



*Institute of Governance Studies,
BRAC University*

Working Paper

Improving Tax Compliance in Bangladesh: A Study of Value-Added Tax (VAT)

Nasiruddin Ahmed

IGS Working Paper Series No. 11/2013

June 2013

Improving Tax Compliance in Bangladesh: A Study of Value-Added Tax (VAT)

IGS Working Paper Series No. 11/2013

Published by the Institute of Governance Studies, BRAC University in June 2013

© Institute of Governance Studies 2013

Institute of Governance Studies

SK Center (5th - 7th Floor), GP, JA-4, TB Gate, Mohakhali,

Dhaka 1212, Bangladesh

Tel: +88 02 881 0306, 881 0320, 881 0326, +88 01199 810 380, +88 35303

Fax: +88 02 883 2542

Web: www.igs-bracu.ac.bd

Email: igs-info@bracu.ac.bd

Improving Tax Compliance in Bangladesh: A Study of Value-Added Tax (VAT)

Nasiruddin Ahmed¹

1. Background of the Study

In recent years, tax compliance has come to the centre of both academic and policy discourse for several reasons. In the first place, tax-GDP ratio in Bangladesh is very low (10.6%) when compared with her South Asian neighbours. This is mainly because of poor compliance rate in both income tax and value-added tax (VAT). Therefore, improving VAT compliance will increase Bangladesh's tax-GDP ratio. Secondly, consumption taxes are the largest source of revenue in middle-income countries and in less developed countries (Salanie 2011). In Bangladesh, VAT contributes more than 50 per cent of total tax revenue. Thirdly, available evidence shows that VAT productivity² in Bangladesh is lower than the average level of low-income countries. If Bangladesh could increase its VAT productivity by 0.12 percent of GDP to the average level of other low income countries, then all else being equal, VAT could increase government revenue by 1.8 per cent of GDP (IMF 2011). Fourthly, raising VAT productivity requires improving taxpayers' compliance. For improving VAT compliance, we need to reform VAT law as well as VAT administration. Fifthly, the Sixth Five Year Plan (FY 2011 – FY 2015) of Bangladesh projects an increase in the revenue to GDP ratio by 3.7 percentage points to 14.6 per cent of GDP by FY 2015 (Planning Commission, 2011). Sixthly, the Modernization Plan (2011-2016) of the National Board of Revenue (NBR) aims at increasing tax-GDP ratio from the existing 10.6 per cent to 13 per cent of GDP by June 2016 (NBR 2011).

With the above background in mind, this paper attempts to analyze how tax revenue can be enhanced by improving VAT compliance. The remainder of the paper is organized as follows. Section 2 discusses some theoretical issues in VAT and tax compliance. An overview of tax revenue in Bangladesh is given in Section 3. Section 4 develops a model for optimizing voluntary compliance through an appropriate balance of (1) simple VAT law and processes, (2) organization development, (3) automation of tax process, (4) taxpayers' education and assistance and (5) enforcement improvement programs. An analysis of the model is given in Section 5. Section 6 deals with an experiment in taxpayer recognition program to enhance VAT compliance. Concluding thoughts are given in Section 7.

¹ The author is working as Part-time Professor at the Institute of Governance Studies, BRAC University.

² VAT productivity is defined as the ratio of VAT revenue to GDP divided by the standard VAT rate.

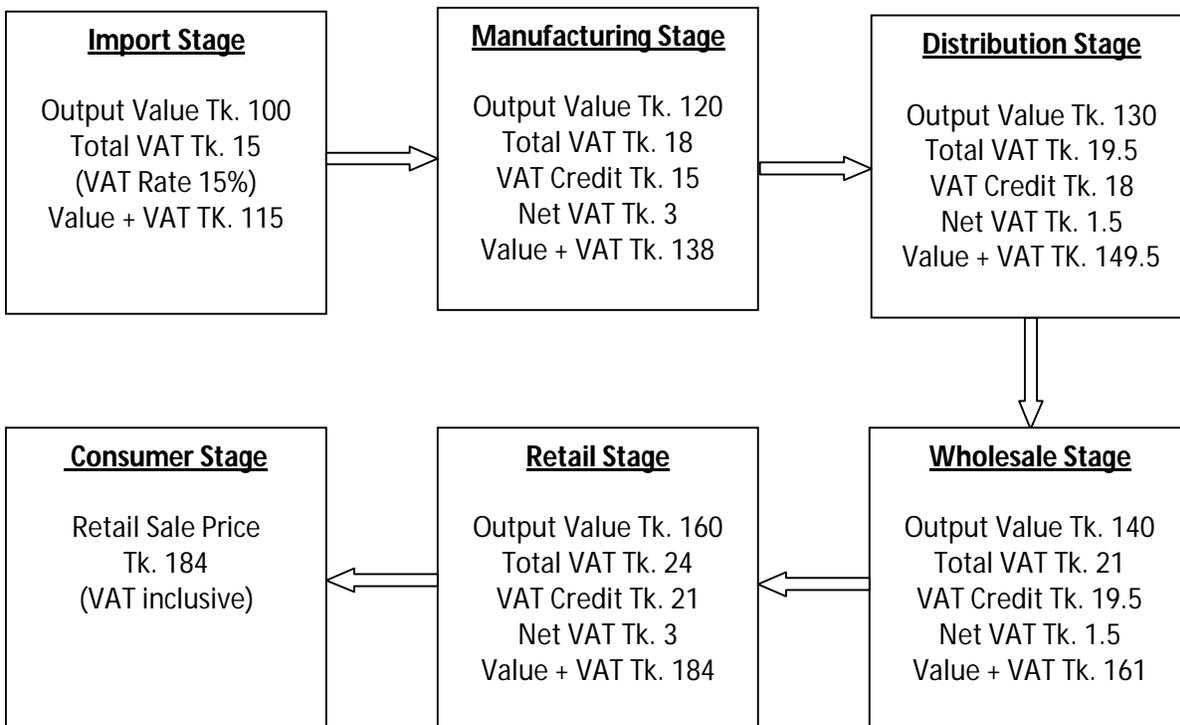
2. Some Theoretical Issues in VAT and Tax Compliance

2.1 Working of VAT System

VAT is imposed on the value of the output of a firm less than the value of goods and services purchased from other firms. As its name suggests, VAT is paid on the value added at each production stage: firms pay VAT on the difference between total sales and total input costs.

According to the self-enforcement hypothesis in the VAT system, firms have an incentive to ask their suppliers for accurate receipts because they can deduct input costs from their VAT bill. This incentive builds the creation of paper trails directly into the tax structure. But the built-in incentive structure breaks down at the final stage (Consumer Stage). While it is in the interest of firms to ask suppliers for receipts in order to deduct input costs from their VAT bill, consumers have no incentive to do so. Since the amounts are recorded in two sets of books – purchase register and sale register, the risk of cross-checks is thought to deter firms from reporting differing amounts (Bird and Gendron 2007). The working of VAT System is given in Figure 2.1.

Figure 2.1: How Does VAT System Work?



2.2 Tax Compliance

Tax compliance refers to the extent to which a taxpayer meets the following four obligations (OECD 2004; Alink and Kommer 2011):

- Registration in the system;
- Timely filing of tax returns;
- Reporting of complete and accurate information; and
- Payment of taxation obligations on time.

Some indicators that are used to monitor VAT compliance level are presented in Table 2.1.

Table 2.1: Some Indicators of VAT Compliance

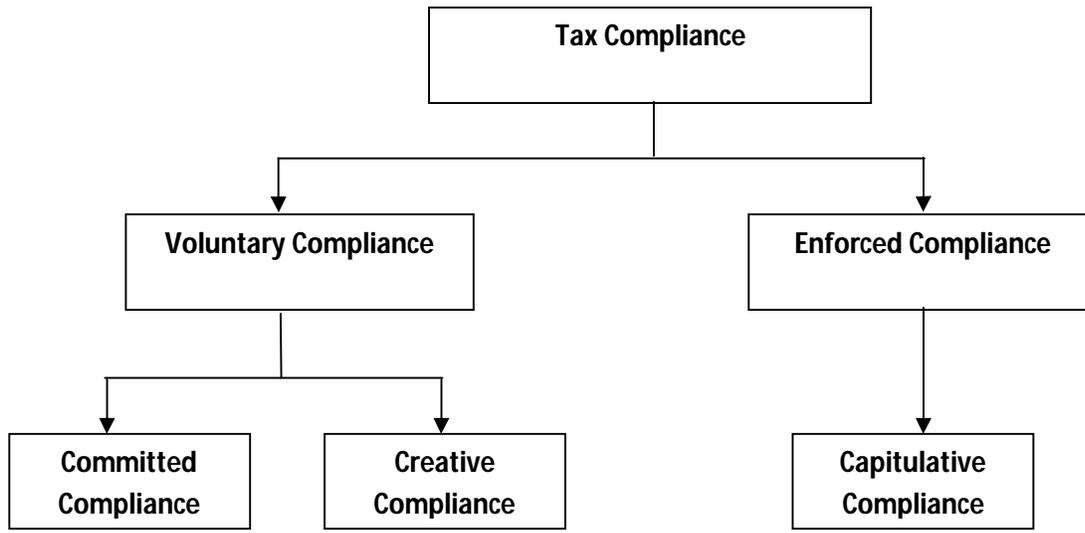
Type of Risk	Indicators of VAT Compliance
Registration	<ul style="list-style-type: none">• Trend in the percentage of registered taxpayers (by specified entity type) compared to estimates of potential VAT payers
Filing	<ul style="list-style-type: none">• Trend in the percentage of returns filed on time by entity type
Correct Reporting	<ul style="list-style-type: none">• Net VAT revenue tracked against changes in consumer expenditures and levels of imports• Net VAT collection/estimates of VAT base (derived from national accounts data)
Payment	<ul style="list-style-type: none">• Trend in the percentage of tax paid on time by entity type

2.3 Dimensions of Tax Compliance

Tax compliance may be voluntary or enforced compliance (Kirchler 2007). Voluntary compliance is made possible by the trust and cooperation between tax authority and taxpayer. It is the willingness of the taxpayer on his/her own to comply with the directives and regulations of tax authority. On the other hand, compliance is enforced on taxpayers who are unwilling to pay their taxes through enforcement.

There are three forms of tax compliance, which include committed compliance, creative compliance and capitulative compliance (McBarnett 2003). Committed compliance is the willingness to discharge tax obligations by taxpayers without grumbling. Creative compliance refers to any act by a taxpayer aimed at reducing taxes by reducing one's tax liability (tax avoidance) while capitulative compliance is the reluctance of a taxpayer in discharging his/her tax obligations (tax evasion). The dimensions of tax compliance are shown in Figure 2.2.

Figure 2.2: Dimensions of Tax Compliance



2.4 Determinants of Taxpayer Behaviour

Research efforts on taxpayer behaviour have identified a large number of possible determinants of compliance and non-compliance. Pioneers Allingham and Sandmo (1972) simply stated that non-compliance was a product of the risk of detection and punishment in the form of tax penalties and other sanctions. Their model was based on pure rational economic risk calculation. Although there might be some value in their approach, it does not explain why most taxpayers comply even in situations when there is hardly a chance of detection. Methods to improve compliance mainly based on examination and sanctions are clearly not effective (Kirchler 1998); Tyler 1990) and can even turn out to be counterproductive (Blumenthal and Slemrod 1998). The use of threat and coercion by tax administration can easily lead to the opposite behaviour from that advocated (Brehm and Brehm 1981). People react against the use of power, especially when it is unwarranted and illegitimate (Biner 1988).

Webley (2002) found a number of aspects influencing taxpayers' non-compliance, including:

- Opportunity is an important explaining factor;
- Perception of equal and fair treatment;
- Individual differences in personality of people;
- Social norms (beliefs about others' behaviours); and
- Knowledge of the tax system and the requirements involved.

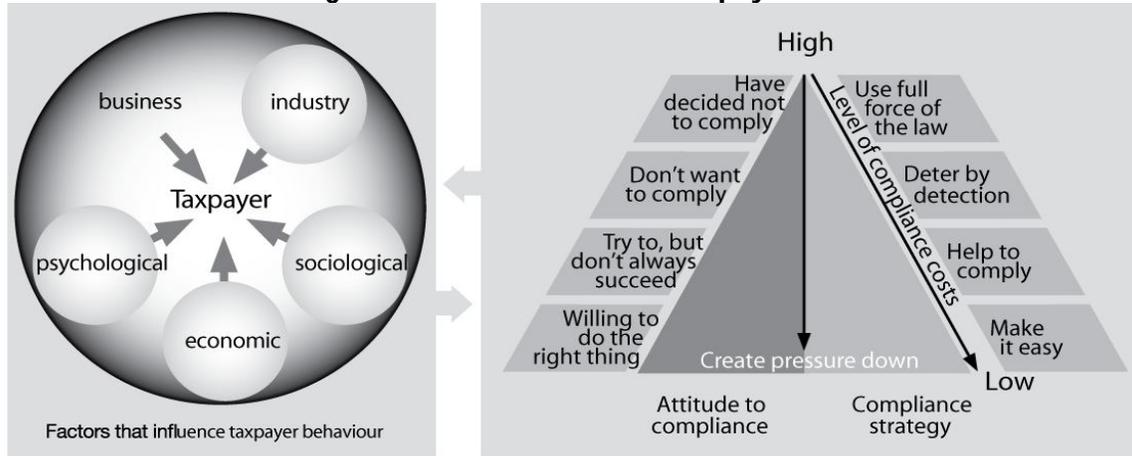
In 2004, OECD developed a model of taxpayer behavior (Figure 2.3) which provides a structured way to better understand what motivates people to comply, or not to comply. The compliance model is divided into two parts:

- The left side of the model recognizes that a wide variety of factors, business, industry,

sociological, economic and psychological, influence a taxpayer's behaviour.

- The right side of the model reflects the different taxpayer attitudes to compliance and the corresponding compliance strategy that best responds to each particular attitude.

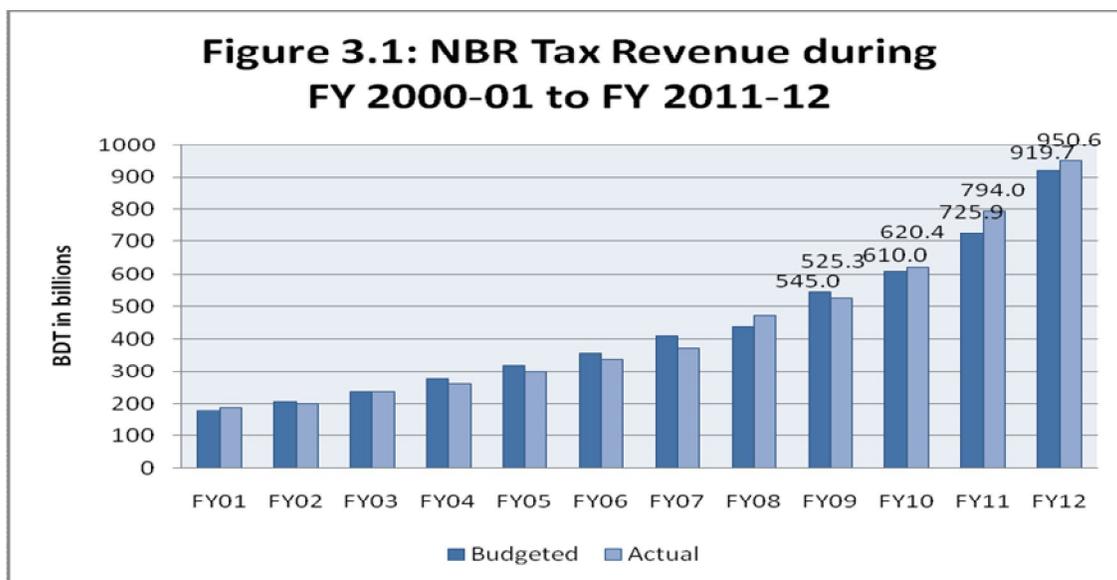
Figure 2.3: Determinants of Taxpayer Behaviour



Source: OECD (2004).

3. An Overview of Tax Revenue in Bangladesh

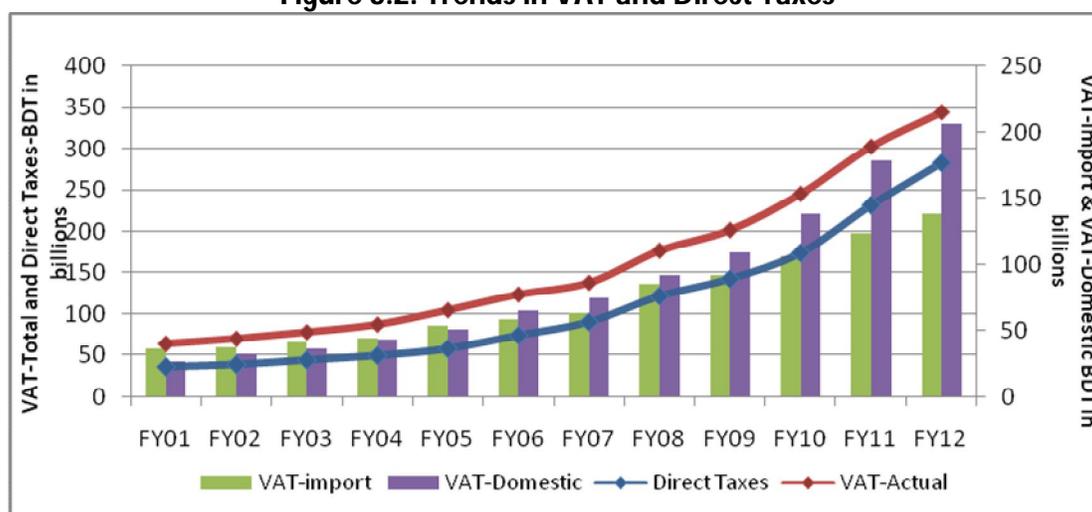
The National Board of Revenue (NBR) is the central authority of tax policy and tax administration in Bangladesh. In recent years, Bangladesh's tax collection has recorded an impressive growth averaging 25 percent per annum. For the first time in the history of Bangladesh, the NBR exceeded the revenue targets specified in the budgets for the last three successive fiscal years (Figure 3.1).



Source: NBR Data

The remarkable achievement in tax revenue mobilization is due to the buoyant performance in domestic taxes - value-added tax (VAT) and direct taxes. Despite the recent gains in tax revenue, achieving the tax revenue targets under the Sixth Five Year Plan (SFYP) remains challenging. However, enormous potentials on both VAT and direct tax fronts can be reaped through sustained structural reforms in tax policy and tax administration. Trend in VAT and direct taxes is shown in Figure 3.2.

Figure 3.2: Trends in VAT and Direct Taxes



Source: Mansur 2012

3.1 VAT System in Bangladesh

In Bangladesh, VAT was introduced at the manufacturing and import stages replacing excise duty at the domestic stage and sales tax at the import stage in 1991. Over the years, VAT coverage has been extended to a number of services as well as at the wholesale and retail stages. Although the standard VAT rate is 15 per cent, the gradual adoption of the truncated value bases for specific services, tariff values for specific products and package VAT for small retailers resulted in multiplicity of VAT rates (Table 3.1).

Table 3.1: VAT Rates

Item	Application	Rates (%) / Values
Standard Rate	Domestic	15
Truncated value base	21 services	1.5-10
Tariff value	101 headings at production stage	Different values
Package VAT	<u>Small Retailers:</u>	
	• Dhaka and Chittagong City Corporations area	Tk. 9000
	• Other City Corporation areas	Tk. 7200
	• Pourashava of districts	Tk. 5400
	• Other areas	Tk. 2700

Source: NBR

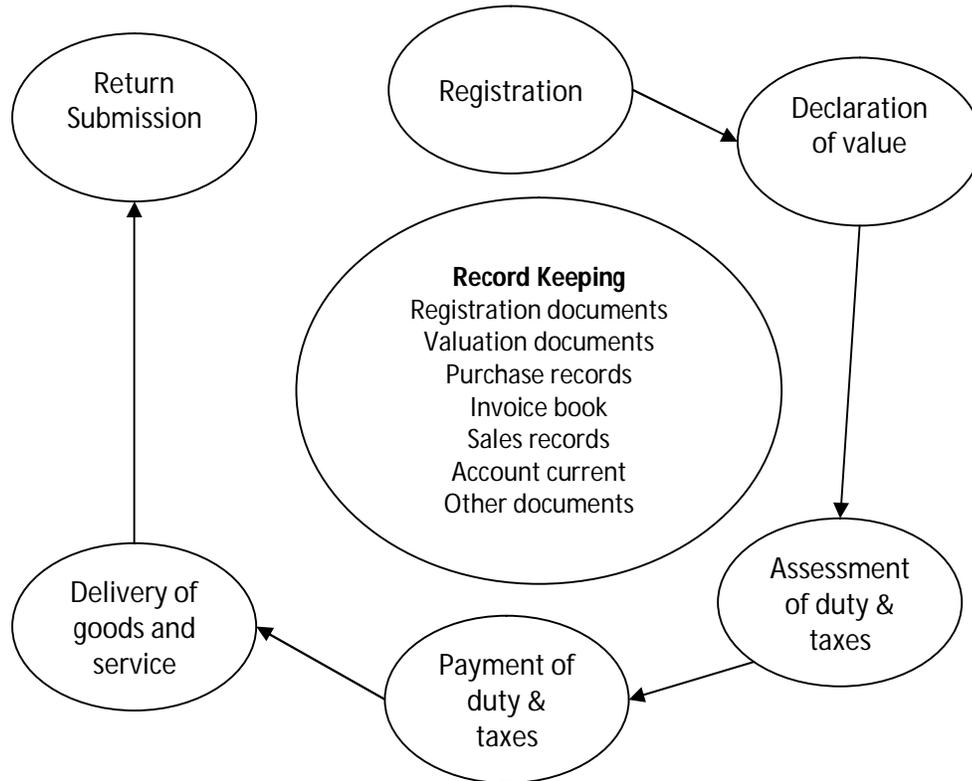
Some salient features of the VAT system are given below:

- Supplementary duty and turnover tax come under the purview of the VAT Act.
- VAT is a self-assessing, self-accounting and self-depositing clearance system.
- The present VAT system is plagued with the prevalence of widespread exemptions, which constitute about 2.0 percentage points of gross domestic product (GDP).
- Multiplicity of VAT rates as well as prevalence of widespread exemptions erodes the efficiency of the VAT system.
- Non-functioning of VAT chain has relegated it to excise duty type tax with cascading (i.e. tax on tax) effect.
- To expand the contour of deduction at source, provision has been made to deduct VAT at source for procurement of 34 specific services by the government and 8 types of other organizations. On all other services, VAT is to be deducted at source if not paid by the service renderer.
- Truncated bases have been reviewed and withdrawn from certain services while tax exemptions on few products have been withdrawn.
- Tariff values for payment of VAT have been rationalized and upward revision has been made for certain products.
- To provide incentives for small and medium sized enterprises (SMEs), the threshold limit for turnover tax has been raised to Taka 7 million from Taka 6 million.
- Provision has been made to protect the confidentiality of the taxpayers' information in the VAT Act.
- The value declaration process for manufacturers has been simplified.
- The import of services through e-commerce has been brought under the purview of VAT.
- Online VAT registration and return submission have been introduced on a trial basis.

3.2 VAT Management System in Bangladesh

VAT management system in Bangladesh has a number of steps: (1) registration for VAT, (2) declaration of value of manufactured commodities, (3) assessment of duty and taxes, (4) payment of duties and taxes, (5) delivery of goods and services and (6) submission of return along with VAT payment. Figure 3.3 displays VAT management system in Bangladesh.

Figure 3.3: VAT Management System in Bangladesh



3.3 Need for Improving VAT Productivity through Improving Tax Compliance

There are two types of VAT compliance behaviour: **stop-filers** and **non-filers**. Non-filers are those firms which carry VATable activities but they are neither registered nor do they submit monthly returns to the NBR. The NBR does not have any information about them. However, the NBR maintains the information of stop-filers: those firms which are registered but not submitting monthly returns along with VAT payments. Table 3.2 gives the information about BIN registration and monthly filing of returns of the registered firms. The compliance rate has been calculated as the percentage of registered firms which file monthly returns.

Table 3.2: Compliance Rate of VAT Registered Firms in Bangladesh

Category	BIN Registration	Monthly Return Filing	Compliance Rate (%)
Importers	125572 (14.35%)	7534 (7.45%)	6.00
Exporters	37106 (4.24%)	9107 (9.00%)	24.54
Manufacturers	46488 (5.31%)	10734 (10.61%)	23.09
Trade	272923 (31.19%)	37465 (37.03%)	13.73
Service Renderers	392899 (44.90%)	36323 (35.91%)	9.24
Total	874988 (100%)	101163 (100%)	11.56

Source: NBR Data

It may be mentioned that the compliance rate has been calculated as the percentage of registered firms which file monthly returns. If we take into consideration the number of stop-filers and non-filers, the compliance rate would have been much lower than shown in Table 3.2.

VAT productivity in Bangladesh is quite low when compared with many other countries, both low and high income. Each point of the standard VAT rate in Bangladesh generates only 0.22 per cent of GDP in revenue (i.e. VAT productivity) compared to 0.34 per cent of GDP in other low income countries (Table 3.3).

Table 3.3: VAT Indicators for Bangladesh and Comparator Country Groups

Country/Country Groups	Standard VAT Rate	VAT Revenue (% of GDP)	VAT Productivity
Bangladesh	15.0	3.3	0.22
Low income countries	16.4	5.5	0.34
Lower middle income countries	17.4	6.6	0.38
Upper middle income countries	17.3	6.6	0.38
High income countries	17.1	6.7	0.39

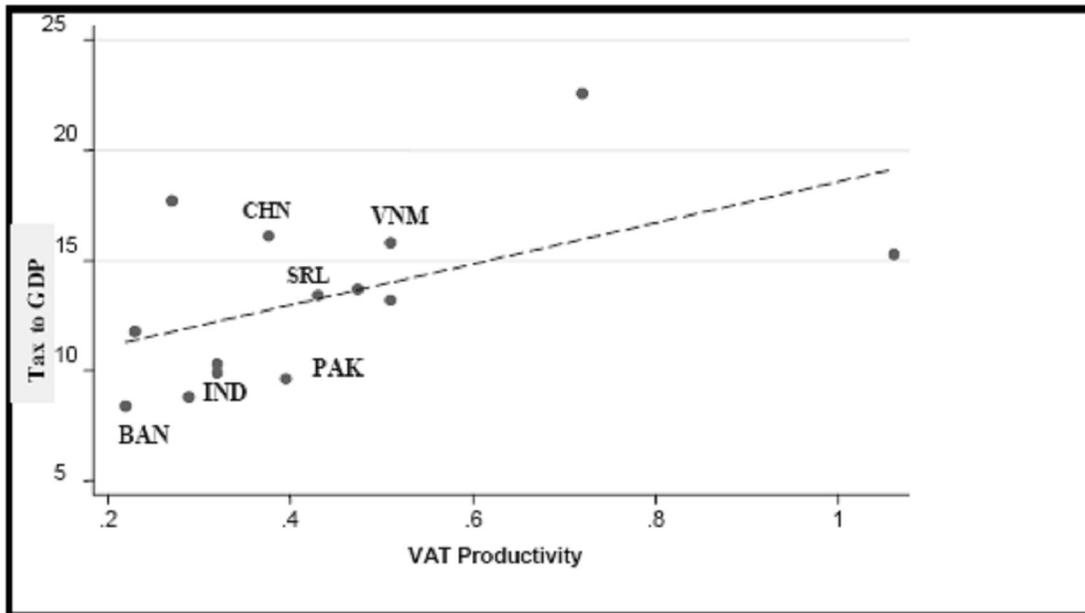
Source: IMF 2011

Notes: Data for Bangladesh are for FY 2009, the averages for the country groups are for 2005.

The low yield reflects the narrow base of the tax (with the trading and service sectors largely subject to a low-rate turnover tax) and weaknesses in administration. As a consequence, the VAT does not meet its potential for mobilizing revenue to finance high priority public sector expenditures. The introduction of a broad-based and well-administered VAT can contribute substantially to achieving the revenue objective. Raising VAT productivity, however, requires broadening the base and improving taxpayers' compliance.

The potential for higher tax revenue through improving VAT productivity is shown in Figure 3.4. Figure 3.4 plots tax-to-GDP ratio against VAT productivity for six Asian countries (Bangladesh, India, Pakistan, Sri Lanka, China and Vietnam). The fitted relationship between tax-to-GDP ratio and VAT productivity is positive and statistically significant suggesting that as the efficiency of VAT collection increases, so does the tax-to-GDP ratio. This suggests that Bangladesh can boost its tax revenue significantly by improving its VAT productivity through increasing VAT compliance.

Figure 3.4: VAT Productivity and Tax Revenue in Selected Asian Countries



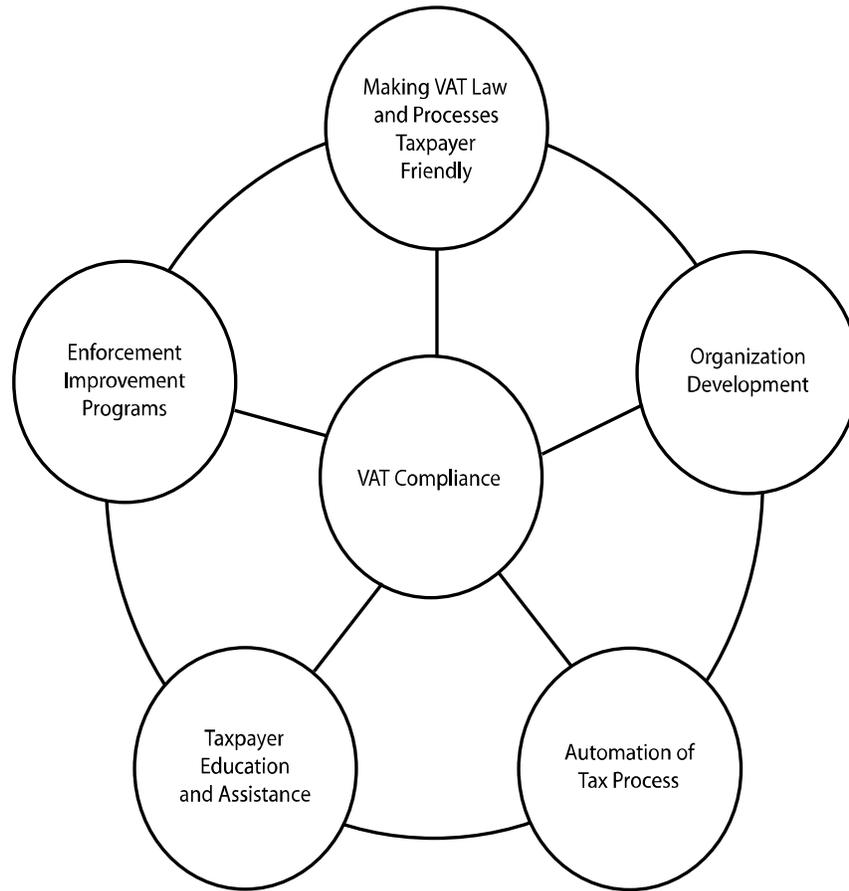
Source: Mansur, Yunus and Nandi 2011

4. A Model for Optimizing VAT Compliance

Compliance programs are commonly structured around major taxpayer segments (e.g., large businesses, medium-sized enterprises, small and micro enterprises, and individuals) and address compliance risks relevant to these segments. It is found that a number of revenue agencies have adopted a system of self-assessment which relies on most taxpayers *voluntarily* complying with their obligations to register, keep proper records, file correct returns and pay tax on time. Successful self-assessment systems are underpinned by an administrative approach which recognizes that voluntary compliance will be optimized through an appropriate balance of simple laws and processes, organization development, automation of tax process, taxpayer education and assistance and enforcement improvement programs.

After reviewing tax compliance models developed by OECD (2004), Russell (2010) and Alink and Kommer (2011), the following model for VAT compliance is developed (Figure 4.1). The contribution of the model is that it focuses more on organization development of the NBR in terms of autonomy, accountability, efficiency and effectiveness.

Figure 4.1: A Model for Optimizing VAT Compliance



5. An Analysis of the Model

5.1 Making VAT Law and Processes Taxpayer Friendly

5.1.1 The New VAT Act and Compliance

The VAT Act of 1991 is characterized by excise-based physical controls, excessive taxpayer-tax officer interactions, burdensome information reporting, treatment of each unit of a multi unit business as a separate business entity, use of deemed value added based on a percentage of sales (truncated VAT), tax liability based on approved prices rather than actual prices, over reliance on presumptive VAT, etc. In December 2012 the Parliament passed the VAT and Supplementary Duty Act 2012. The objective of the new Act is to enhance voluntary compliance by making it taxpayer friendly. Under the new law, the amount of VAT due in each reporting period is based on the invoice-credit method where the amount of tax to be paid equals VAT charged on sales minus VAT paid on inputs. The new law provides for three taxes: (1) a creditable 15 per cent VAT that is chargeable by businesses with taxable sales above Taka 8 million, (2) a non-creditable 3 per cent turnover tax that applies to businesses with taxable sales between Taka 2.4 million and Taka 8 million, and (3) a supplementary duty of varying rates that

is chargeable on sales of specific goods and services. However, the law provides for a threshold at Taka 2.4 million below which small businesses are completely exempt from registering for and charging both the VAT and turnover tax.

Some salient features of the new law are the following:

- *Coverage* – The new VAT law will broaden the tax base by bringing all sectors, including import, manufacturing, services, and distribution within the purview of VAT. Under the new law, tax will be paid on the basis of *actual transactions values* rather than arbitrary tariff values (for manufactured goods) and truncated bases (for services and the trading sector) as is practiced under the existing law, and at the same time substantially reducing the long list of exempt goods and services.
- *Registration* - Single registration for each taxpayer with the option for branch registration if separate accounts are maintained.
- *Taxable value* - No requirement for taxpayers to have prices and input-output coefficients approved by tax officers.
- *Input tax credits* - Broader provision for claiming credit for VAT paid on taxed inputs purchased by registered taxpayers.
- *VAT refunds* - Simplified VAT refund system.
- *VAT exemptions* – The number of exempt goods and services have been substantially reduced under the new law.
- *Collection of arrear tax* - The new law vests the NBR with some additional powers to recover tax arrears, place a lien on the tax debtor's property, and hold company directors liable for paying unpaid taxes.
- *Electronic system* - Provision for online submission and centralized processing of tax returns.

A comparison between the existing VAT Act and the new Act is given in Annexure 1.

5.1.2 Re-designing VAT Administrative Processes³

A modern form of VAT administration should be based on self-assessment of tax liabilities and selective risk-based audit, streamlined administrative processes, and simplified information reporting. Each administrative process (e.g., registration, VAT returns and payments processing, refunds, taxpayer services, audit) should be re-designed to bring it in line with modern practices.

³ This Section draws heavily from Brondolo *et al.* (2012), A Draft Plan for Implementing the New Value-Added Tax (IMF, December 19, 2012).

5.1.2.1 Registration

Under the new law, business entities with an annual turnover (excluding exempt supplies) above Taka 8 million will be required to register for VAT. Businesses with an annual turnover between Taka 2.4 million and Taka 8 million will be required to enlist for turnover tax and businesses with a turnover below 2.4 million will not be required to register or enlist. All VAT and turnover tax taxpayers will have to be re-registered and issued a new unique Business Identification Number (BIN) that, in turn, will be linked to the Taxpayer Identification Number for income tax purposes. An attempt will be made to link the TIN with the National Identification Number (NID).

5.1.2.2 Taxpayer Services

The taxpayer service program will have to be designed to assist taxpayers to understand and comply with their obligations under the VAT Act. The objective of the program is to familiarize the taxpayers with their obligations under the new law, facilitate registration, encourage voluntary compliance and support the implementation process. A comprehensive communications program will be introduced focusing on taxpayer specific messages and information dissemination through a variety of channels: (1) general guidance booklets to explain the VAT in detail, including taxpayers' obligations, (2) clear and easily followed registration and enlistment forms and instructions, (3) sector specific guides to explain the operation of VAT in special sectors, and (4) articles for trade publications, business associations and professional bodies explaining how the VAT will apply to that particular trade.

5.1.2.3 Tax Returns, Payments, and Accounts Management

Tax returns, payment and accounts management program will put in place a system to facilitate the filing of tax returns, payment of tax and maintenance of a taxpayer account. The VAT will operate under a modern self-assessment system, requiring taxpayers to calculate their own VAT liabilities, file VAT returns and pay any tax due on a regular basis.

5.1.2.4 Refund Management

Refund entitlements arise when a taxpayer has deposited to the government treasury an excess amount of VAT than due owing to error, inadvertence, wrong explanation or other causes or has a surplus of input tax credits over VAT liabilities in a tax period. The refund management system program will establish an efficient arrangement to process and pay VAT refund claims.

5.1.2.5 Audit and Investigation

The new VAT Act, which is based on self-assessment, requires an effective audit and investigation program to ensure that non-compliance is detected and corrected. The audit program will aim at preventing revenue loss and deterring further non-compliance. The audit program will be designed to achieve this objective by being fully risk-based and adopting appropriate levels of audit coverage and a range of different audit methods for the various segments of the taxpayer population.

5.1.2.6 Collection Enforcement

The collection enforcement program will focus on ensuring taxpayers file their VAT returns and pay tax due on time. The program will identify the cases of non-filers and stop-filers at the Central Processing Centre. The computer system will track which taxpayers are expected to file returns and by which date. Consistent follow-up actions will be applied in all cases. Non-payment of taxes will be addressed with the same automatic identification and follow-up of cases as for the non-filer cases. Enhanced enforcement powers conferred by the new law will be employed against the least compliant taxpayers.

5.1.2.7 Appeals

The appeals program will manage the various stages of VAT appeal available to taxpayers.

5.2 Organization Development (OD) and Compliance

Taking a modified approach of Easton (1970), we discuss organization development of the NBR in terms of four factors namely, autonomy, accountability, efficiency and effectiveness.

5.2.1 Autonomy

The Modernization Plan of the NBR intends to re-orient the NBR away from the traditional department of the government to one that is run as a corporate entity with the focus on management rather than administration. This requires the redefining the role of the NBR and its relation with the government. With this end in view, we would look at the needs to redefine the status, role and regulatory power of the NBR in light of the necessary modifications of the Presidential Order 76 of 1972 by which the NBR was created or through the enactment of new Act of Parliament based on the international best practices. The objective is to give the NBR a corporate entity with functional and financial autonomy and also implement transparent tax policies in an integrated manner. This would look at strengthening the NBR to support its new and redefined role.

5.2.2 Accountability

Adopting Mulgan (2002) model, accountability is the relationship between two parties: (1) relationship between the Internal Resources Division (IRD) (holder of accountability) and the NBR (giver of accountability), (2) relationship between the NBR (holder) and its field formations (giver) and (3) relationship between taxpayers (holder) and the NBR (giver). It is expected that the automation of tax processes would facilitate transparency and accountability of the NBR. Moreover, its officials should be held responsible for any failure to discharge their duties honestly. The Integrity Unit to be formed at the NBR and its field formations may work as the institutional framework for ensuring accountability in the system.

5.2.3 Efficiency

The NBR should achieve the revenue target set in the budget at a least cost, while providing an acceptable standard of service to taxpayers. In order to attain these objectives, we need to increase efficiency in terms of human resources (HR) management including recruiting and training staff, integrity management, strengthening research wing for establishing research-policy linkage and upgrading the training infrastructure. This calls for reassignment of tax personnel from non-core functions like return receipt and processing, tax accounts, taxpayer registration with TIN/BIN, record keeping etc. to core functions like tax compliance and tax collection work. Non-core functions may be left to a remote centralized data processing centre.

An integrated revenue management program will enable the desired flow of information and consequent synergy among the three tax wings of the NBR namely, Income tax, VAT and Customs. It will seek to connect the three departments at transactional level through the taxpayer identification numbers i.e. TIN and BIN in the database and linking them to the national identification number.

5.2.4 Effectiveness

The NBR should discharge its functions in accordance with the law to achieve the objectives of revenue mobilization and taxpayer service. For making it an effective organization, the NBR must strive to achieve the objectives set forth in its Modernization Plan (2011-2016).

It is recognized that there is a strong case for functional distribution of tax work at the line level so that economies of scale can be achieved and more efficient and specialized approach to tax management is possible. Therefore, the NBR is required to move towards distribution of work according to function and size in order to achieve a more balanced re-assignment of administrative resources across functions. The integrated information system and ICT platform will create a seamless environment for inter-function and intra-function flow of information.

The effectiveness of the tax administration may be improved by organizing it to deal with taxpayers by size (Large Taxpayer Unit (LTU), Medium Taxpayer Unit and Small Taxpayer Unit). Effectiveness could also be derived by merging functions (such as tax collection, and filing of tax returns) across the different taxes. LTUs have largely been a success as they ensure a highly trained workforce tackling the cases that generate about 80 per cent of the tax revenue. Among the remaining taxpayers are those who are medium and small/micro taxpayers. The small and micro taxpayers require a very different approach from the medium taxpayers as they require a greater emphasis on service and assistance than on audit. The segmented administration by size ensures a customized approach to taxpayers that enable the tax administration to manage their resources optimally. In recent years, the NBR has undertaken a number of reform programs in tax policy and tax administration. Time has come to develop its capacity to implement the reform programs. This may be done by adopting change management approach to implement reform programs effectively and forming work improvement teams.

5.3 Automation of Tax Process and Compliance

The present tax administration structure, methods and business processes were designed for a manual paper based work environment and are inadequate to keep pace with the reform initiatives. Hence the NBR has chosen to embrace information and communications technology (ICT) as a key driver in its comprehensive tax administration reform effort. This part of the reform is the program, "Digital NBR" which in turn is a subset of the national program, "Digital Bangladesh". A key part of Digital NBR is the automation of Taxpayer Identification Number (TIN) and Business Identification Number (BIN) for income tax payers and VAT payers respectively. The other major components are the setting up of an NBR Data Centre, Central Processing Centre for Income Tax and VAT Returns, Tax Information Network and installing an Integrated Tax Administration Software that would help tax officials perform their functions in a computerized environment.

New information technology system, based on a commercial-off-the shelf (COTS) software package, will need to be acquired to support core VAT processes. The system will be run on a centralized platform that will be accessible by all offices and will be designed to exchange information with other NBR systems. The acquisition and support of the VAT information system will be outsourced.

5.4 Taxpayers' Education and Compliance

This part includes designing a comprehensive communication strategy for the NBR, devising taxpayer education modules, supporting taxpayers through direct face-to-face assistance provided in taxpayer service centres and through call centres, and a Web interface that provides comprehensive support to taxpayers.

Obviously, in addition to improved taxpayer service and effective compliance, there is a strong case for educating eligible taxpayers with their tax filing obligations as well as with information on how to go about it. Automation of tax accounts and return processing coupled with an efficient TIN database will provide valuable tools for analyzing taxpayer profile and behaviour. Such analysis and information will be used to undertake an aggressive taxpayer education program. This will assist taxpayers to behave as responsible citizens/residents and to meet tax obligations arising from taxable income and activities within Bangladesh.

5.5 Enforcement Improvement Programs and Compliance

This component focuses at efforts to improve tax compliance through better audits, better investigation including combating international tax evasion, improving collection of tax arrears and addressing taxpayer grievances through quick disposal of tax appeals including alternative dispute resolution (ADR) mechanism. This calls for an aggressive program for skill development and training in audit, investigation and litigation management. Skill development will include the latest techniques in combating international tax evasion, tax avoidance and transfer pricing. There is a need for shifting tax compliance management from the traditional subjective audit selection approach to a computer assisted intelligent selection approach based on efficient data mining and revenue risk management tools. Improvement in voluntary compliance experience, taxpayer education, and an efficient information/risk- based compliance regime will itself reduce the volume of disputes.

6. Taxpayer Recognition Program to Increase VAT Compliance

6.1 Background

In May 2011, a collaborative agreement on randomized controlled trial program titled “Social Recognition to Increase VAT Revenue: A Pilot Project in Bangladesh” was formalized with a Memorandum of Understanding signed by the NBR and the International Growth Centre of London School of Economics (LSE). The NBR in collaboration with Harvard University, Yale University and International Finance Corporation (IFC) of the World Bank Group are implementing the program. The objective of the program is to rigorously examine whether social recognition interventions can raise tax revenue by improving voluntary VAT compliance among small firms.

The program runs on the principles that (1) VAT registration builds image of a firm; and (2) display of the names of compliant VATpayers on dash boards and giving them social recognition. All this information is likely to create peer pressure on non-compliant firms to become compliant. The program is being implemented in 6 VAT Circles of Dhaka City. Implementing such a recognition program requires high quality data on firms’ existing registration status and VAT payment records.

6.2 Progress of the Program

The progress of the program is given below:

- The largest firm-level census and GPS mapping in Bangladesh covering 32,000 firms in pilot area.
- Followed by detailed survey of 26,000 firms (relevant for VAT payment) about their business activities and perception regarding VAT system.
- Digitization of registration and VAT payment records (Mushak 19).
- Orientation program for relevant NBR officials.
- The results of the digitized registration and payment information (January 2012 – August 2012) show that 35 per cent of the firms in the project area are registered and 8 per cent of all firms pay either package VAT or regular VAT.

Social recognition interventions that create a culture of compliance have the greatest promise in expanding the revenue base in a sustainable way. The NBR could scale up the program that is proved to be most successful and cost-effective. Such interventions would be complementary with the recent reform initiatives of the NBR.

7. Concluding Thoughts

The evidence presented in this paper shows that VAT compliance rate is very low in Bangladesh. Therefore, there is a need for improving voluntary compliance in VAT. This paper has developed a model, which shows that voluntary compliance will be optimized through an appropriate balance of simple laws and processes, organization development, automation of tax process, taxpayer education and assistance and enforcement improvement programs.

The new VAT Act appears to be business friendly and revenue augmenting. However, implementing the new VAT Act entails many challenging implementation tasks. These tasks include re-designing the VAT administrative processes, rationalizing the current organizational arrangement, acquiring and configuring a new computer system, recruiting and training the staff and educating taxpayers and the public on their obligations under the new law. The implementation tasks will require substantial investment in information technology and infrastructure. The acquisition and support of the VAT information will have to be outsourced. Finally, political commitment is essential to make reform programs a success.

Bibliography

Alink, Matthiji and Victor van Kommer, 2011. *Handbook on Tax Administration*. Amsterdam: IBFD.

Allingham, M.G. and Sandmo, A., 1972. Income Tax Evasion: A Theoretical Analysis. *Journal of Public Economics*.

Bangladesh Jatiya Sangsad, 2012. *Value Added Tax and Supplementary Duty Act, 2012* (Act 47 of 2012).

Biner, P.M., 1988. Effects of Cover Letter Appeal and Monetary Incentives on Survey Response.

Bird, Richard and Pierre-Pascal Gendron, 2007. *The VAT in Developing and Transitional Countries*. Cambridge: Cambridge University Press.

Blumenthal, M.C. and Slemrod, J., 1998. The Determinants of Income Tax Compliance: Evidence from a Controlled Experiment in Minnesota.

Brehm, S.S. and Brehm, J.W., 1981. *Psychological reaction: A theory of freedom and control*.

Brondolo, John, Debra Adams, John Ryan, Paul Tregillis, and Steve Vesperman, 2012. *Bangladesh: A Draft Plan for Implementing the New Value-Added Tax*. Washington, D.C.: International Monetary Fund.

Cox, Tim, Damian Morris and Ashley King, 2010. Australia. In: Anuschka Bakker and Sander Kloosterhof, eds. *Tax Risk Management: From Risk to Opportunity*. Amsterdam: IBFD.

Easton, David, 1970. An Approach to the Analysis of Political Systems. In: J R van Der Slik, ed. *American Politics, Research and Readings*. New York: Holt, Rinehart and Winston, Inc.

Ebrill, Liam, Michael Keen, Jean-Paul Bodin and Victoria Summers, 2001. *The Modern VAT*. Washington, D.C.: International Monetary Fund.

Kirchler, E., 2007. *The Economic Psychology of Tax Behaviour*. Cambridge: Cambridge University Press.

Kirchler, E., 1998. Differential Representations of Taxes: Analysis of Free Associations and Judgments of Five Employment Groups. *Journal of Socio-Economics*.

Kirchler, E., Stephan Muehlbacher, Barbara Kastlunger and Ingrid Wahi, 2007. Why Pay Taxes? A Review of Tax Compliance Decision. *Working Paper 07-30*. International Studies Program, Andrew Young School of Public Studies, Georgia State University.

Ludlow, Graeme, John Crotty, Graham Holland and Riaz Malik, 2008. Bangladesh: Strengthening VAT Administration and Preparing for Income Tax Reforms. Washington, D.C.: International Monetary Fund.

Mansur, A.H., 2012. *Tax Revenue Mobilization – Sustaining the Recent Success*. Dhaka: Policy Research Institute of Bangladesh.

Mansur, A.H., Mohammad Yunus and Biplob Kumar Nandi, 2011. *An Evaluation of the Tax System in Bangladesh*. Dhaka: Policy Research Institute of Bangladesh.

McBarnett, D., 2003. When compliance is not the solution but the problem: From changes in law to changes in attitude. In: V. Braithwaite, *Tax Democracy: Understanding Tax Avoidance and Evasion*. Aldershot: Ashgate Publishing Ltd.

Mulgan, R., 2002. Accountability Issues in the New Model of Governance. *Discussion Paper No. 91*. Australian National University (ANU): ANU Press.

National Board of Revenue, 2011. *An Outline of Modernization Plan (2011-2016)*.

National Board of Revenue, International Finance Corporation (IFC) and Apex Consulting. *NBR Process Simplification: Easier, Better and Faster Services to Investors in Bangladesh*.

Organisation for Economic Cooperation and Development (OECD), 2004. *Compliance Risk Management: Managing and Improving Tax Compliance*. Paris: OECD.

Planning Commission, 2011. *6th Five Year Plan FY 2011 – FY 2015*.

Pomeranz, Dina, 2011. *No Taxation Without Information: Deterrence and Self-Enforcement in the Value Added Tax*. Paper presented at the International Growth Week 2012 Conference.

Ressell, Barrie, 2010. *Revenue Administration: Developing a Taxpayer Compliance Program*. Washington, D.C.: International Monetary Fund.

Salanie, Bernard, 2011. *The Economics of Taxation*. MIT Press.

Tyler, T.R., 1990. *Why People Obey the Law: Procedural Justice, legitimacy, and Compliance*.

Annexure 1

Table 1: Major Differences between the VAT Act of 1991 and the VAT and SD Act of 2012

Feature	VAT Act, 1991	VAT and SD Act, 2012
Tax base	<ul style="list-style-type: none"> • Narrow tax base • Wide ranging exemptions • Limited coverage of services 	<ul style="list-style-type: none"> • Broad tax base • Narrow exemption list of goods and services
Registration	<ul style="list-style-type: none"> • Separate registration for each place of business 	<ul style="list-style-type: none"> • Single registration for each taxpayer • Consistent with accounting practices, option for branch registration if separate accounts are maintained
Taxable value	<ul style="list-style-type: none"> • Arbitrary tariff values for specific products • Truncated bases for specific services • Package VAT for small retailers 	<ul style="list-style-type: none"> • Actual transaction value is the basis for taxation • No tariff values • No truncated bases • No package VAT
Price approval	<ul style="list-style-type: none"> • Requirement to have prices and input-output coefficient approved by tax officers 	<ul style="list-style-type: none"> • No requirement for price and input-output coefficient approval • Keeping input-output coefficient for audit purpose
Input tax credit	<ul style="list-style-type: none"> • Severe restrictions on input tax credit • No input tax credit allowed for VAT deducted at source nor for Advance VAT paid on import 	<ul style="list-style-type: none"> • All taxed inputs are creditable to the extent that they are or will be used to make taxable supplies
Invoice system	<ul style="list-style-type: none"> • Partial 	<ul style="list-style-type: none"> • Full
VAT accounting	<ul style="list-style-type: none"> • Under the present 'Account Current System', manufacturers are required to make advance VAT payment before clearing goods from factories 	<ul style="list-style-type: none"> • VAT accounting on a monthly return basis
Tax refund	<ul style="list-style-type: none"> • Very complex and almost impossible for taxpayers to get refund 	<ul style="list-style-type: none"> • Simplified VAT refund system
Tax clearance certificates to taxpayers	<ul style="list-style-type: none"> • No provision 	<ul style="list-style-type: none"> • Tax clearance certificate to be given to good taxpayers
Collection of arrear taxes	<ul style="list-style-type: none"> • Limited power of the NBR 	<ul style="list-style-type: none"> • Additional powers given to the NBR to recover arrear taxes
System management	<ul style="list-style-type: none"> • All systems are manual 	<ul style="list-style-type: none"> • The law provides for full conversion to electronic processes, including tax payment