Tax compliance measured by corporate location shows that multinational corporations (40.0%) are better than the local corporations (36.4%), but only marginally.

In terms of filing compliance, the finance sector corporations have the highest level of compliance (91.25%), followed by the service sector (80.6%) and manufacturing sector corporations (74.4%). However in reporting compliance, service and manufacturing corporations jointly have the highest compliance rate (67.7%) and (67.4%) respectively, whilst rates for this compliance are 41.3 per cent for finance corporations. Finally, in terms of payment compliance, manufacturing corporations are the most compliant (83.7%) followed by finance (73.6%) and the service corporations (67.7%). When the compliance components are combined, manufacturing corporations are the most compliant (44.2%), in comparison with service (38.7%) and finance (32.5%) corporations.

Table 9: Tax compliance by large corporations viewed from corporate ownership, corporate sector, and corporate location (N = 154)

Compliance types	Compliance status	Ownership structure		Corporate sectors			Location	
		Public limited	Private limited	Finance	Manufacturing	Service	Local	Multi
Filing	Compliant	100 (86.9)	30 (76.9)	73 (91.2)	32 (74.4)	25 (80.6)	108 (83.7)	22 (88.0)
	Non-compliant	15	9	7	11	6	21	3
Reporting	Compliant	57 (49.5)	26 (66.6)	33 (41.2)	29 (67.4)	21 (67.7)	68 (52.7)	15 (60.0)
	Non-compliant	58	13	47	14	10	61	10
Payment	Compliant	84 (73.0)	32 (82.0)	59 (73.7)	36 (83.7)	21 (67.7)	98 (75.9)	18 (72.0)
	Non-compliant	31	7	21	7	10	31	7
Full	Compliant	40 (34.7)	17 (43.5)	26 (32.5)	19 (44.1)	12 (38.7)	47 (36.4)	10 (40.0)
	Non-compliant	75	22	54	24	19	82	15

Note: Figures in parentheses indicate compliance percentage in the respective category.

Two things are worth noting: first, none of the sector corporations achieve top compliance in more than one component. The finance sector has the highest level of compliance in filing; the manufacturing sector in payment; and the service sector in reporting compliance. On average, the manufacturing sector corporations are the most compliant. The question is, why should this be so? Perhaps, central banking regulations and monitoring, as argued by some respondents, require finance sector corporations to prepare their audit reports on time; but such regulations are not enough to ensure they fully report their business income. One respondent expressed his views about this in the following way.

> There are high level manipulations affecting tax compliance behaviour despite strong rules and regulations. For example, the accounts of banks are prepared on the basis of papers sent from the branches, which are huge. It is quite difficult to audit all the papers and find underreported income. Thus tax non-compliance may be a capacity-related issue as well as an intentional attempt to hide some income or expenses. (Respondent 5).

The reason that service sector corporations are the top reporting compliers may be due to the fact that compared to finance and manufacturing corporations, the percentage of multinational corporations is relatively high the in service sector. Of the service sector corporations, 30 per cent are multinationals, whereas the percentage is 11.2 per cent and 16.3 per cent respectively for finance and manufacturing sector corporations (see Table 10).

Table 10: Distribution of large corporations by corporate sector and location (N = 154)

Local / multinational	Corporate sectors			Total
	Finance	**Manufacturing**	**Service**	
Local	71 (88.8)	36 (83.7)	22(70)	129
Multinational	9 (11.2)	7(16.3)	9 (30)	25
Total	80	43	31	154

Note: Figures in the parentheses indicate percentage with respect to total.

As argued by the respondents, multinational corporations are comparatively better in their reporting behaviour than local corporations. Consider the following comments submitted by the respondents:

> I don't think there is much underreporting in LTU multinational corporations, except over the issue of transfer pricing. (Respondent 12).

> Large foreign corporations comply, if not fully at least nearly fully. They have some subtle non-compliance; the local ones commit very crude non-compliance. (Respondent 22).

> Tax compliance by the multinational corporations is high. Among the others, the publicly-traded are better. Privately owned run by the family members have poor tax compliance. (Respondent 3).

> Among the large corporations, multinationals and publicly traded are comparatively good in tax compliance. My only headache is the local big manufacturing corporations. (Respondent 2).

In the international literature there is a little support for the above arguments. As stated earlier, one third of the 275 large multinationals in the US did not pay any taxes during 2001–2003 (ICFTU, 2004). A similar situation exists regarding many multinational corporations in the UK. Among large corporate taxpayers in the manufacturing sectors of the US, Mills (1998) observed a positive relationship between excess of book income over taxable income and proposed audit adjustment.

The fact that the manufacturing corporations emerge as the best compliers in payment compliance may be because the tax burden for this group of taxpayers is low. Manufacturing corporations are charged a tax rate of 27.5 per cent. It is the lowest of

all corporate tax rates in Bangladesh. The international literature on tax compliance suggests that the tax rates for manufacturing and non-manufacturing corporations are almost the same. In Pakistan, for example, the tax rate in 2014 for all corporations is 34 per cent, except for commercial banks which is 35 per cent, while in India the corporate tax rate is 33.99 per cent, with some differences for domestic (30%) and foreign owned companies (40%) (KPMG, 2014). In Canada, similar to Bangladesh, the basic rate of federal tax on large corporations belonging to manufacturing and processing industries is 21 per cent, and 28 per cent for other industries (Erard, 1997).

However, the corporate tax rate for manufacturing corporations in Bangladesh whose shares are not traded publicly is 37.5 per cent. This tax rate can be even lower if a manufacturing corporation declares dividends of more than 10 per cent in a year. Collected data shows that 63 per cent of manufacturing corporations are taxed the marginal rate of 27.5 per cent. Another reason may be that most manufacturing corporations are likely to export their products, and hence may be able to gain from transfer pricing manipulation or export subsidy. But for finance sector corporations the marginal tax rate was 45 per cent in tax year 2009–2010, which may have created a huge tax burden for corporations that reported and paid taxes in accordance with the law.

8.   CONCLUSIONS

Large corporations provide the majority of corporate taxes in most of the tax administration. Ninety percent of corporate taxes in the US and 70 per cent in the UK are provided by large corporations (OECD, 2009), although the share of corporate taxes, as a percentage of total tax revenues, is relatively small in both these countries– eight per cent in the UK and nine per cent in the US (Auerbach et al., 2008). In developing countries, their contribution tends to be much higher. In Bangladesh and Pakistan, for example, large corporations provide one third of the national tax revenue, and a large percentage of corporate taxes (FBR, 2008; NBR, 2009). In many countries, large companies are placed under the LTU system of tax administration to minimise the risk they pose to tax collection. Sophisticated tax compliance models have been developed to combat tax non-compliance by these giant taxpayers both in developed and developing countries. The concept of LTU formation and monitoring of tax collection from the large corporations has been a challenge for tax administrations.

This paper found that large corporations in Bangladesh are mainly divided into three sectors: finance, manufacturing, and service sector corporations. The finance sector corporations achieved the highest compliance rate in tax return filing (91.3%), while the manufacturing and service sectors corporations achieved the highest rate of compliance in payment (83.7%) and reporting compliance (67.7%), respectively. In overall terms, manufacturing sector corporations were the top compliers (44.2%). These findings suggest that none of the sector corporations dominate in more than one compliance component. As revealed in the paper, large taxpayers achieved their highest level of compliance in filing (84.4%), followed by payment (75.3%) and reporting (53.9%) compliance. The overall compliance, measured by totalling these three components, was 37.0 per cent. In calculating tax compliance rates, the effects of appeal decisions were considered. When viewed from the perspective of other corporate characteristics, for example, corporate ownership pattern, private limited corporations are more compliant in overall terms (43.6%) than public limited

corporations (34.8%). Tax compliance measured by corporate location shows that multinational corporations (40.0%) are marginally more compliant than local corporations (36.4%).

As this study suggests, the LTU compliance models applied by the Bangladesh LTU are successful in creating higher levels of filing compliance among large corporations. The level of compliance achieved for tax payment is also very high. However, for reporting compliance the level of compliance is only moderate. Overall, the level of tax compliance is below average.

The findings may be relevant to countries with comparable tax systems and circumstances. There are many areas of tax compliance and the accompanying legal framework in which developing countries follow common practices. For example, the tax laws in India, Bangladesh and Pakistan are similar–all these countries inherited the Income Tax Act 1923, which was enacted during the British colonial period. (Shirazi & Shah, 1991). According to Moore (2008), the tax systems of developing countries share many features—a high level of tax complexity, litigation practices, poor record-keeping and bureaucratically designed tax governance. However, the large number of finance sector corporations represented in the sample data might not be a common feature for LTUs in other jurisdictions. In Bangladesh, all finance sector corporations–banks, insurance and leasing—are placed within the LTU's jurisdiction. This may reduce the generalisability of the study results. Thus where the study variables are measured differently and the legal and regulatory systems of tax audits vary, the study findings might well be different.

9.   REFERENCES

Alink, M & Kommer, V 2011, *Handbook on tax administration*, IBFD, Amsterdam.

Andreoni, J, Erard, B & Feinstein, B 1998. Tax compliance. *Journal of Economic Literature,* vol. 36, no. 2, 818–860.

Argyrous, G 2011, *Statistics for research: With a guide to SPSS*. Sage Publications, London.

Arnold, BJ & Mclntyre, MJ 2002, *International tax premier*, Kluwer Law International, The Hague.

Auerbach, A, Devereux, M & Simpson, H 2008, *Taxing corporate income, NBER working paper*, viewed 16 June 2012, <http://www.nber.org/papers/w14494>.

Baer, K, Benon, O & Oro, J 2002, *Improving large taxpayer compliance, IMF Occasional Paper 215*, International Monetary Fund, Washington, DC.

Barford, B & Holt, G 2013, 'Google, Amazon, Starbucks: The rise of 'tax shaming', BBC News Magazine, 21 May 2013, viewed 18 January 2015, <http://www.bbc.co.uk/news/magazine-20560359>.

Bodin, JP 2003, LTU Case Studies, power point slide (Harvard International Tax Program, 2003), viewed 11 March 2011, https://www.bu.edu/law/faculty/scholarship/workingpapers/documents/AinsworthR080806.pdf

Braithwaite, V 2003, *Taxing democracy: Understanding tax avoidance and evasion*, Ashgate Publishing, Aldershot.

Braithwaite, V. 2007, 'Responsive regulation and taxation: Introduction', *Law and Policy*, vol. 29, no. 1, 3–10.

Braithwaite, V & Braithwaite, J 2001, 'An evolving compliance model for tax enforcement', in N. Shover & J.P. Wright (eds.), *Crimes of privilege: Readings in white collar crime*, Oxford University Press, New York, pp. 405–419.

Braithwaite, J & Wirth, A 2001, *Towards a framework for large business tax compliance, Centre for Tax System Integrity working paper no 24*, Australian National University, Canberra.

Brondolo, J 2009, *Collecting taxes during an economic crisis: Challenges and policy options. IMF staff position note*, International Monetary Fund, Washington DC.

Brown, R & Mazur, M 2003, *IRS's comprehensive approach to compliance measurement*, Internal Revenue Service, Washington DC, viewed 6 December 2009, < http://www.irs.gov/pub/irs-soi/mazur.pdf >.

Bryman, A & Cramer, D 2005, *Quantitative data analysis with SPSS 12 and 13: A guide for social scientists*, Routledge, New York.

Burgess, RG 1982, 'The unstructured interview as conversation', in RG Burgess (ed.), *Field research: A sourcebook and field manual*, pp.164-169, Routledge, New York.

Federal Board of Revenue (FBR), 2008, Tax collections figure, viewed 24 July 2011, <http://www.fbr.gov.pk/ >.

Chowdhury, F, 2006, *Corrupt bureaucracy and privatization of tax enforcement in Bangladesh*, Pathak Shamabesh, Dhaka.

Christian Aid, 2010, *paying our dues: how tax dodging punishes the poor,* viewed 26 August 2013 < https://www.christianaid.org.uk/images/ChristianAidTaxReport.pdf>.

CIAT, 2009,*A modern vision of the tax administration*, viewed 29 April 2011, <file:///C:/Users/zha202/Downloads/e.book__assembly_dominicana_rep.pdf>.

Clinard, M B & Yeager, PC, 1980, *Corporate crime*, Free Press, New York.

Commonwealth Association of Tax Administrators (CATA), 2006, *Implementing large taxpayer units*, Commonwealth Secretariat, London.

Conley, J M & O'Barr, WM, 1997, 'Crime and custom in corporate society: A cultural perspective on corporate misconduct'. *Law and Contemporary Problems*, vol. 60(Summer), 5–22.

Cordes, JJ, Ebel, RD & Gravelle, J, 1999, *The encyclopaedia of taxation and tax policy*, Urban Institute Press, Washington.

Crandall, W, 2010, *Revenue administration: Performance measurement in tax administration,* viewed 14 August 2014, <https://www.imf.org/external/pubs/ft/tnm/2010/tnm1011.pdf>.

Department for International Development (DFID), 2001, *Evaluation of revenue projects synthesis report volume 1*, viewed 10 November 2009, <https://www.gov.uk/government/publications/evaluation-of-revenue-projects-synthesis-report-volume-i-ev636>

Easter, GM, 2008, 'Capacity, consent and tax collection in post-communist states'. in D Brautigam, O-H Fjeldstad & M Moore (eds.), *Taxation and state building in developing countries: Capacity and consent, pp,64-88,* Cambridge University Press.

Erard, B, 1997, *The income tax compliance burden of Canadian big business working paper no 97–2, University of Carleton, Finance Technical Committee*, viewed on 3 June 2010, http://publications.gc.ca/collections/Collection/F21-4-97-2E.pdf.

Federal Board of Revenue (FBR), 2014, Large taxpayer unit, viewed 8 September 2014, <http://www.ltulahore.gov.pk/>.

Fuest, C & Riedel, N, 2009, *Tax evasion, tax avoidance and tax expenditures in developing countries: A review of the literature*, Oxford University Centre for Business Taxation.

The Sunday Morning Herald, 2010, 'ATO to come down on big business', viewed 19 July 2011, < http://www.smh.com.au/business/ato-to-come-down-on-big-business-20100216-o90y.html >.

Hamilton, G, 1994, 'Integral unit for large taxpayer management in the tax administration'. *The VII CIAT IFE Essay Contest*: Revista de Administration Tributaria CIAT/IEF.

Hamm, JL, 1995, 'Income level and tax rate as determinant of taxpayer compliance: An experimental examination' PhD Thesis, Texas Technology University, viewed 12 April 2010, https://repositories.tdl.org/ttu-ir/handle/2346/19720

Hasseldine, J, Hite, P, James, S & Toumi, M, 2007, 'Persuasive communications: Tax compliance enforcement strategies for sole proprietors'. *Contemporary Accounting Research,* vol. 24, no. 1, 171–194.
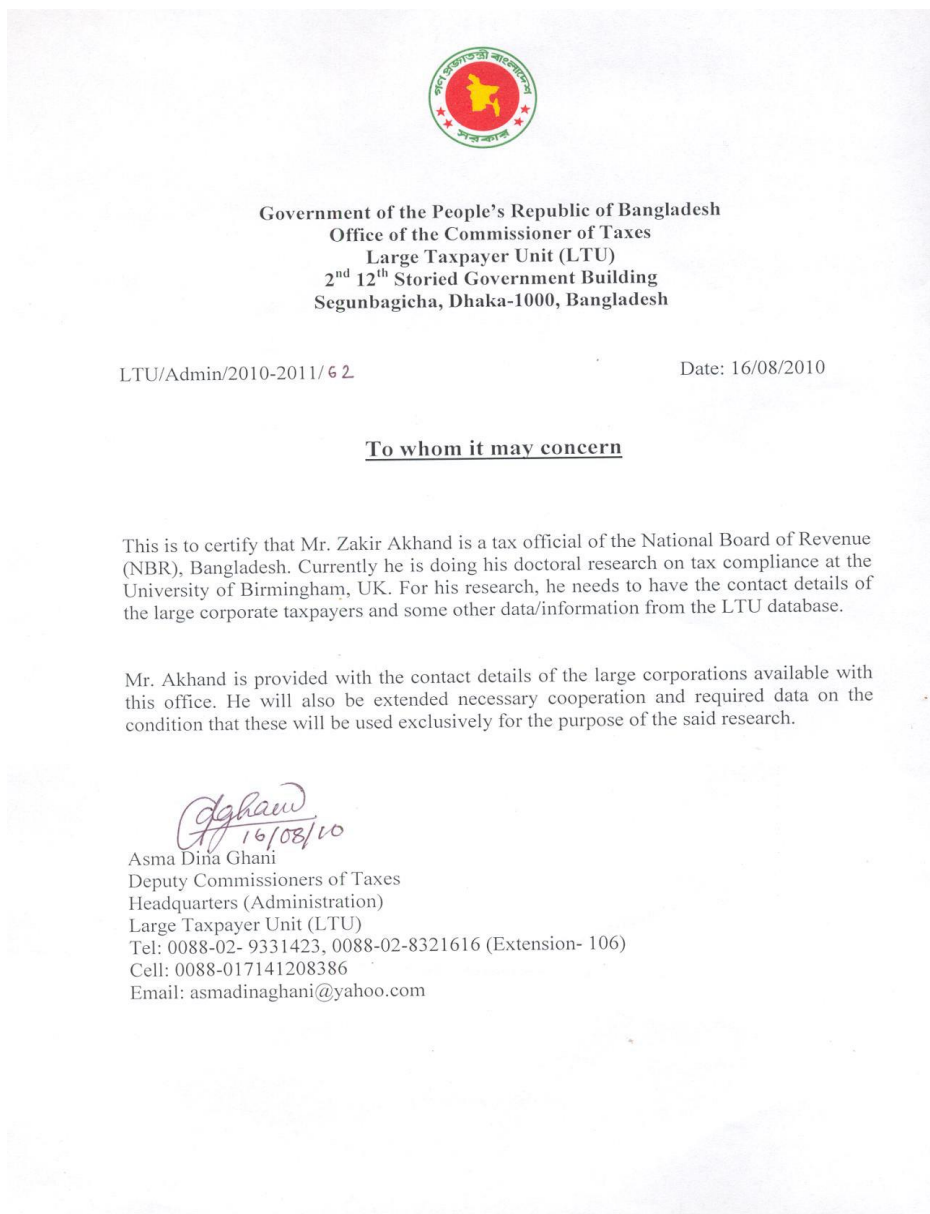
Hernes, T, 2004, 'Studying composite boundaries: A formal analysis'. *Human Relations*, vol. 57, no. 1, 9–29.

House of Commons, UK, 2008, *Management of large business corporate tax—Thirtieth report of session 2007–2008*, viewed 6 March 2011, <http://www.parliament.uk/business/committees/>.

ICFTU (International Confederation of Free Trade Unions), 2004, 'Having their cake and eating it too: The big corporation tax break', viewed 23 August 2010, <http://www.taxjustice.net/cms/upload/pdf/tax_break_EN.pdf>.

Israel, GD, 2009, 'Determining sample size', University of Florida, IFAS extension, viewed 11 March 2010, http://edis.ifas.ufl.edu/pd006.

Internal Revenue Services (IRS), 2006, *Fiscal Year 2006 Enforcement and Service Result, viewed 28 August 2015, <http://www.irs.gov/uac/Fiscal-Year-2006-Enforcement-and-Service-Results>*.

International Monetary Fund (IMF), 2000, *Revenue Mobilization in Developing Countries* (Washington: International Monetary Fund), viewed 11 November 2014, https://www.imf.org/external/np/pp/eng/2011/030811.pdf.

International Tax Dialogue (ITD), 2007, *Taxation of micro‑, small ‑ and mediums sized enterprises*, viewed 12 December 2014, http://www.smmeresearch.co.za/SMME%20Research%20General/Conference%20Papers/Taxation%20of%20SMEs.pdf

Joshi, A & Ayee, J, 2008, 'Associational taxation: A pathway into the informal sector?' in D Brautigam, O-H Fjeldstad & M Moore (eds.), *Taxation and state building in developing countries: Capacity and consent, pp. 183-211,* Cambridge University Press.

Joulfaian, D and Mark, K 1999. 'Differential taxation and tax evasion by small business'. *National Tax Journal,* vol. 51, no. 4, 685–687.

Kangave, J, 2005, 'Improving tax administration: A case study of the Uganda revenue authority'. *Journal of African Law*, vol. 49, no. 2, 145–176.

Khan, MH, 1996, 'The efficiency implications of corruption'. *Journal of International Development,* vol. 8, no. 5, 683–696.

Kieso, D, Weygandt, J & Warfield, J, 2011, *Intermediate accounting: IFRS edition*, Wiley and Sons, New Jersey.

KPMG, 2014, *Corporate tax rates table*, <http://www.kpmg.com/global/en/services/tax/tax-tools-and-resources/pages/corporate-tax-rates-table.aspx>.

Kvale, S, 1996, *Interviews: An introduction to qualitative research interviewing*, Sage Publications, London.

Leech, N, Barret, K & Morgan, GA, 2008, *SPSS for intermediate statistics. Use and interpretation*, Lawrence Erlbaum Associates: New York.

Lohr, S L, 2010, *Sampling: Design and analysis*. McMillan Publishing, Boston.

Large Taxpayer Unit (LTU), 2009, LTU Annual Report 2009 (In Bengali).

McBarnet, D, 1992, 'Legitimate rackets: Tax evasion, tax avoidance, and the boundaries of legality', *Journal of Human Justice*, vol. 3, no. 2, 56–74.

McCarten, W, 2003, *The role of organizational design in the revenue strategies of developing countries: Benchmarking with VAT performance*. The World Bank, Washington DC.

McCarten, W, 2004, *Focusing on the few: The role of large taxpayers unit in the revenue strategies of developing countries.* The World Bank, Washington DC.

Mills, L, 1998, 'Book-tax differences and internal revenue service adjustments', *Journal of Accounting Research,* vol. 36, no. 2, 343–356.

Ministry of Finance, India, 2014, Large Taxpayer Unit, viewed 22 September 2014,http://ltu.gov.in/index1.htm.

Moore, M, 2004, 'Revenues, state formation, and the quality of governance in developing countries'. *International Political Science Review*, vol. 25, no. 3, 297–319.

Moore, M, 2008, 'Between coercion and contract: Competing narratives on taxation and governance', in D Brautigam, O-H Fjeldstad & M. Moore (eds.), *Taxation and state building in developing countries:* C*apacity and consen*t, 64-88, Cambridge University Press.

Morris, T and Lonsdale, M, 2004, Translating the compliance model into practical reality, paper presented at the 2004 IRS Research Conference, viewed 8 July 2011, <http://www.irs.gov/pub/irs-soi/04moori.pdf>

Nachmias, CF and Guerrero, AL, 2011, *Social statistics for a diverse society*, Sage Publications, London.

National Board of Revenue, (NBR) 2009, *Annual report 2009*, International Resources Division, Dhaka.

Organisation for Economic Co-operation and Development (OECD), 2009, 'Forum on tax administration: Compliance management of large business task group', viewed 22 November 2009, <http://www.oecd.org/tax/administration/43241144.pdf>.

Palil, MR, 2010, 'Tax knowledge and tax compliance determinants in self-assessment system in Malaysia', PhD thesis, University of Birmingham, viewed 26 December 2011, http://etheses.bham.ac.uk/1040/1/Palil10PhD.pdf.

Perry, V, 2004, 'Experience and innovation in other countries',. in HJ Aaron & J Slemrod (eds.), *The crisis in tax administration*, The Brookings Institution, Washington, DC.

Phillips, ME, 2008, 'Business tax as state-building in developing countries: Applying governance principles in private sector development', *International Journal of Regulation and Governance,* vol. 8 no. 2, 123–154.

Pitti, J & Vazquez-Caro, J, 1998, 'Tax administration during the transition: Coping with the legal changes and a shrinking base' in L Bokros and J-J Dethier (eds.), *Public finance reform during the transition: The experience of Hungary*, pp. 511-532, The World Bank, Washington, DC.

Roth, JA, Scholz, JT & Witte AD, 1989, *Taxpayer compliance: An agenda for research*, University of Pennsylvania.

Santos, DP, 1994, *Administration of large taxpayers*, International Monetary Fund, Washington DC.

Shirazi, JK & Shah, A (eds.), 1991, *Tax policy in developing countries,* The World Bank, Washington. DC.

Shover, N, Job, J & Carroll, A, 2003, The ATO compliance model in action: A case study of building and construction in V Braithwaite (ed), *Taxing democracy: Understanding tax avoidance and evasion*, pp. 159-176, Ashgate Publishing Limited, England.

Slemrod, J, 2004, *The economics of corporate tax selfishness, NBER working paper no 10858*, viewed 24 July 2010, <http://www.nber.org/papers/w10858>.

Song, YD & Yarbrough, T, 1978, 'Tax ethics and taxpayer attitude: A survey'. *Public Administration Review*, vol. 38, no. 5, 442–452.

Terkper, S, 2003, *Managing small and medium size taxpayers in developing countries,* International Monetary Fund, Washington, DC.

Transitional Records Access Clearinghouse (TRAC), 2011, 'Audits of IRS large corporate taxpayers', viewed 16 March 2010, < http://trac.syr.edu/tracirs/newfindings/v13/> .

Tran-Nam, B., Evans, C., Walpole, M and Ritchie, K. 2000. Tax compliance costs: research methodology and empirical evidence from Australia. National Tax Journal, 53(2), 229-252.

Tsibouris, GC, Horton, MA, Flanagan, MJ & Maliszewiski, WS, 2006, *Experience with large fiscal adjustments IMF Occasional Paper 246*, International Monetary Fund, Washington DC.

Tuck, P, 2004, *Remaking the large corporate taxpayer into a visible customer partner: The changing role of tax governance*, viewed 11 June 2011, <http://www2.warwick.ac.uk/fac/soc/wbs/projects/orthodoxies/conference2010/papers/101213_tuck_p.pdf>.

United States General Accounting Office (GAO), 1997, *Tax administrations–factors affecting results from audits of large corporations*, US GAO, Washington, DC.

Vazquez-Caro, J, 1996, *Assessing the impact of integrating functions of administration on efficiency and effectiveness*, Third Conference of Tax Administration of Central Eastern Europe and Baltic Countries (CEEB), Warsaw, October 28-31 1996.

Watts, HD,1978, *The large industrial enterprise: Some spatial perspectives*, Croom Helm, London.

10. APPENDICES

Appendix 1: Approval letter from the LTU Bangladesh.

Government of the People's Republic of Bangladesh
Office of the Commissioner of Taxes
Large Taxpayer Unit (LTU)
2nd 12th Storied Government Building
Segunbagicha, Dhaka-1000, Bangladesh

LTU/Admin/2010-2011/6 2   Date: 16/08/2010

To whom it may concern

This is to certify that Mr. Zakir Akhand is a tax official of the National Board of Revenue (NBR), Bangladesh. Currently he is doing his doctoral research on tax compliance at the University of Birmingham, UK. For his research, he needs to have the contact details of the large corporate taxpayers and some other data/information from the LTU database.

Mr. Akhand is provided with the contact details of the large corporations available with this office. He will also be extended necessary cooperation and required data on the condition that these will be used exclusively for the purpose of the said research.

Asma Dina Ghani
Deputy Commissioners of Taxes
Headquarters (Administration)
Large Taxpayer Unit (LTU)
Tel: 0088-02- 9331423, 0088-02-8321616 (Extension- 106)
Cell: 0088-017141208386
Email: asmadinaghani@yahoo.com

Appendix 2: Lack of knowledge and training.

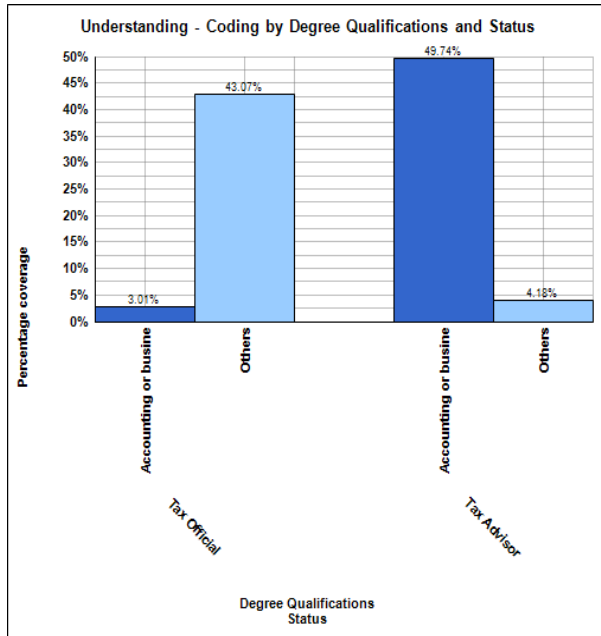Figure 1: Respondents' academic knowledge of accounting and taxation.

Figure 2 Respondents' work experience and accounting knowledge

Chart 1 shows that out of fourteen tax officials interviewed, only four had academic knowledge of accounting and taxation; the others had only in-service training on tax law. Almost all tax professionals have accounting or business degrees. Four per cent of tax professionals have no qualification in accounting, because the ITO, 1984 has allowed retired tax officials to plead tax cases, who do not require having academic qualifications in accounting or taxation.

Chart 2 illustrates all respondents having 25 or more years of experience have degrees in accounting, because respondents in this experience group are tax professionals. But respondents in the other two experience groups, mostly tax officials, have lesser qualifications in business and accounting. Of the eight respondents in the below-15-years-experience groups, only four have accounting degrees, one of which is a tax professional. In the 15-25 year experience group only three out of nine have accounting degrees, most of which are tax officials.

Appendix 3: Summary of key evidence from interviews

RESPONDENT NO.	TITLE	ISSUES
RES-01	Chartered Accountant	Focused on the importance of corporate sector characteristics and the influence of power and politics on tax compliance.
RES-02	Corporate Managing Director	Provided a general review of the coercive and persuasive instruments and emphasised mutual understanding as an option. Acknowledged the role of corporate sectors in compliance behaviour.
RES-03	Corporate Finance Director	Focused on the importance of corporate sector characteristics and compliance behaviour: multinationals are better; services do not reduce the cost of compliance or produce value for money.
RES-04	Chartered Accountant	It's the probability of any coercive action and regulatory discipline that induces compliance, not the amount of the penalty.
RES-05	Bank Finance Director	Argued that structural deficiency in the accounting system and lack of competent accounting staff cause many compliance problems.
RES-06	Additional Commissioner, LTU	Focused on why taxpayer service fails and emphasised the need for coercion.
RES-07	Joint Commissioner, Khulna Tax Zone	Insisted that the possibility of a huge financial penalty was more coercive than its probability merited; preference for powerful, severe actions over soft, persuasive solutions.
RES-08	Second Secretary, NBR	Poor regulatory framework of the financial accounting system and its impact on income underreporting.
RES-09	Inspector, LTU	Tax officials' discretionary powers and their potential impact on compliance; large corporations are greedy profit-makers. Also concentrated on complex tax law and uneven competition.
RES-10	Income Tax Practitioner	Audit adjustment process and the influence on compliance, and noted that the taxpayer service can be futile in creating compliance.
RES-11	Chief Finance Officer	Argued that imprisonment and other tough action can only bring transitory change, rather than permanent change.

RES-12	Tax Commissioner, Chittagong	Hierarchical tax bureaucracy and tax audit problems; focused on the necessity for simplified tax law and reducing knowledge gaps.
RES-13	Tax Commissioner, LTU	Acknowledged the issue of transfer pricing among large corporate taxpayers.
RES-14	Additional Commissioner	Concentrated on mutual understanding and the probable impact on tax laws. Supported the persuasive mode of encouraging tax compliance.
RES-15	Chief Finance Officer	Complex and costly tax laws make bribery likely and stimulate non-compliance.
RES-16	Deputy Commissioner, LTU	Focused on the issues of corporate sector affiliation and compliance behaviour.
RES-17	Managing Director	Discussed conflicting local and international accounting standards. tax officials' inefficiency, mistrust, and lack of mutual understanding.
RES-18	Chief Finance Officer	Argued that financial audit is corrupt and a strong source of tax non-compliance.
RES-19	Income Tax Practitioner	Disbelief, trust and negative attitude of the tax administration in creating tax non-compliance issues. Tough laws cannot bring the desired outcome— you need to persuade.
RES-20	First Secretary, NBR	Explained why services may fail and persuasive measures become ineffective.
RES-21	Deputy Commissioner, LTU	Audit selection process and its impact on filing compliance. Political vengeance and patronage as an explanation for tax compliance.
RES-22	Member, NBR	Explained how political intervention becomes a factor in the compliance process and service provisions become ineffective in creating compliance.
RES-23	Joint Commissioner, LTU	Inefficient and complex tax law discourages taxpayers from being compliant and indirectly makes them unreceptive to coercive actions. Complex tax laws affect the trust-building process.

RES-24	Former Member, NBR	Tax officials' inefficiency and chaotic procedures make taxpayer service fail.
RES-25	Chartered Accountant	Argued for coercive actions and focused on increasing penal actions and strengthening regulation.
RES-26	Chartered Accountant	Taxpayer service and simplified tax law can be a good source of high corporate tax compliance.
RES-27	Second Secretary—NBR	Explained why mutual understanding fails and complicates the compliance process.