

UNIVERSITY OF SOUTHAMPTON

FACULTY OF BUSINESS AND LAW

SOUTHAMPTON BUSINESS SCHOOL

**Evaluation and Analysis of Value Added Tax (VAT)
compliance:**

A Case Study of Small and Medium Enterprises in Tanzania

by

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ABSTRACT

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EVALUATION AND ANALYSIS OF VALUE ADDED TAX (VAT) COMPLIANCE: A CASE STUDY OF SMALL AND MEDIUM ENTERPRISES IN TANZANIA

Salma Yahaya Msangi

This study adopted a positivistic paradigm and employed mixed research methods in data collection and analysis. Covering seven tax regions in Tanzania, surveys and semi-structured interviews were administered to collect data from 205 VAT registered SME taxpayers and 32 Tanzanian Revenue Authority (TRA) tax officials respectively. A deductive logic guided the statistical testing of a range of hypothesised relationships between tax compliance factors and nine measures of VAT compliance in Tanzania. The researcher identified tax compliance factors from economic and behavioural theories of tax compliance and the general tax literature. Content analysis of qualitative data provided results to corroborate the results from statistical analysis of quantitative data.

The findings of the current study indicate partial ability of the economic theory to explain VAT compliance in a developing country, Tanzania. Based on the economic theory, findings indicate several (but not all) factors were associated with VAT compliant behaviour (e.g. perceived detection likelihood and perceived influence of VAT sanctions). Furthermore, the compliance factor that was more significant and indicated a more consistent association with measures of VAT compliance was the perception that collected VAT is a business asset. This finding adds to the existing evidence that shows most SMEs taxpayers fail to differentiate between business money and VAT money. In addition, not all the associations between compliance factors and measures of VAT compliance were consistent with the economic theory predictions. Overall, while this study contributes to the empirical evidence that supports the applicability of tax compliance theories in a developing country context, it is the behavioural theory of tax compliance that appears to have more support from the current study's findings than economic theory of tax compliance.

One key difference between the current study and other studies in developing countries is the mixed approach adopted in investigating VAT compliance. The approach has helped the researcher to investigate the phenomenon of VAT compliance in a much broader way, and generated broader understanding and explanation of the factors influencing VAT compliance, which might be unique for developing countries. In addition, the current study captures the fragmented and less developed characteristic of tax system in a developing country context by testing the compliance factors' association with compliant behaviour at the different stages of the VAT compliance cycle (i.e. from the initial stage of identifying/registering taxpayers to the final stage where tax authorities collect/receive VAT revenues). Consequently, the research finds taxpayers' compliance behaviour to be different at every stage of the VAT compliance cycle. For example, compared to female taxpayers, male taxpayers were less compliant during VAT registration (early stage of the VAT compliance cycle), but became more likely to be compliant by agreeing that they were less likely to make intentional mistakes to reduce VAT liability (later stage of the VAT compliance cycle). Likewise, older SMEs taxpayers were more compliant by voluntarily registering for VAT purpose (early stage of the VAT compliance cycle) but indicated that they were more likely to submit their VAT returns late (later stage of the VAT compliance cycle), which is a VAT non-compliant behaviour. Based on this, uniquely compared to other studies the findings indicate taxpayers' compliance behaviour could change from being compliant to being non-compliant even within one VAT complying circle.

In conclusion, the overall findings of this study contribute to the limited body of knowledge of VAT compliance in developing countries context. The study also contributes to the knowledge of existing tax theories applicability to both VAT compliance and developing countries context.

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DECLARATION OF AUTHORSHIP

I, Salma Yahaya Msangi declare that the thesis entitled *Evaluation and Analysis of Value Added Tax (VAT) compliance: A Case Study of Small and Medium Enterprises in Tanzania* and the work presented in the thesis are both my own, and have been generated by me as the result of my own original research.

I confirm that:

- this work was done wholly or mainly while in candidature for a research degree at this University;
- where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
- where I have consulted the published work of others, this is always clearly attributed;
- where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
- I have acknowledged all main sources of help;
- where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
- none of this work has been published before submission.

Signed:

Date:

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Definitions and abbreviations

BMS	Block Management System
BOT	Bank of Tanzania
CLT	Central Limits Theorem
DRD	Domestic Revenue Department
EFA	Exploratory Factor Analysis
EFD	Electronic Fiscal Device
GDP	Gross Domestic Product
IFM	Institute of Finance Management
ILFS	Integrated Labour Force Surveys
OECD	Organisation for Economic Co-operation and Development
SME	Small and Medium Enterprises
TATA	Taxpayers Association of Tanzania
TIS	Tanzania Interbank System
TRA	Tanzania Revenue Authority
Tshs	Tanzania shilling
UK	United Kingdom
VAT	Value Added Tax

Variable abbreviations

ATT_DECL	Positive attitude towards VAT declaration
ATTD_HELP_TRA_OFFC	Perceived attitudes and helpfulness TRA officials
ERR_VAT_RTN	Notifying error of VAT returns to TRA

INTMSK_REDC_VAT	Intentional mistakes to reduce VAT liability
INV_CASH_TRS	Involvement in cash transactions
LES_VAT_PAID	Theoretical evasion by paying less VAT if there zero risk of being detected
N_TML_SUB_VAT	Frequency of timely submission of VAT returns
PERC_DECT_LKHOOD	Perceived detection likelihood
PERC_FARNES_VAT-SYTM	Perceived fairness in the VAT system
PERCP_VAT_ASET_BUSS	Perception that collected VAT is a business asset
PRFSN_FRMS_SERV	Professional firms' information
SOCTY_MORL_OBLG	Societal moral obligations
T_VAT_REG	Type of VAT registration decision
TMNESS_VAT	Timeliness of VAT returns
TRA_SERV	TRA services
VAT_RTN_ON_TM	Timely submission of VAT returns
VAT_SANC	Influence of VAT sanctions

Chapter One

Introduction

1.1 Background to research

Tax compliance is one of the most significant aspects of the tax policy and is as old as taxes themselves (Andreoni, Erard and Feinstein, 1998). Tax compliance particularly income tax has received considerable attention from researchers, compared to Value Added Tax (VAT) compliance (Webley, Adams and Elffers, 2002; Agha and Haughton, 1996a; Keen and Smith, 2006). This is surprising due to the importance of VAT and the extent to which VAT has been introduced by a large number of countries (Webley, Adams and Elffers, 2002). For example, in Europe and Latin America; around 140 countries have adopted VAT in the last sixty years (Keen and Lockwood, 2009), and the literature shows that VAT is increasingly becoming a major source of government revenues (Jenkins, Jenkins and Kuo, 2006; Fjeldstad, 1996; Yesegat, 2008).

Compared to Europe and Latin America, VAT is a relatively new type of tax for most of the sub-Saharan African countries, including Tanzania. For example, in sub-Saharan Africa more than three-quarters of all countries adopted VAT in the 1990s (Keen and Lockwood, 2009). In the case of Tanzania, it adopted VAT in July 1998 (Mann, 2004; Levin, 2001). Notwithstanding the fact that VAT is a recent tax in developing countries, its contribution to government revenues in these countries cannot be over emphasised. In a study of tax systems in Mozambique, Tanzania and Zambia, Fjeldstad and Heggstad (2011) found that VAT is a major tax in all three countries. For example, in 2009 VAT generated more government revenues than any other type of tax in Tanzania and Mozambique. As indicated in Table 1.1, in the financial year 2008/09 the total VAT (domestic + import) was 32.9% of total government revenue, which was the highest compared to other types of tax revenues. Since the imposition of VAT in July 1998, Table 1.1 also shows total VAT collection has remained the highest tax revenue compared to other taxes in Tanzania. In 2004/05 VAT reached the highest point with 44.6% of total tax revenues.

Table 1.1: Tanzania tax revenue as a percentage of total revenue

No.	Tax Item	1996/97	2000/01	2004/05	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
		%	%	%	%	%	%	%	%	%
1	P.A.Y.E.	7.6	11.1	14.4	16.3	16.7	17.5	17.4	18.0	17.3
2	Corporation Tax	10.8	5.6	9.4	10.2	9.4	10.1	12.0	13.4	15.8
3	Individuals	1.8	1.5	1.6	1.0	1.1	1.1	1.0	0.9	0.9
4	Other Income Taxes ¹	4.6	7.7	6.0	5.7	6.5	5.9	7.6	8.3	8.2
5	Domestic Excises duty	12.2	8.3	6.8	7.1	6.8	6.1	6.9	7.2	8.0
6	Domestic VAT	13.2	16.8	17.7	17.1	16.4	15.5	15.1	14.9	14.0
7	Other Domestic Taxes/Charges ²	15.3	2.6	1.6	2.1	2.2	2.5	2.3	2.5	2.3
8	Import duty	15.4	11.5	6.6	9.1	8.5	8.7	7.8	7.5	7.8
9	Excises duty on Import	5.9	10.3	7.9	11.7	12.0	11.6	9.0	9.0	8.1
10	VAT on Import	10.8	21.8	26.9	15.8	17.1	17.0	16.7	15.7	14.2
11	Other Import charges ³	2.4	5.9	4.8	6.5	6.2	6.7	6.8	6.2	8.5
12	Other revenue less tax refunds	0.0	-3.2	-3.6	-2.7	-3.0	-2.7	-2.6	-3.8	-5.3
GRAND TOTAL - Tax Revenue		100.0								
Total VAT [Domestic (6) + Import (10)]		24.1	38.6	44.6	32.9	33.5	32.6	31.7	30.6	28.2

Notes: ¹Other income taxes include rental tax, withholding tax, skills and development levy, gaming tax and capital gains, and miscellaneous collection tax; ²Other domestic taxes/charges include motor vehicle taxes, stamp duty, departures charges, and business license; ³Other import charges include fuel levy, export duties, non-tax revenue, and other import charges.

Source: Researcher extracted and calculated from TRA (2016a)

Furthermore, Fjeldstad and Heggstad (2011) indicate that for the financial year 2008/09 VAT generated 5.4% of GDP in Mozambique and 4.6% of GDP in Tanzania. The VAT experience in Tanzania, Mozambique and Zambia as highlighted by Fjeldstad and Heggstad (2011) is also common in other developing countries. For example, the literature indicates VAT is a major source of government tax revenues in Benin, Côte d'Ivoire, Guinea, Kenya, Madagascar, Mauritius, Niger, Senegal, Togo and Nigeria (Onwuchekwa and Aruwa, 2014). Arguably, this shows how important VAT is as a source of government revenue

in developing countries. Because Tanzania has much in common in these respects with other developing countries especially in Sub-Saharan Africa, investigating its VAT experience may provide helpful and valuable information and knowledge on VAT compliance.

In general, tax compliance problems have been a major concern to tax authorities. It has never been easy for the tax authorities to persuade all taxpayers to comply with tax laws and tax systems (Slemrod, Blumenthal and Christian, 2001; Andreoni, Erard and Feinstein, 1998). In the case of VAT compliance, in recent years, some tax researchers have questioned the effective and efficient applicability of VAT systems in developing countries. This is because the claimed benefits of VAT (for example, it does not distort consumption and investment, does not have a “tax cascading effect”¹ like sales tax, and the inherent ‘self-policing’ mechanism) ignores one of the important structural features of a developing countries; the existence of a large informal sector that escape the VAT net (Emran and Stiglitz, 2005).

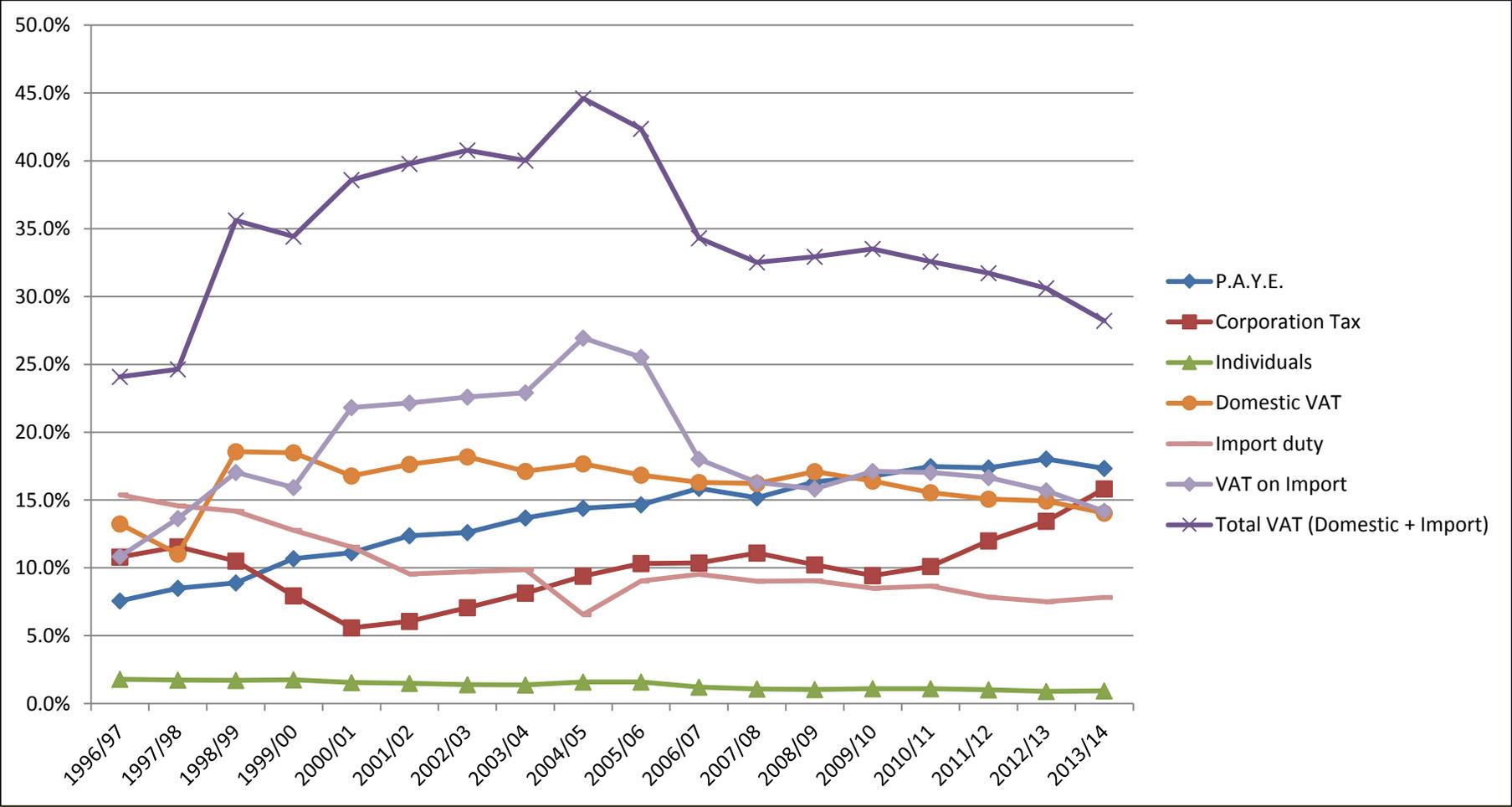
The problem of the informal sector exists in Tanzania. For example, a number of current estimates/projections show that the informal sector is around 50% to 60% (Leyaro *et al.*, 2015). Furthermore, Osoro (2009) estimated that the informal economic activities not recorded in the official statistics (mainly by SMEs) from 1970 to 2006 were around 50% of national GDP. The 2000-01 Integrated Labour Force Surveys (ILFS) indicated that 61% of households in urban areas had informal activities while the 2014 ILFS indicates that employment in informal sector in urban areas was around 45% (Leyaro *et al.*, 2015). The informal sector creates administrative and structural challenges and problems in implementing VAT system. Consequently, this adds to the challenges in improving VAT compliance in developing countries (Coolidge, 2012; Bird, 2005). For example, because of

¹ Tax cascading effect happens when a tax is levied on goods and services at each stage of the production process up to the point of being sold to the final consumer. This commonly happens with sales tax where each successive transfer (purchase/sale) of goods and services is taxed inclusive of any previous taxes being levied. This is because each successive sale includes the taxes of all previous sales; consequently, the end tax amount will be greater than the initial sales tax rate (Smith, Islam and Moniruzzaman, 2011; Keen, 2009a)

the large informal sector, the collection of VAT revenue from small and medium size businesses in developing countries is relatively difficult (Keen, 2008).

The introduction of VAT in Tanzania in 1998 started well (24.1% of total tax revenues), and the growth in VAT collection continues until financial year 2004/05 when it reached the highest level of 44.6% of total tax revenues (See Figure 1, also Table 1.1).

Figure 1: Tanzania tax revenue as a percentage of total revenue



Source: Researcher extracted, calculated, and graphed from TRA (2016a). Same data as in Table 1.1

However, Figure 1 shows a declining trend of total VAT revenue from 42.4% in the financial year 2005/06 to 28.2% in the financial year 2013/14. In addition, the declining trend happened at the same time TRA is undertaking measures to improve tax administration. There could be several reasons for this trend, but the researcher argues one of the reasons is likely to be VAT non-compliance. Arguably, this calls for empirical investigation in order to generate or extend our knowledge of VAT compliance in Tanzania.

Therefore, it is of importance to examine taxpayers' non-compliance behaviour towards VAT, and identify factors that explain VAT compliance behaviour. Hence, reducing the occurrence of VAT non-compliance is crucial for not only raising the desired government revenue but also reducing its adverse effect on social equality and its negative consequences on country's economic efficiency.

1.2 Research problem and questions

Extant literature indicates that VAT non-compliance has been a major problem to tax authorities (for example see, Adams and Webley, 2001; Keen and Lockwood, 2009; Yesegat, 2008; Keen and Smith, 2006). Similarly, the limited literature also shows that VAT non-compliance is common in Sub-Saharan Africa. Despite the importance of VAT in government revenue generation and the widespread problem of VAT non-compliance, research work on this area is lacking. In the researcher's knowledge, there are few published studies on VAT non-compliance like the work by Yesegat (2008) in an Ethiopian context. Tanzania has much in common with other developing countries especially in Sub-Saharan Africa; therefore, its experiences may provide helpful and valuable information about the problem.

Moreover, to the best of the researcher's knowledge most of the previous studies on VAT compliance were experimentally based, and relatively few studies used survey approach to investigate VAT compliance (for example, see Webley, Adams and Elffers, 2002; Hansford, Hasseldine and Howorth, 2003). Similarly, the lack of theories that specifically address and explain the problem of VAT compliance creates an interesting research opportunity, which is to assess applicability of existing tax compliance theories in a VAT context. In addition, no previous VAT compliance studies have been published in this geographic area, particularly in

Tanzania. Therefore, the current study will attempt to contribute towards bridging the existing VAT non-compliance knowledge gap in Tanzania, which can possibly be generalised to other similar developing countries. The following sub-sections present the research objectives and the research questions for this study.

1.2.1 Research objectives and significance

The overall research objective for this study is to investigate the association between factors in tax compliance theories and VAT compliance in Tanzania. Specifically, the study aims to achieve the following objectives:

1. Assess the factors that are associated with VAT compliance in Tanzania.
2. Assess the degree to which existing tax compliance theories are applicable in explaining VAT compliance in a developing country.
3. Identify the strategies employed to encourage VAT compliance in a developing country context.

1.2.2 Research questions

In order to achieve the research objectives stated in sub-section 1.2.1, this study aimed at specifically addressing the following research questions:-

1. What factors are associated with VAT compliance in Tanzania SMEs?
2. To what extent do existing tax compliance theories explain VAT compliance in Tanzania?
3. What role does the TRA play to encourage voluntarily compliance?

1.3 Research methodologies

This study adopted a positivist paradigm through a deductive logic. The study employed a deductive logic with the objective of explaining the relationship between theoretical tax compliance factors and VAT compliance. Based on existing tax compliance theories the researcher formulated testable hypotheses to assess the relationships between variables. For data collection and analysis, this study adopted mixed research method. In particular, the study adopted a

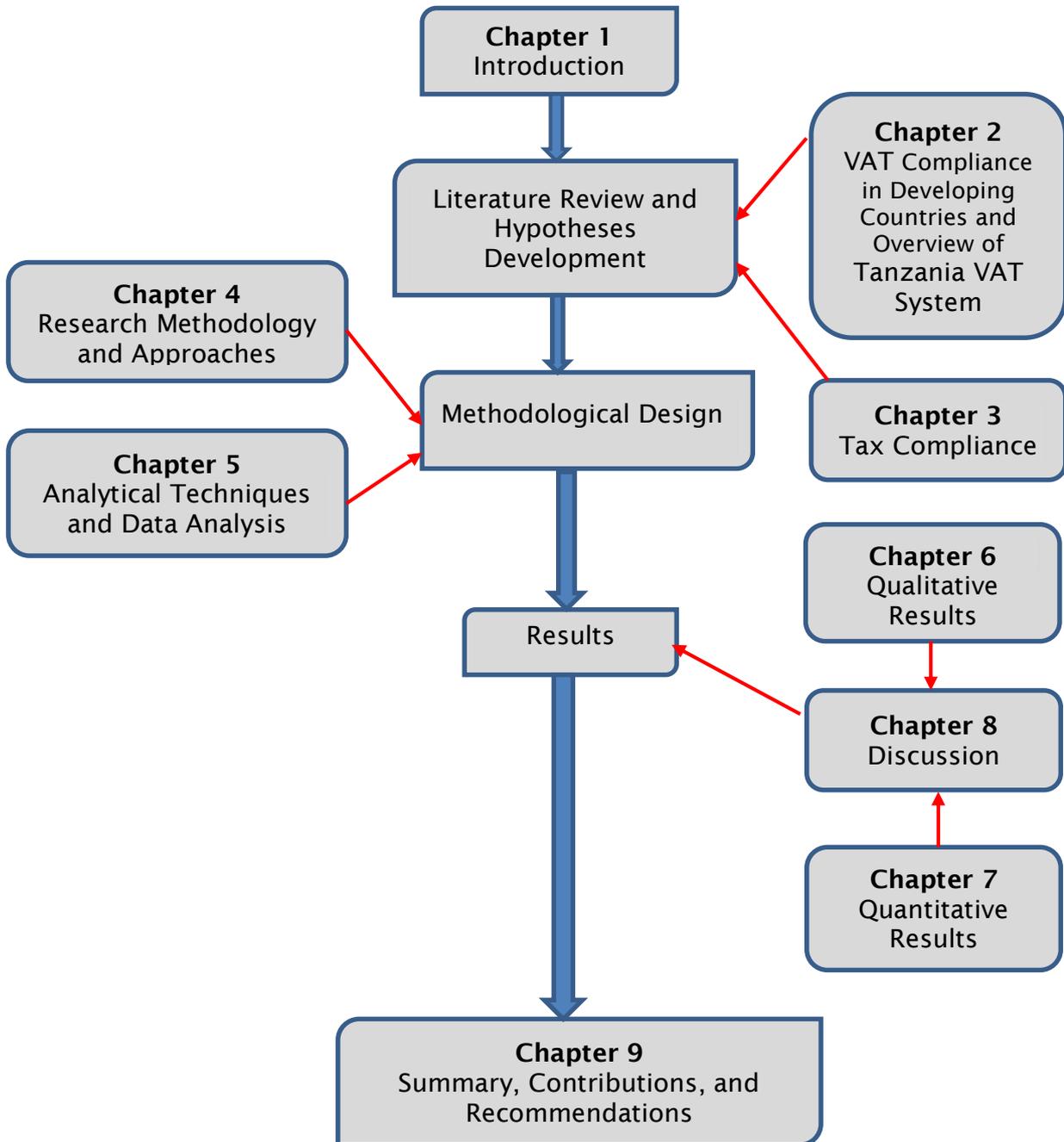
concurrent embedded strategy. The study covered seven tax regions in Tanzania in collecting both quantitative (using survey) and qualitative (using semi-structured interview) data.

The research sample comprised of 205 taxpayers (surveyed) and 32 tax officials (semi-structured interviewed). The researcher simultaneously collected the quantitative and qualitative data in a single data collection phase. Prior to data collection, the researcher conducted a pre-survey evaluation of the data collection instruments.

The collected data were analysed as follows: quantitative data analysis was processed using SPSS20 and STATA12 while qualitative data was analysed using NVivo10.

1.4 Thesis outline (summary of chapter contents)

Figure 2: Summary of chapter contents



Chapter Two

VAT Compliance in Developing countries and Overview of Tanzania VAT system

2.1 Introduction

This chapter provides context by examining the importance of VAT compliance. It then describes in overview the Tanzania VAT system.

‘Value added’ is that element of value that is created by an economic unit during a productive process, which transforms an input into an output of a good or a service (Sicat, 1988). Therefore, VAT is a tax that is imposed on ‘value added’ to a commodity or service. It is an indirect tax levied on consumer expenditure and collected from business transactions (Webley and Ashby, 2010). Every VAT registered business pays VAT on its purchases of goods and services (inputs), charges VAT on its sales (outputs) and hands over the difference to tax authority for each accounting period (Adams and Webley, 2001).

VAT is a major source of government revenue if properly administered (Jenkins, Jenkins and Kuo, 2006; Fjeldstad, 1996; Yesegat, 2008). For example, in OECD countries revenues from VAT as a percentage of total tax revenues increased from 11.9% in 1995 to 17.9% in 1998 (OECD, 2001). Harrison and Krelove (2005) shows that VAT contributes about 25% of the world’s tax revenue. In Tanzania, the study by Fjeldstad and Heggstad (2011) indicates that in 2009 VAT contributed more revenues (VAT-to-GDP ratio of 4.6%) than personal income tax and corporate income tax combined (VAT-to-GDP ratio of 4.1%). Therefore, it can be argued that VAT is an important tax revenue base in both developed and developing countries.

However, like any other tax, VAT is vulnerable to taxpayers’ non-compliant behaviour, for example, as indicated by EU countries’ concerns over recent losses in VAT revenues (Keen and Smith, 2006) . The EU countries’ losses in VAT revenue are attributed to several factors including fraud (Ainsworth, 2006; Ruffles *et al.*, 2003). The problem of VAT non-compliance is not confined to developed countries only as prior literature appears to indicate that VAT non-compliance is prevalent and remains

to be a major challenge for most tax authorities in developing and transitional countries (Bird and Gendron, 2007b). Therefore, if governments in developing countries want to rely more on VAT revenue, they must broaden their VAT bases and enhance compliance (Jenkins and Kuo, 2000).

2.2 VAT compliance in developing countries

In the last decade, most developing countries have favoured the use of VAT to raise revenue (Emran and Stiglitz, 2005). Extant literature shows a variety of reasons (factors) for VAT becoming the most common type of consumption tax in developing countries (Le, 2003; Keen, 2009; Bird and Gendron, 2007a; Bird and Gendron, 2006).

For example, VAT should not distort consumption, investment, and savings decisions because of how it operates. In a VAT system, sellers can claim credit for VAT paid on inputs, and no tax cascading effect as is the case with other consumption taxes. The other reason is its inherent mechanism of 'self-policing' where tax collection takes place on each transaction in the production process, with a resulting lower revenue loss. Furthermore, compared to an import tariff, VAT is considered neutral in terms of domestic production and imported goods (Bird and Gendron, 2006). Overall, early literature on the introduction of VAT in developing countries recognised that proper design of a VAT system would take advantage of these good features of VAT, and ensure a stable and sustainable source of significant amount of revenue for developing countries (Hossain, 1995).

In recent years, some taxation researchers have questioned the applicability of the beneficial features of VAT systems in developing countries. For example, the problem of the consensus on the beneficial features of a VAT system in revenue collection is that it ignores one of the important structural features of a developing country; the existence of a large informal sector that escapes the VAT net (Emran and Stiglitz, 2005). Another disadvantage commonly cited in the literature is the regressive nature of VAT, because a single VAT rate is applied to the tax base becoming a proportional tax on consumption (Beer and Kasper, 2014). In order to address the regressively problem, some countries use multiple VAT rates and exemptions, which may have negative impact on efficiency and

effectiveness of a VAT system (Bird, Martínez-Vázquez and Torgler, 2005). The regressive problem is normally greater in developing countries because a large proportion of people live in poverty (Keen, 2009; Keen and Lockwood, 2009).

The examples of administrative or structural problems of implementing a VAT system as identified above adds to the challenges in improving VAT compliance in developing countries (Coolidge, 2012; Bird, 2005). For example, because of the large informal sector, the collection of VAT revenue from small and medium size businesses in developing countries is relatively difficult (Keen, 2008). VAT non-compliance may be because of the direct compliance costs of registering for VAT, or non-compliance may be attractive for less formal (informal) businesses selling to formal sector businesses as part of a wider concealment strategy (Keen, 2008). This is because informal sector businesses revealing themselves to tax authorities for VAT purposes expose themselves to income tax requirements as well. Therefore, in most developing countries larger companies are more likely to be VAT compliant than small and medium enterprises (Coolidge, 2012).

In Tanzania, a number of current estimates/projections show that the informal sector is around 50% to 60% (Leyaro *et al.*, 2015). Furthermore, Osoro (2009) estimated that the informal economic activities not recorded in the official statistics (mainly by SMEs) from 1970 to 2006 were around 50% of national GDP. The 2000-01 Integrated Labour Force Surveys (ILFS) indicated that 61% of households in urban areas had informal activities while the 2014 ILFS indicates that employment in informal sector in urban areas was around 45% (Leyaro *et al.*, 2015).

In a study by Coolidge (2012, p. 250) the following factors are identified as relevant in assessing the level of VAT compliance in developing countries. The regressive pattern of tax with higher tax compliance costs in SMEs (e.g. up to 15% or more of turnover); complexity in tax accounting requirements associated with high tax compliance costs; the use of tax accounting software and e-filing which may reduce VAT compliance costs. Other factors include the rates of which tax inspections and audits (including all kinds of visits, official and unofficial, by tax authorities) play a role in determining VAT compliance. Furthermore, both tax evasion and corruption were found to be common compliance problems in most

developing countries. Finally, reputation for competence, helpfulness and integrity of tax official were also significant in influencing compliance.

The preceding discussion of VAT compliance in developing countries identifies key compliance factors that are relevant to the current study. The following section 2.3 presents, more specifically, the overview of Tanzania VAT system.

2.3 Overview of the Tanzania VAT system

Since the 1990's many countries in sub-Saharan Africa have established semi-autonomous revenue authorities distinct from their ministries of finance (Fjeldstad and Moore, 2009). In Tanzania, the Tanzania Revenue Authority (TRA) was established in 1996 with main function of the assessing, collecting and accounting of all central government revenue. Other TRA functions are monitoring, coordinating tax collection activities and to ensuring the fair, efficient and effective administration of tax laws and promoting voluntary tax compliance. The Value Added Tax Act, 1997 is one of the tax laws administered by TRA, and it came into operation in July 1998. Value Added Tax (VAT) is administered under Domestic Revenue Department (DRD).

In principle, VAT in Tanzania is a consumption tax, paid by final consumers, levied on the taxable supply of goods and services, and on imports, at a standard VAT-rate of 18%² on all sales, and administered under invoice-credit methods. This implies that taxpayers are able to credit the VAT charged on their purchases ("input VAT") against the VAT due on their sales ("output VAT") and any excess credits this creates are refunded to the taxpayer. VAT registered taxpayers³ act as collection agents who collect and submit VAT to the TRA. In Tanzania, VAT works on the 'destination principle'. It is an international norm of taxing goods and services in the jurisdiction of the goods and services consumption (Keen and Smith, 2006); this means that in Tanzania VAT is levied on goods and services consumed in Tanzania, but not those

² Since the start of VAT in 1998 to June 2010, the VAT rate was 20%. The VAT-rates in Tanzania are in line with the typical VAT rates in other African countries, which are between 15-20%, but higher than in other developing regions (Fjeldstad and Heggstad, 2011). For example, in most Asian countries the VAT-rates are around 10%, whereas in the Americas, the average is around 14% (Volkerink, 2009).

³ For the purpose of this study, VAT registered taxpayers will be referred as 'taxpayers'

consumed elsewhere. All imported products are taxed, whereas all exported products are zero-rated⁴. A zero-rate for exports of goods and services is a common practice in many countries (Fjeldstad and Heggstad, 2011). In addition, other goods and services are exempted⁵; taxpayers who supply only exempt products are not required to register for VAT purpose. In addition, VAT Act 1997 provides special relief⁶ for qualified taxpayers.

Furthermore, VAT administered in Tanzania is a broad-based tax on all commodity sales, whether to consumers or to other businesses and the VAT-registration threshold for businesses is an annual turnover in excess of Tshs 40 million⁷ (approximately (£ 23,902.4) over a period of 12 consecutive months. Therefore, all taxpayers above this threshold turnover are required to register for VAT purposes. According to the VAT Act 1997, taxpayers can register either voluntarily or following the use of the commissioner's power i.e. following tax audit investigation. Although the law does not require registration among taxpayers with total sales below the VAT threshold, the VAT Act 1997 allows such taxpayers to register for VAT voluntarily if they make sales to other VAT registered taxpayers.

VAT returns must be filed with the TRA in the month following the month of business. Late lodgement of VAT returns carries a penalty of Tshs. 50,000 (about £29.900) or 1% of the VAT payable, whichever amount is greater, and any unpaid VAT or penalty beyond the due date⁸ attracts commercial compounded interest rate as determined by the Bank of Tanzania (BOT). Furthermore, VAT sanctions such as penalties, fines, interest, the publication of names of tax offenders, and imprisonment are administered in order to deal with VAT non-compliance. For example, VAT non-compliant taxpayers may be required to pay the amount of VAT evaded and on top of that, they have to pay a fine. The fine is twice the amount evaded or Tshs. 2 million

⁴ Zero-rating means that VAT is levied at a rate of zero: no tax is due on outputs, but a credit is allowed on input VAT, which becomes a refund (Keen and Smith, 2006).

⁵ Exemption mean that no tax is due on output but nor is credit available for input VAT (Keen and Smith, 2006)

⁶ Special relief means that a taxpayer who sells a product to another person reclaims all input VAT and does not levy output VAT. In effect it is the same as zero-rating; however it is different in that it applies to a specific group of purchasers rather than uniformly applied to all goods or services (VAT Act 1997)

⁷ Since 1998, the VAT threshold was Tshs. 20 million (about £11,951.2)

⁸ Due date means, the date on which VAT returns are due for lodgement or any tax penalty, or other amount prescribed in VAT Act, 1997.

(approximately £1,195.1), whichever amount is greater or imprisonment for a term less than two years or both.

In recent years, the government of Tanzania has exerted large efforts to improve tax compliance. Despite these efforts, Tanzania's tax to GDP-ratio of 14% is still relatively lower than the ratios of other neighbouring African countries (Ali, Fjeldstad and Sjursen, 2013)

Tax non-compliance is a major challenge and estimates indicate that the loss in tax revenue due to tax non-compliance amounted to one sixth of the entire Tanzanian budget in the fiscal year 2009/10 (Ali, Fjeldstad and Sjursen, 2013). The consequences of this poor tax revenue collection performance is indicated by the Tanzania's heavy dependence on foreign aid, which was about 34% of government budget in 2009/10 (AfDB 2010). Furthermore, a recent study by Mwangi (2014) shows that in 2011 Tanzania lost USD 1.9 billion in tax revenue due to tax non-compliance (Uganda USD 856 million and Kenya about USD 2 billion).

In Tanzania SME taxpayers account for sizable portion of tax collected. The group categorised as 'small taxpayers' refers to the Domestic Revenue Department (DRD) of the TRA, grouping, SMEs taxpayers as 'large', 'medium' and 'small' taxpayers according to their turnover. According to DRD, SME taxpayers are those with an annual turnover below Tshs.40-million (approximately £ 23,902.4) but whose annual total domestic tax payments to TRA do not exceed Tshs.400 million (equivalent £ 239,020).

The major challenges the TRA is facing with respect to taxation of SME are in particular to those of informal sectors: identification, registration, non-compliance, poor or no record keeping of business activities and non-filing of tax returns. These challenges may be due to SMEs not having permanent business premises, poor record keeping problems because of illiteracy, high costs of hiring a tax adviser, maintenance of only of basic purchases/sales records. Further factors include low general tax knowledge, for example, SME taxpayers having limited understanding of taxable income and therefore inability to differentiate input and output tax for tax purposes and taxpayers failing to file their returns.

Chapter Three

Tax compliance literature and hypotheses development

3.1 Tax compliance

This chapter aims to review the literature related to tax compliance theories. It begins with a review of the literature on the concepts of tax compliance, followed by the review of tax compliance theories. Finally, the section discusses factors explaining tax compliance before concluding the chapter.

3.2 Definition of tax compliance

There are different approaches taken to define tax compliance. Braithwaite (2003) suggests that a tax compliance definition should ideally capture the theoretically important issues and allow for tax compliance to be practically measured. According to James and Alley (2002), definition of compliance ranges from the narrow law enforcement approach to wider economic definitions. This definition includes the version of taxpayer decisions to conform to the tax policy, objectives and cooperation with the society. Generally, James and Alley (2002) defined tax compliance as *'the degree to which taxpayers comply with tax laws'*.

James and Alley (2002) also suggested that tax compliance can be explained or seen as tax avoidance or tax evasion. The distinction between these two concepts is in terms of legality, with tax avoidance referring to legal measures to reduce tax liabilities whereas illegal measures are referred to as tax evasion. Elffers, Weigel and Hessing (1987) describe tax evasion behaviour or tax cheating as a deliberate act of non-compliance that results in the payment of less tax than actually owed whether or not the behaviour eventuates in subsequent conviction for tax fraud.

In a broader sense, tax compliance can be approached from many perspectives; it can be viewed as a problem of public finance, law enforcement, organisation design, labour-supply, ethics or a combination of all these (Andreoni, Erard and Feinstein, 1998). Furthermore, Andreoni, Erard and Feinstein (1998) added that under public

finance, tax compliance is viewed as resulting from the notions of equity, efficiency and incidence. Tax compliance is also a problem of law enforcement. The questions about the deterrent effects associated with penalties and the probability of detection are central to both the tax compliance and law enforcement literatures.

Furthermore, the degree of non-compliance may be measured in terms of the 'tax gap' that is, the difference between the actual revenue collected and the amount that would be collected if there were 100 per cent compliance (Andreoni, Erard and Feinstein, 1998). Sometimes there are difficulties in interpreting legal terms, such as tax gap. The 'tax gap' definition and measure are far too simplistic for practical policy purposes since successful tax administration requires taxpayers to cooperate in the operation of a tax system rather than to be forced to carry out every aspect of their tax obligations (James and Alley, 2002).

Brand (1996) categorised the tax gap as gross and net tax gaps, gross tax gap is being the amount of 'true' tax liability that is paid 'voluntarily' on time, whereas, net tax gap is the amount less tax paid late or collected through enforcement activities. Furthermore, gross and net tax gaps have three main components; non-filing gap, under-reporting gap and underpayment gap. The under-reporting gap is made up of under-reported income, overstated offsets and net arithmetical mistakes. The major concern of such definitions is that, they can incorrectly indicate a certainty in the measurements of tax compliance that does not exist. The added problem is that tax laws are not always precise, although legal definitions are often of the tax gap, there are sometimes practical difficulties of interpretations (James and Alley, 2002).

VAT non-compliance could take various forms including not registering for VAT, not levying VAT on sales, not reporting correct VAT, claiming credit on purchases more than the input tax paid, not claiming input VAT credits and not maintaining proper books and supporting documents (Yesegat, 2008). Other forms of VAT non-compliance include under-reported sales, misclassification of commodities, tax collected but not remitted and, false claims of credit or refund, and making sales without issuing tax invoice (Jenkins, Jenkins and Kuo, 2006; Keen and Smith, 2006). These forms of VAT non-compliance may exist in a tax system because of certain factors and contextual conditions.

The performance of a tax administration regime is one key determinant of a VAT compliance context. Unlike developed countries, developing countries appear to have

relatively poor performance of tax administration resulting in uncontrolled non-compliance. Further, most developing countries include fragmented economies, large informal sectors, general low tax morale and high levels of distrust between taxpayers and tax administrators (Yesegat, 2008; Bird and Gendron, 2006). For example, in Dominican Republic VAT non-compliance was common especially in rural areas, which represented an informal sector (Jenkins, Jenkins and Kuo, 2006). Jenkins and colleagues also found that the dominance of the informal sector of the country was a challenge in VAT compliance. Moreover, the collection of most taxes was limited at some stage in the distribution chain because some businesses were too small or out of reach of the tax administration.

Small and medium enterprise (SME) which also stands for small and medium taxpayers like any other group of taxpayers are responsible for collecting and remitting taxes to tax authorities. The SME taxpayers are critical in expanding the economy because as they grow they become the employers of the future; therefore, addressing the tax compliance problems of this sector should be a first priority of developing economy such as Tanzania. SME plays an important role in countries' tax systems, however the literature suggest that generally the SME are vulnerable to offences that result in non-compliance which lead to loss of government revenue (Hanlon, Mills and Slemrod, 2005; Bodin and Koukpaizan, 2008).

Following the above definitions of tax compliance, the next section covers the theories that are relevant in explaining tax compliance.

3.3 Relevant theories of tax compliance

This section presents the discussion of relevant theories of tax compliance. Broadly, the literature suggests two theories that are very relevant to the study of tax compliance. The first is an economic based theory, which deals with the likely economic incentives and costs borne by taxpayers in dealing with tax issues (section 3.3.1). The second covers behavioural-based theories, which deal with non-economic factors; for example, psychological and social factors (section 3.3.3). Furthermore, while tax compliance under the economic theory is about economic rationality and efficiency in resource allocation; behavioural-based theories suggest tax compliance is about behavioural cooperation (James and Alley, 2002). Consequently, under behavioral theories, success in tax compliance depends on cooperation between

taxpayers and tax authorities, which makes taxpayers' perceived fairness and tax morale important issues in explaining tax compliance. Therefore, the discussion of the theories of fairness perceptions and tax morale (section 3.3.2) will precede the discussion of the behavioural theories.

3.3.1 Economic theory of tax compliance

The economic theory explains taxpayers' income reporting behaviour in a utility-maximisation framework (James and Alley, 2002; Andreoni, Erard and Feinstein, 1998). According to this framework, taxpayers are rational and risk averse in determining how much income to report on their tax returns. The framework assumes that taxpayers are able, and will solve their expected utility-maximisation problem by assessing the trade-off between tax savings from income underreporting and the risks of being audited and having to pay penalties for detected non-compliance (Kirchler, 2007; Erard and Feinstein, 1994a).

The pioneers of economic theory of tax compliance were Becker (1968) and Allingham and Sandmo (1972). Initially, Becker (1968) developed economic theory that explained criminal activities within a rational individual decision framework. Becker (1968) assumed criminal behaviour is an outcome of an individual's assessment of the benefits and risks involved in acting criminally. For example, individuals will assess the uncertain benefits of successfully deviating from expected behaviour against the risks of being detected and punished. Following Becker (1968), Allingham and Sandmo (1972) developed the economic theory of tax compliance, which adopted the same assumptions of a rational, risk averse and utility maximising individual. In the economic theory, utility maximisation refers to individuals or entities' attempt to get the greatest utility possible from expenditure of least amount of money or efforts (Kahneman and Thaler, 2006).

The economic theory of Allingham and Sandmo (1972) was developed to analyse taxpayers' choice between declaring the actual income and declaring an amount which is less than the actual income. In this setting, the choice is normally made under conditions of uncertainty and taxpayers are involved in a gamble between these two choices. In this theory, taxpayers are assumed self-interested and they can choose to be tax non-compliant if it pays. Alm, McClelland and Schulze (1992, p. 22) state that:

'A purely economic analysis of the evasion gamble implies that most individuals would evade if they are "rational", because it is unlikely that cheaters will be caught and penalised.'

Therefore, if taxpayers choose to pay less than the actual income, the payoff will depend on the probability of being detected by tax authorities, but if they are not detected, then taxpayers will be better off than under the choice to declare actual income. However, if they are caught and punished after declaring less than the actual income, they will be worse off (Kirchler, 2007).

Furthermore, the economic theory suggests that *'people are honest only to the extent that they have economic incentives for being so'* (Sen, 1977 p. 332). This theory assumes that taxpayers reporting behaviour is driven by the economic incentives available in a tax system with the intention of maximising their personal income and wealth using utility-maximisation framework. This implies that taxpayers' compliance decisions are based on beliefs of the probability of detection and legal fine if detected. Therefore, it may be argued that tax non-compliance is negatively correlated with the probability of detection and the degree of punishment. Therefore, according to Allingham and Sandmo (1972) taxpayers will choose to be non-compliant as long as the benefit of non-compliance is greater than the expected cost of being caught and punished. This implies that tax non-compliance is like gambling, where, if the expected value of the gamble is positive, taxpayers will not pay all tax, and if it is negative, they will fully comply with the law (Bernasconi, 1998; James and Alley, 2002; Raskolnikov, 2006).

There were other early economic theorist in tax compliance e.g. Srinivasan (1973), Kolm (1973), Yitzhaki (1974), Andreoni, Erard and Feinstein (1998) and Mckerchar (2001). According to Mckerchar (2001) these theorists were very much in agreement with the underlying assumptions of economic theory of tax compliance by Allingham and Sandmo (1972). For example, in Srinivasan (1973) taxpayers were assumed to be utility maximisers with perfect information and their behaviour could be modelled with only one unknown variable, the level of reported income in tax returns (Srinivasan, 1973; Mckerchar, 2001). Additionally, while others viewed Allingham and Sandmo's (1972) theory from tax collection side, Kolm (1973) theorised the tax compliance model from the taxpayers' side. Kolm (1973) then concluded that the

unknown variable in the tax compliance equation was taxpayers' utility and how to maximise it, taking into account changes in income level and tax rates.

Since its introduction, the theory by Allingham and Sandmo (1972) has received substantial criticism from researchers because of its limitations (for example, Andreoni, Erard and Feinstein, 1998; Franzoni, 1999; James and Alley, 2002; Polinsky and Shavell, 2007). An example is that the theory is based on the belief that taxpayers' compliance decisions relies on amoral views (Franzoni, 1999). Similarly, James and Alley (2002) argues that the theory is narrow because of its assumption that taxpayers are immoral and operate in a 'social vacuum'. However, according to Mansbridge (1990), taxpayers in defining their self-interest, also add into their thoughts their moral and other people's interests. Moreover, Yitzhaki (1974) also challenged as inaccurate and unrealistic Allingham and Sandmo's (1972) assumption that taxpayers would pay the penalty on any undeclared income after being detected by tax authorities. Interestingly, Raskolnikov (2009, p. 690) suggests a range of motivations for taxpayers complying with the tax law as indicated in the following quote:

'Some (taxpayers) are afraid of audits, others of penalties; some are constrained by peer disapproval, others by their own guilty feelings; some follow a duty, others a habit, and there are even those who pay their taxes because they like it. Just as many reasons explain the significant and persistent non-compliance'

Moreover, some conclusions based on the economic theory of tax compliance appear to be in contradiction to actual taxpayers' compliance behaviour. For example, the inherent honesty in always disclosing actual income exhibited by some taxpayers, even where there are opportunities not to comply with tax laws contradicts economic theory of tax compliance (Erard and Feinstein, 1994b).

Furthermore, in a study by Pyle (1991), not all taxpayers were found to be utility maximisers. Even when it is was more likely that the tax system would favour tax non-compliant behaviour, Pyle (1991) found that the majority of taxpayers would behave honestly when dealing with their tax matters. According to James and Alley (2002, p. 35) *'an approach that treats human beings as little more than isolated experimental rats in a cage may not provide a full explanation of tax compliance behaviour'*. To some extent, the assumptions of Allingham and Sandmo's (1972) theory contradicts intuition and empirical evidence (Bernasconi, 1998). This is

because taxpayers have been found to have a degree of shame and guilt, which can have a more influential role in shaping their reporting behaviour than the factors suggested by the economic theory of tax compliance (Erard and Feinstein, 1994b).

Despite the limitations identified in the preceding paragraphs, Allingham and Sandmo's economic theory has to date played an important role in explaining the tax compliance problem. This is because of the relative importance of financial considerations have, to a lesser or greater degree, influence tax compliance behaviour (James and Alley, 2002).

Conclusively, economic theory of tax compliance by Allingham and Sandmo assumes that taxpayers make tax compliance decisions based on three factors; (1) the probability of non-compliance detection, (2) sanctions for non-compliance, for example, penalties and fines and (3) tax rates (Andreoni, Erard and Feinstein, 1998; Allingham and Sandmo, 1972; James and Alley, 2002). Based on its underlying assumptions, the theory generally predicts that an increase in the perceived detection probability and/or penalties will result in greater tax compliance (Clotfelter, 1983). The theory also predicts that the increase in tax rate will result in reduced tax compliance (Ali, Cecil and Knoblett, 2001).

In the current study, the economic theory of tax compliance is used in extracting factors, and formulating statistically testable hypotheses, in relation to VAT compliance in Tanzania. The following paragraphs present a description of these factors in three parts (a), (b) and (c).

a) Probability of detection

According to Chau and Leung (2009, p. 37), the probability of detection refers to '*the likelihood that tax authorities will discover an individual's non-compliance and seek to remedy the evasion*'. Taxpayers usually would like to evade paying tax and the only reason that hinders them from doing so is that there is some non-zero probability of being caught (Bordignon, 1993). Detection likelihood is a function of the probability of being audited and the probability of being detected (for example, see Andreoni, Erard and Feinstein, 1998; Pommerehne and Weck-Hannemann, 1996; Robben *et al.*, 1990; Snow and Warren, 2005).

Furthermore, for the detection likelihood to have a significant influence on compliance behaviour, Snow and Warren Jr (2005) found that it is important that both

probabilities of being audited and that of being detected should be high. The findings of Snow's and Warren Jr's (2005) complements the conclusions reached by Alm (1988) who indicated that for risk averse taxpayers, greater uncertainty about audit effectiveness increases tax compliance. This is possibly because uncertainty in identifying both audit and detection probabilities raises the perceived risk level of a taxpayer's non-compliant behaviour being detected. Because of this higher perceived risk level, taxpayers may tend to raise their compliance level accordingly. Similarly, if the probability of being audited has to have a significant influence on compliance, there should be an increase in the perceived uncertainty of whether a taxpayer will be detected if audit is undertaken (Robben *et al.*, 1990; Snow and Warren Jr, 2005; Alm, Jackson and Mckee, 1992b). However, it can be argued that it is not the actual probability of audit that influences tax compliance, rather the probability of tax non-compliance being detected (Kirchler, 2007).

Overall, the reviewed literature supports the proposition that there is a positive relationship between audit and detection probabilities and tax compliance (for example, see Varma and Doob, 1998; Fischer, Wartick and Mark, 1992; Ali, Cecil and Knoblett, 2001). Fischer, Wartick and Mark, (1992) reports a positive relation in their review of studies on the relationship between detection likelihood and tax compliance behaviour. They found increasing the detection probability would increase tax compliance. Similarly, Blackwell (2007) found evidence of a positive relationship between detection probability and tax compliance, however the effect was low. A Canadian survey also suggested the perceived detection likelihood was an important factor in the taxpayers' compliance decision (Varma and Doob, 1998). Furthermore, in a study by Dubin, Graetz and Wild (1990), increasing the rate of audit positively influenced tax compliance. A marginally but positively significant association between audit probability and tax compliance was also found in Pommerehne and Frey (1992) and Ali, Cecil and Knoblett (2001). It should also be noted that tax audit is considered to have direct deterrent effect on audited taxpayers and indirect effect on unaudited taxpayers (Alm, Jackson and Mckee, 2006). In contrast, Erard (1993) studied the deterrent effect of an ordinary audit experience and found that a taxpayer's ordinary prior audit experiences has little effect on future reporting behaviour.

Therefore, the reviewed literature indicates the association between tax compliance and perceived audit rate and detection probability. However, the literature has also

shown this association as more complex than suggested in the economic theory of tax compliance. This is because of the limits, in analysing taxpayers' compliance behaviour, imposed by relatively unrealistic assumptions and excluded unknown variables in economic theory as indicated, for example, in Mckerchar (2001).

The reviewed literature indicates that the results support economic theory as concluded by Allingham and Sandmo (1972, p. 330) that '*...an increase in the probability of detection will always lead to a larger income being declared*'. Therefore, the increase in probability of detection will increase tax compliance and tax audits represent one of the most effective detective measures used by tax authorities (Alm, 1991). More evidence was also found that tax non-compliance is discouraged by a high risk of detection (Klepper and Nagin, 1989c; Robben *et al.*, 1990), and their conclusion was in agreement with that of Alm, Jackson and Mckee (1992a).

However, in some studies, other factors appeared to moderate the effect of audit probability on tax compliance. For example, Slemrod, Blumenthal and Christian (2001) found that higher-income taxpayers were more non-compliant than lower and middle-income taxpayers. This was because higher-income taxpayers perceived that tax authorities would not always detect and punish non-compliance. The perceived partiality of tax authorities in detecting and punishing non-compliance could be a function of the limitations or weaknesses in conducting tax audits or taxpayers' actual income minimising behaviour in reporting their income using a tax adviser. The relationship also depends on the effectiveness of the tax audit (see Trivedi, Shehata and Mestelman, 2004; Gërkhani and Schram, 2006; Alm, Jackson and Mckee, 1992b). Trivedi, Shehata and Mestelma (2004, p. 2) pointed out that depending on the reasons for taxpayers failure to comply, if taxpayers only care about incentives and are 'playing the audit lottery', then increased tax audit rates should improve tax compliance. Alm, Jackson and Mckee (1992a) also argued that the effect of an audit on tax compliance depends on perceptions of equity; if taxpayers receive public goods in exchange for their tax payments, then audit probability is more likely to be positively associated with tax compliance. Moreover, in a study by Kastlunger *et al.* (2009), repeated tax audits lead to higher probability of compliance compared to random audit. The literature suggests that SME taxpayers are more likely to non-comply than other groups of taxpayers (Schuetze, 2002; Kirchler *et al.*, 2006; Kamleitner, Korunka and Kirchler, 2012). For example, according to Schuetze (2002)

small taxpayers can conceal income from tax authorities due to limited financial resources available to undertake effective tax audits,

Furthermore, taxpayers' uncertainty about audit and detection probabilities increase tax compliance for ambiguity-averse taxpayer, if they believe their non-compliance behaviour will be detected following a tax audit, but reduces compliance for "ambiguity lovers" (Snow and Warren Jr, 2005; Snow and Warren, 2005). The challenge in using uncertainty, however, is that tax authorities can neither effectively categorise nor screen taxpayers on the basis of their preferences for ambiguity; therefore, it is not likely to be a useful variable in designing measures to enhance tax compliance (Snow and Warren, 2005).

Differences in culture between countries were found to explain mixed findings on the relationship between audit liability and tax compliance. For example, in a comparative experimental study by Gërzhani and Schram (2006), significant results on the relationship between audit probability and tax non-compliance was found in Netherlands but not for Albania. Additionally, while in other studies the relationship between audit probability and tax compliance was assumed to be linear, the experimental study by Alm, McClelland, and Schulze (1992b) found the relationship to be non-linear.

However, the effectiveness of audit as suggested by economic theory to be the most relevant factors of tax compliance cannot be completely confirmed. This is because tax audit may lead taxpayers to develop strategies to escape tax liabilities (Kastlunger *et al.*, 2009). According to Andreoni, Erard and Feinstein (1998) and Pommerehne and Frey (1992) the probability of being audited does not have significant positive influence on tax compliance.

In summary, the reviewed literature in the preceding paragraphs provides evidence that the impact of high audit probabilities is quite strong. However, in practice tax audits are costly to tax authorities, therefore alternative control mechanisms need to be developed (Kirchler *et al.*, 2007b). For example, Alm, Cronshaw and Mckee (1993) constructed random audits schemes with several alternatives. They tested the effectiveness of a cut-off rule (i.e., when the declaration falls below a certain threshold), a retrospective audit scheme (i.e., when the random detection of noncompliance results in examination of previous tax files), and a prospective audit scheme (i.e., when the detection of non-compliance increases future audit probability)

(cited in Kirchler *et al.*, 2007b, p. 13). These findings suggested that alternative control audit mechanisms lead to higher tax compliance even if the audit rules implicated fewer audits than random control systems (Kirchler *et al.*, 2007b). Following the preceding literature review, this study proposed the following hypothesis:

H_{1a}: VAT compliance is associated with perceived detection likelihood.

b) Sanctions

The economic theory of Allingham and Sandmo (1972) suggests that sanctions should be administered for non-compliant tax behaviour. Sanctions for non-compliance can be in terms of penalties, fine, interest, imprisonment and publications of names of non-complying taxpayers. The reviewed literature suggests that the size of the perceived penalties should be able to affect the likelihood of tax non-compliance (Varma and Doob, 1998).

Some research findings indicate that only “stiff” penalties have a direct deterrence effect and will enhance the potential of a policy that fosters detection to increase taxpayers’ compliance (Snow and Warren Jr, 2005; Andreoni, Erard and Feinstein, 1998). For example, according to Yesegat (2008) the implementation of stiff penalties such as imprisonment of taxpayers and imposing the same financial penalties regardless of the amount of VAT under-reported was the main factor that influenced compliance decision in Ethiopia. The same study also indicated that the extent of taxpayers’ understanding of VAT matters appeared to be generally poor; therefore focusing on implementing stiff penalties alone without improving taxpayers’ education had negative implications on taxpayers’ attitude and the ability of a tax system to deter tax non-compliance behaviour. In general, however, Yesegat (2008) result indicated that had there not been penalties and tax audits, taxpayers would not have been complying with the VAT system. Therefore, proper design and implementation of tax audit and penalty mechanisms, appropriately linked with other tax compliance enhancing measures, like taxpayers’ educational programmes, were found to be powerful tools in mitigating VAT non-compliance, especially intentional VAT non-compliance (Yesegat, 2008). Adam and Webley (2001) shows that taxpayers’ belief that the VAT system is effective and can detect and penalise their VAT non-compliant behaviour will normally cause the taxpayers to be more VAT compliant. Therefore, the powers bestowed to a tax authority and the extent to which taxpayers

believe or do not believe that the tax authority's powers are effective will respectively contribute towards higher or lower VAT compliance.

Moreover, Blackwell (2007) also found strong evidence that increasing the penalty rate lead to higher tax compliance. In reality relatively small penalties levied for detected non-compliance, combined with the low audit probability, would seem to provide taxpayers with a strong incentive to engage in rational non-compliance behaviour (Snow and Warren, 2005).

Several studies' findings do not support penalties as having an effect on tax non-compliance. For example, Pommerehne and Weck-Hannemann (1996) found no impact of penalty rate on tax compliance in different Swiss regions. Similar results were also reported in an analysis from American taxpayers between 1980 and 1995 (Ali, Cecil and Knoblett, 2001). Furthermore, the results by Varma and Doob, (1998) shows that the perceived penalties were not an important factor in explaining taxpayers' compliance decision.

However, some literature indicates that low and high-income taxpayers reacted differently (Kirchler et al., 2007a). The low-income earners showed no change in tax compliance after penalties, while higher-income earners reacted as expected and increased their tax compliance (Kirchler *et al.*, 2007b). In addition, experimental studies reveal that tax compliance was not affected by the amount of fines, but fines should have stronger effects in the laboratory than in the field due to the artificial situation of gambling with the experimenters (see, Baldry, 1987; Elffers, Robben and Helsing, 1992). This indicates that the type of research method employed may influence the results. Moreover, increasing fines can have opposite effect by initiating tax non-compliance, for example, a surveyed study by Fjeldstad and Semboja, (2001) in Tanzania shows that severe sanctions including strict enforcement and harassment of taxpayers increased tax resistance, and, hence resulted in widespread of tax non-compliance.

Furthermore, the reviewed literature reports inconsistent findings on the relation between fines and tax compliance. For example, Park and Hyun (2003) used experimental data from Korea and found that penalties' influence on tax compliance was slightly higher than the influence of audit probabilities on tax compliance. There is contrary evidence that other experiments showed that audit probabilities are more related to tax compliance as compared to fines (for example, see Elffers, Robben and

Hessing, 1992). This implies that the interaction of fines and high rate of tax audit are an effective measure in deterring non-compliant behaviour.

The other consideration in assessing the effect of punishment on tax compliance is the tendency of tax authorities renegotiating penalties with a good intention of dealing with the current non-compliance. While this practice may have positive effects today, it may encourage further renegotiation tomorrow meaning future tax compliance behaviour may not improve (Braithwaite, 2003; Ahmed and Braithwaite, 2005). Therefore, in order to achieve higher compliance true interaction with a good trustworthy relationship between taxpayers and tax authorities is required (Kirchler, 2007; Kirchler, Hoelzl and Wahl, 2008).

Feld, Frey and Torgler (2006) suggested that auditing and penalties should not be considered as the only means to increase tax compliance. Additionally, Tittle (1980) concluded that perceived harshness of sanctions was far more important than most theorists or researchers have assumed. Overall, Tittle's (1980) data analysis indicated that there was no clear way of explaining circumstances in which sanctions can have a deterrent effect in dealing with tax non-compliance.

The reviewed literature shows the deterrence effects of sanctions (for example, penalties and fines) are weak or negligible. Some of the findings indicated that deterrence measures are more effective only when interacted with frequent tax audit. The most severe penalties will have no effect, if taxpayers have knowledge that tax audits rarely occur. But, if fines are too high, the tax system would be perceived as unjust and unfair and taxpayers would use any possibility to legally avoid their taxes (Kirchler *et al.*, 2007b). Kirchler *et al.* (2007b) give an example of Austria, where the maximum penalties for tax non-compliance is 200% of the evaded tax, though in practice the typical penalty is a fine of about 40%. Nevertheless, depending on the income of tax offender, such a system might yield too low a fine to have the desired deterrent effect. In experimental studies of taxpayers from Austria, the United Kingdom and the Czech Republic, Muehlbacher, Kirchler and Schwarzenberge (2011) found that the income-adjusted fines had more impact on the sentenced taxpayers' intention to commit the same offence again than fines which were solely adjusted to severity of tax non-compliance. Following the preceding literature review, this study proposed the following hypothesis:

H_{1b}: VAT compliance is associated with perceived level of VAT sanctions.

c) Tax rate

The tax rate is another important tax compliance determinant. The economic theory of tax compliance predicts that an increase in marginal tax rates would decrease tax compliance (Allingham and Sandmo, 1972). However, several empirical studies have provided mixed findings of the effect of marginal tax rate on tax compliance. These studies show that there is no clear hypothesis that emerges from economic theory, and the question of whether higher tax rates would decrease compliance remains unclear. The literature proposes two opposing influences of tax rate increase on tax compliance. On the one hand, a high tax rate will reduce taxpayers' disposable income, making tax non-compliance more profitable. On the other hand, the reduction of disposable income will result in increase in taxpayers' risk aversion, hence a possible increase in tax compliance (Kirchler *et al.*, 2007b; Park and Hyun, 2003). Some studies indicate a positive association between marginal tax rate and tax non-compliance, (for example, see Clotfelter, 1983; Slemrod, 1985; Pommerehne and Weck-Hannemann, 1996). The same positive relationship between marginal tax rate and tax non-compliance was found in studies by Pommerehne and Weck-Hannemann (1996), Feinstein (1991) and Hai and See (2011). Furthermore, some laboratory experiments which used varying tax rates frequently found tax rate increases leading to higher tax non-compliance (Alm, Jackson and Mckee, 1992b; Collins and Plumlee, 1991; Park and Hyun, 2003).

Similarly, it was also found that taxpayers' non-compliant behaviour, for example underreporting of income was positively correlated with high tax rate (Clotfelter, 1983). This implies that taxpayers' perceived a high a tax rate as meaning a tax overpayment, which may lead them (i.e. taxpayers) to outweigh this perceived tax overpayment through tax non-compliance. According to Christian, Gupta and Lin (1993) most taxpayers are sensitive to even the smallest changes in their tax bracket.

However, some reviews of the literature reports negative association between tax rate and tax compliance (for example, see Feinstein, 1991; Christian, Gupta and Lin, 1993; Mas'ud *et al.*, 2014). Mas'ud et al. (2014) used African cross-country data and found there was significant negative correlation between tax rates and tax compliance, and the tax rate had a negative effect on tax compliance. Richardson and Sawyer (2001, p. 200-201) argue that not controlling for the correlation between marginal tax rates and income level may cause this inconsistency. The inconsistency is shown with some

studies findings a positive relationship while other reported a negative relationship between marginal tax rate and tax compliance.

Furthermore, Alm, Sanchez and De Juan (1995) found in a sample of Spanish taxpayers, respondents appeared to be more compliant when the tax rate increased over time. But Baldry (1987) did not find a significant effect of tax rate. Other results also show that higher marginal tax rates lead to reduced tax non-compliance (Feinstein, 1991). In a study by Porcano (1988), an increase in the tax rate had no effect on tax compliance. In examining the impact of the economic theory of tax compliance, Blackwell (2007) found no statistically significant effect of the tax rate on compliance. In a cross-country analysis of the determinants of VAT compliance Agha and Haughton (1996b) found that higher VAT rates and imposing multiple VAT rates were significantly associated with lower VAT compliance. This is because taxpayers facing higher tax rates have greater economic incentive to evade tax, and imposing multiple tax rates increases complexity, and compliance and administration costs in a tax system (Agha and Haughton, 1996a). It was also suggested by Keen and Smith (2006) that higher VAT rate encourages VAT non-compliance.

In a recent study in Nigeria the findings show that tax rate do not have any positive or negative effect on tax compliance (Modugu, Eragbhe and Izedonmi, 2012). In a cross-country study of OECD countries, evidence showed that there was insignificant correlation between marginal tax rate and tax non-compliance (Richardson, 2006).

The reviewed literature confirmed conflicting findings about the association between tax rates and tax compliance. As discussed above, some studies showed that high tax rate was positively associated with tax non-compliance and some studies showed that it was negatively associated with tax non-compliance. Again, other studies found either no relationship and some a positive relationship between tax rates and tax compliance (Feinstein, 1991; Richardson, 2006). Following the preceding literature review, this study proposed the following hypothesis:

H_{1c}: VAT compliance is associated with actual VAT rate.

3.3.2 Theories of fairness perceptions and tax morale

As introduced in section 3.3, behavioural theories indicate the success of a tax system depends on the behavioural cooperation between taxpayers and tax

authorities. This makes taxpayers' perceived fairness and tax morale important issues in explaining tax compliance. Therefore, this section presents the theories of fairness perceptions and tax morale. Theories of fairness perceptions include Equity Theory, Distributive Justice Theory (DJT) and Procedural Justice Theory (PJT).

a) Equity Theory

Equity theory is a relevant theory in explaining fairness perceptions, and it emerged from the concept of justice in organisations (Adams, 1965; Greenberg, 1987). Equity Theory predicts that individuals perceive fairness based on outcomes of their contribution to society, and they believe that incentives and punishments should reflect one's contributions (Bobek, 1997). According to Adams (1965), Equity Theory comprises two dimensions, which are exchange fairness (reciprocation) and allocation fairness.

Exchange fairness proposes that individuals respond fairly if the other party in the exchange also acts fairly to them. In this regard, the achievement of equity or fairness is when there is an equivalence of the input-outcome ratios for all parties involved in a particular exchange (Cook and Hegtvedt, 1983). Basically, an individual will perceive a system as fair if the contribution made by him/her is fairly reflected (or equal to) the benefits received, and vice versa. In addition, Equity Theory argues that individuals are more likely to comply with the rules if they perceive the treatment received from the system is fair. In contrast to exchange fairness, Eckhoff (1974) describes allocation fairness as involving a one-way distribution of resources across a group/circle of recipients; also known as indirect exchange Blalock & Wilken (1979).

Although some authors (e.g. Bobek, 1997; Leventhal, 1980), have criticised the original Equity Theory by Adams (1965) because of its simplistic premises, researchers have extended and adopted the theory in various fields of study. For example, in payment and job-related rewards studies (Aryee, Chen and Budhwar, 2004; Pritchard and Campbell, 1976; Greenberg, 1987; Watson *et al.*, 1996), and in taxation studies (Carnes and Cuccia, 1996; Bobek, 1997; Gilligan and Richardson, 2005).

The current study is on VAT compliance, and the exchange parties are SMEs taxpayers and the government. In this context, individual SME taxpayers will perceive the VAT-system as fair if they perceive the benefits received from the government compared to their VAT payment is equitable. If the benefits that is, the VAT paid ratio is perceived as 'not equitable', then the exchange is deemed unfair and SMEs taxpayers are more likely to seek to restore the equity through non-compliance.

b) Distributive Justice Theory

Distributive Justice Theory (DJT) is an extension of the allocation fairness dimension of the Equity Theory by Adam (1965), and is part of the Social Comparison Theory (Lamm and Schwinger, 1980). DJT proposes that individuals do not only perceive equity in terms of benefits received from their contribution to society (i.e. exchange fairness), but also by comparing their benefit received-contribution ratio with that of others in society. An individual will deem any disparity in the benefit received-contribution ratio between the individual and others in society, as inequitable (Hatfield *et al.*, 1978). In other words, DJT postulates that distribution outcomes should be equal among those with similar contributions.

In order to achieve distributive fairness, Leventhal (1976) suggests the application of allocation rules like equity rule, equality rule or needs rule. The equity rule suggests that there must be relative equality between an individual's contribution (e.g. tax paid) and benefits received. In contrast, the equality rule requires equal distribution of benefits regardless of individual's contribution in society. The argument in the equality rule is that everyone in a society deserves equal treatment irrespective of his or her contribution. Finally, the needs rule proposes the consideration of the needs of recipients before taking decisions on benefit/rewards allocation. Consequently, individuals with a low or a zero contribution, but with more needs may be allocated more benefits compared to those with a higher contribution but fewer needs (Leventhal, 1976; Deutsch, 1975). Therefore, the allocation rules depend on the situation. For example, the equality rule is more appropriate if the main concern is to preserve social harmony in a group (Deutsch, 1975).

Eckhoff (1974) extends the DJT dimensions to five including the three dimensions suggested by Deutsch (1975), and Leventhal (1976) the 'relative equality' (the equity rule), 'objective equality' (the equality rule), 'subjective equality' (the needs rule), 'rank order equality' and 'equal opportunity'. The 'rank order equality' dimension proposes individuals (or groups of individuals) should receive rewards according to their 'investments'⁹ in society (Homans, 1958). The other dimension is the 'equal opportunity', which is commonly discussed in the context of racial integration policies (Cook and Hegtvedt, 1983).

The discussion of the allocation rules covered in the preceding paragraph emphasises the positive side of the DJT (i.e. the allocation of benefits/rewards). The other side of the DJT is concerned with the fair allocation of punishments, known as retributive fairness (Cook and Hegtvedt, 1983). A social system achieves retributive fairness if it is able to match the penalty imposed with the committed crime. In the same way, a social system achieves retributive fairness if it is able to make compensation received equal to any loss incurred by individuals.

DJT is one of the fairness perception theories that has been widely adopted in social science research (Deutsch, 1975; Lamm and Schwinger, 1980; Leventhal, 1976; Mikula and Schwinger, 1978), including in taxation research (Gravelle and Gravelle, 2006). In a taxation context, for example, taxpayers will find their interactions with tax authorities as equitable if the distribution of benefits is equal among those with similar tax liabilities; this is horizontal fairness. In horizontal fairness (equity), equals before tax are also equals after tax (Gravelle and Gravelle, 2006). The other DJT dimension applied in taxation studies is the idea that the ratio of inputs (e.g. tax paid) and outputs (e.g. benefits received) need not necessarily be equivalent to achieve fairness. The main issue of concern are the

⁹ Hopmans (1958) describes a person's 'investments' in society as the costs this person (or a member of a particular group in society) incurs as their contribution to society (e.g. paying taxes and other charges to government). Consequently, Hopmans (1958, p. 604) argues that 'If the costs of the members of one group are higher than those of another, distributive justice requires that their rewards should be higher too'.

individuals' needs; this is vertical fairness (equity). In taxation, vertical fairness is about the ability to pay (Kirchler, Niemirowski and Wearing, 2006).

Retributive fairness is another dimension of the DJT, which is also common in taxation theories, and it is concerned with the fair allocation of punishments (Cook and Hegtvedt, 1983). Tax systems have various punishments in the form of penalties and interest charges for tax non-compliance behaviour. Retributive fairness in taxation is about the ability of a tax system to match tax penalties and interest charges with the level of tax non-compliance behaviour.

c) Procedural Justice Theory

Procedural Justice Theory (PJT) is another extension of the Equity Theory. PJT originated from the legal context claim that society's acceptance of judicial decisions is greatly influenced by the procedures used to formulate them (Fuller, 1961). Consequently, PJT stresses positive social connections between justice agencies and the populations they serve. The experience of procedurally fair treatment and decision-making is important in nurturing belief that the justice agencies have a positive right to exercise power and influence over society (Jackson *et al.*, 2014; Murphy, 2005). Furthermore, the PJT literature highlights the importance of government authorities' trustworthiness, interpersonal respect, and neutrality in dealing with those being governed (Murphy, 2005).

Leventhal (1980) extended the notion of procedural justice, and identified six criteria for evaluating procedural fairness, namely: accuracy, bias suppression, consistency, correctability, ethicality, and representativeness. The accuracy criterion requires that allocative procedures use accurate information. This is important because failure to collect and use accurate information in implementing procedures may result in incorrect decisions and increases the risk of reducing individuals' confidence in the fairness of the procedures. Therefore, sustaining the use of accurate information in procedures increases individuals' positive perception of procedural fairness. The bias-suppression criterion requires the avoidance of prejudice (examples, discrimination or misconception) in allocative procedures. An allocative procedure that allows preferential treatment or personal

self-interest violates the bias-suppression criterion, and jeopardises perceived procedural fairness.

Consistency in allocative procedures is another criterion of procedural fairness. It requires consistent application of allocative procedures among different individuals at all times. This means achievement of procedural fairness requires allocative procedures to remain constant without frequent changes. Correctability deals with the opportunities to revise incorrect procedural decisions made. This criterion requires existence of legitimate mechanisms to revise or modify decisions as a prerequisite for fair allocative procedures.

The ethics criterion deals with moral and ethical standards in procedures. Perceived lack of following clear moral and ethical standards indicates violation of procedural justice; hence perceived lack of fairness. Finally, the achievement of procedural justice includes the decision-making process being representative of all recipients' concerns. The most important PJT principles of the six according to existing literature are consistency and representativeness (Barrett-Howard and Tyler, 1986; Makkai and Braithwaite, 1996).

d) Tax morale

Tax morale can be defined as an internalised (intrinsic) willingness or motivation to pay tax (Braithwaite and Ahmed, 2005; Frey, 2002). According to Alm and Torgler (2006, p. 228) 'tax morale can generally be understood as describing the moral principles or values that individuals hold about paying their tax'. Tax morale is an important concept in defining the '...norms of behaviour governing citizens as taxpayers in their relationship with government' (Song and Yarbrough, 1978b). Existing literature shows that countries with lower levels of tax morale among their citizens experience higher levels of tax non-compliance behaviour (Torgler, 2003). Research also indicates a negative relationship between propensity to cheat on tax affairs and levels of tax ethics and morale of taxpayers. The higher the ethical standards and tax morale held by taxpayers, the lower the propensity to cheat on taxes these taxpayers will be, and the opposite is true (Jackson and Milliron, 1986; Richardson and Sawyer, 2001). Therefore, it is very important for governments and their respective tax authorities to design and

institute systems and measures that will nurture tax morale in their taxpaying populations (Braithwaite and Ahmed, 2005).

The quality of exchange between taxpayers and governments helps to influence tax morale (Frey and Feld, 2002; Frey, 2003). For example, a policy formulation process that recognises the importance of respecting and including taxpayers' views is more likely to nurture higher levels of tax morale (Braithwaite and Ahmed, 2005). There is a significant tax literature supportive of the centrality of citizen-government relationship in enhancing tax morale (Lewis, 1982; (Webley *et al.*, 1991; Lewis, 1982a). In addition, the link between tax morale and trust in government (Scholz and Lubell, 1998), and between tax morale and fairness in the tax system (Kinsey and Grasmick, 1993; Smith and Stalans, 1991) is common in the tax research literature. Further, tax research literature indicates consideration of a broader explanation of what influences tax morale. The broader explanation recognises that procedural justice (Tyler, 2001; Tyler, 1997), distributive justice (Kirchler, 1997; Lewis, 1982), and exchange fairness (Kirchler, 1997; Scholz and Lubell, 1998; Wärneryd and Walerud, 1982) are key determinants of tax morale.

In a study by Alm and Torgler (2006, p. 228), they argue that the factors likely to influence tax morale are 'perceptions of fairness, trust in the institutions of government, the nature of the fiscal exchange between taxpayers and government, and a range of individual characteristics'. The current study is about SMEs' VAT compliance, and factors identified in the literature as influencing tax morale, are arguably relevant in this study.

3.3.3 Behavioural theories of tax compliance

In contrast to economic theory, behavioural theories of tax compliance identify factors used to conceptualise and predict taxpayers' intentions related to tax compliance. In doing so behavioural theories do not assume that individuals are simply independent, selfish utility maximisers, but that individuals interact according to different attitudes, beliefs, norms and roles (Rawlings, 2005; Kirchler, 2007). Consequently, the behavioural theories include the issues of fairness in taxation and

related theories of fairness perceptions and tax morale covered in the preceding subsection 3.3.2.

The existing literature shows a myriad of theories of behaviour (for example, see Davis *et al.*, 2014). However, the Theory of Planned Behaviour (TPB) Ajzen (1991) has been used as a conceptual framework in business and management research for predicting and explaining the reasons why behaviour may occur or why individuals may choose to act in particular ways (Conner and Armitage, 1998; Foxall, 1994; Foxall, 2008; Chudry, Foxall and Pallister, 2011). Specifically, in recent years, TPB has received increasing recognition from tax researchers as an appropriate conceptual framework in predicting and explaining taxpayer behaviour (Jo'anne Langham and Härtel, 2012; Kirchler, 2007; for example, see Bobek and Hatfield, 2003). Therefore, the following literature review examines the appropriateness of TPB in studying tax compliance behaviour.

The central concept in TPB is the "individual's intention to perform a given behaviour" (Ajzen, 1991, p. 181). Taxpayers are rarely considered in isolation as all are member of social groups, societies, and culture (Cullis and Lewis, 1997). Taxpayers will compare, refer and look to others in order to decide what are acceptable, reasonable, approved and expected behaviours within a social context in a certain situation and dilemma. Tax compliance will increase if compliance is considered as acceptable and is practised by society as a whole.

In TPB, Ajzen (1991) extended the Theory of Reasoned Action (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980) and identified three factors that explain and predict taxpayers' behavioural intentions. These factors are: (a) attitude towards behaviour, (b) subjective norms and (c) perceived behavioural control. In determining whether an individual's intentions will be weak or strong, an assessment of the existence and the level to which these three factors can be observed is important. In the current study, these factors are used in formulating testable hypotheses in relation to VAT compliance in Tanzania. The following paragraphs present a description of these factors in three parts (a), (b) and (c).

a) Attitude towards behaviour

The first factor in TPB is the attitude towards behaviour, which is described as the individual's assessment of the outcome of his or her expected behaviour (Ajzen,

1991). The outcome of a particular behaviour may be favourable or unfavourable, and this may respectively play a role in strengthening or weakening an individual's intention to perform the behaviour. For example, in a taxation scenario, the attitude objective facing a taxpayer would be whether to comply or not to comply with tax laws. The taxpayer will then assess the outcome of not complying and decide whether it is favourable or not. This assessment will help to determine whether to perform the behaviour.

Attitude is defined as a psychological (behavioural) tendency that is expressed by evaluating a particular object or situation with some degree of favour or disfavour (Eagly and Chaiken, 1993). Furthermore, individuals' attitudes are a function of their underlying beliefs regarding the outcomes they expect to achieve by engaging in the behaviour and the value they place on these outcomes (Ajzen and Fishbein, 1980).

For an attitude measure to be useful at predicting behaviour, it should correspond to the behavioural intention criterion in action, target, context and time elements (Ajzen and Fishbein, 1980). This study examines attitudes for specific instances of tax compliance. Prior tax research has identified a number of factors that might fit into TPB framework. For example, perceived fairness (Etzioni, 1986; Hofmann, Hoelzl and Kirchler, 2008) and concern for feeling guilty and the relationship between taxpayers and tax authorities (Bogardus, 1928; Kinsey and Grasmick, 1993; Braithwaite, 2003; Kirchler, 2007). Each of these items represents beliefs about what will occur if an individual engages in non-compliant tax behaviour.

In determining tax compliance behaviour, the significance of taxpayers' attitudes towards a government's fiscal policy has been recognised in empirical studies conducted in various countries, (for example, see Chan, Troutman and O'bryan, 2000; Orviska and Hudson, 2003; Webley, Cole and Eidjar, 2001; Niemirowski *et al.*, 2002). For example, perceptions that tax compliance is a 'civic duty', a 'moral obligation' or necessary to be a 'good citizen' or a 'law abiding' person, were found to influence peoples' tax compliance behaviour (Orviska and Hudson, 2003). Furthermore, most of these studies found statistically significant, although sometimes weak, relationships between attitudes and self-reported behaviour (Kirchler *et al.*, 2007a). This can be interpreted to mean that attitudes explain part of self-reported tax non-compliance behaviour but are insignificant predictors of the

actual behaviour (Hessing, Elffers and Weigel, 1988; Elffers, Weigel and Hessing, 1987)

Perceived fairness has emerged as an important factor in tax compliance literature (see Wenzel, 2002a; Richardson, 2006; Hite and Roberts, 1992). For example, in studying SME taxpayers, Adams (1996) in a cross-country study, found differences in compliance behaviour were significantly explained by differences in fairness of the tax administration, in the perceived equity of fiscal exchange and in the overall attitude towards the respective governments across the countries. Furthermore, some survey studies have found a positive association between fairness and tax compliance perceptions (Mason and Calvin, 1984; Song and Yarbrough, 1978b). However, some studies failed to find a significant positive association between fairness and tax compliance behaviour (for example, see Roberts and Hite, 1994; Kaplan, Reckers and Reynolds, 1986).

Fairness relates to taxpayers' perceived fairness in paying tax as compared with their perception of other taxpayers' behaviour (Wenzel, 2004b) and the extent of belief taxpayers have towards fairness of tax authorities in treating them respectfully, impartially and responsively (Braithwaite and Reinhart, 2000).

Fairness can be explained in three scenarios: distributive fairness, procedural fairness and retributive fairness (Wenzel, 2003; Webley, Cole and Eidjar, 2001).

Firstly, distributive fairness refers to the exchange of resources, in terms of both benefits and cost, between taxpayers and their governments. This type of fairness is reflected, for example, in taxpayers' beliefs about unfair treatment relative to the benefits they draw from public goods because taxpayers hold some beliefs about their governments' level of income and spending patterns (Kirchler, 2007; King and Sheffrin, 2002). Furthermore, studies show that tax compliance may increase because taxpayers are aware of a direct link between tax paid and provision of public goods and the value the public goods provided by the government (Alm et al., 1992a; Alm, McClelland and Schulze, 1999). Distributive fairness is also about fairness in the level of tax imposed on different individuals or groups of taxpayers. For example, Spicer and Becker (1980) found that taxpayers who became aware that their tax rates were higher than the average tax rate paid by others have the highest percentage in terms of being non-compliant. Secondly, procedural fairness can be described as the degree to which taxpayers believe that the tax authority treated them in a respectful,

impartial and respectful way (Braithwaite and Reinhart, 2000). According to Richardson (2006) taxpayers tend to avoid paying tax if they assume the tax system is unfair. Lack of procedural justice was perceived to be widespread for SMEs taxpayers in Australia, and SMEs expressed strong resentment against the tax system (Coleman and Freeman, 2002). Furthermore, Webley, Adams and Elffers (2002) summarised European findings that suggests there was a heightened sense of unfairness about tax systems among SME taxpayers. Additionally, they also found SME taxpayers' concerns about the range of taxes that they are required to pay (Webley, Adams and Elffers, 2002). According to this finding, small taxpayers are more critical of the levels of procedural fairness offered by the tax authorities.

Finally, retributive fairness refers to the perceived appropriateness of sanctions, for example penalties in the case of non-compliance. Generally, it is accepted that perception about fairness and tax compliance are associated and the importance of this association should not be underestimated (Jackson and Milliron, 1986; Richardson and Sawyer, 2001).

The perceived inequity of a VAT system is an important factor in VAT compliance. Adams and Webley (2001) noted the issue of equity was key in taxpayers deciding to comply or not to comply, and identified certain aspects of the tax system, which represented fairness. They found that fairness was perceived in terms of the set VAT threshold, the extent VAT distorts competition (fair trade), the extent to which other taxpayers are honest, the way the VAT system treats small businesses as compared to larger businesses, the structure of penalties, and VAT compliance costs. Dissatisfaction at inequity in VAT threshold was because taxpayers perceived the threshold was creating an unequal playing field between businesses that were unregistered and those who were just at the borderline of the threshold. The two were relatively the same in terms of turnover, but the threshold caused them to be treated differently. Related to the VAT threshold aspect was competition.

Another factor that may help to explain attitude towards behaviour is the relationship between tax officials and taxpayers. The interaction between tax authorities and taxpayers can be viewed in two categories of relationships: "cops and robbers" or "service providers and clients" (Kirchler, 2007). In a "cops and robbers" relationship, tax authorities perceive taxpayers as rational agents interested in maximising their individual profit like "robbers" who do whatever they can to reduce their tax liabilities,

and they should be checked, while taxpayers feel persecuted by the tax authorities like “cops” and feel it is right to hide (Braithwaite, 2003). In such relationship, the social distance is likely to be large, with little respect and few positive feelings towards the tax authorities (Bogardus, 1928). The level of voluntary compliance is likely to be negligible and individuals are likely to resort to “rational” weighing of costs and benefits of tax non-compliance (Kirchler, 2007).

On the other hand the “service provider and client” approach is characterised by the idea of tax authorities providing a service for the community and are part of the same community in which taxpayers belong (Kirchler, 2007). In this relationship, tax authorities are expected to be transparent, respectful and supportive to taxpayers. For example, in Switzerland a friendly and respectful treatment of taxpayers by tax authorities has been recognized for a long time as an important means to enhance tax compliance (Frey and Feld, 2002). In such a relationship, social distance is likely to be low, voluntary compliance is likely to prevail, individuals are less likely to consider the chance of evading, and more likely to contribute their share out of a sense of obligation (Kirchler, 2007). However, the decisions to comply or not to comply are not solely determined by a taxpayer’s interaction with the revenue authorities and the tax structure but also with attitudes, perceptions and moral obligation of individuals through association with family, friends and reference groups (Lewis, 1982b).

Furthermore, the literature suggests that since 1990s tax authorities have become aware of the necessity to consider taxpayers as customers instead of wielding control and unreasonably severe sanctions (for example, see Braithwaite and Ahmed, 2005; James and Alley, 2002). Tax authorities in Australia, France, Japan, New Zealand, UK and USA changed from a command-and-control perspective to the recognition of the importance of voluntarily compliance and customer service orientation (James and Alley, 2002). Tax authorities should not develop an adversarial relationship through a “cops and robbers” mentality, characterised by poor communication skills, lack of technical and legal knowledge and inconsistent punishment or current and future compliance may decrease (Hansford and Hasseldine, 2002).

The reviewed studies in the preceding paragraphs indicate that the extent and direction of influence of attitude towards behaviour on tax compliance is inconclusive. A range of factors like methodological differences, contextual and

cultural differences in which these studies were conducted may explain the lack of conclusive findings. Therefore, the current study aims to investigate the existence of this association in a VAT context by proposing and testing the following hypothesis:

H_{2a}: VAT compliance is associated with attitudes towards behavioural outcome.

b) Subjective norms

The second factor in TPB is subjective norms (Ajzen, 1991). Subjective norms are beliefs that an individual holds with regard to what would be the expected acceptability of the individual's intended behaviour and the extent to which this individual is willing to align his or her behaviour according to a referent's beliefs (Ajzen, 1991). Subjective norms are also described in terms of the belief about the socially shared beliefs about expected social behaviour (Fehr, Fischbacher and Gächter, 2002). An individual holding subjective norms is assumed to assess the social pressures in performing or not to performing a particular behaviour (Conner and Armitage, 1998).

According to Kirchler (2007), norms can be defined on individual, social and collective (national) level. At an individual level, norms are internalised standards of how to behave, on the social level, norms represent the behaviour of a social group based on shared standards, and at a national (collective), they are cultural standards and often mirrored in a country's laws.

Personal norms are defined as people's own moral standards acquired, for instance, through the internalisation of social norms (Kelman, 1958). Personal norms are more about one's internal influence in attempting to maintain a socially acceptable self-image and live up to self-based expectations (Schwarz, 1977). Personal norms relate to perceptions of norms held by "referent" others, for example, family members, friends and co-workers (Bobek, Roberts and Sweeney, 2007)

Alm, McClelland and Schulze, (1999) define social norms in terms of behaviour that a referent group judges in a similar way as does the individual intending to perform an act and it is expected to be sustained or not sustained respectively through social approval or disapproval. It can also be defined as a "*person's beliefs about whether specific individuals or groups approve or disapprove of the individual performing a specific behaviour, and to what extent the individual is motivated to conform with these other individuals or groups*" (Bobek and Hatfield, 2003, p. 18).

In a tax compliance scenario, subjective norms predicts that a taxpayer who believes that others around him or her are behaving in a way that is socially “appropriate” will align his or her intentions to achieve this socially “appropriate” behaviour. If the socially “appropriate” behaviour is compliance with tax laws, then the individual will more likely intend to comply with the relevant tax law.

Literature indicates that personal norms on tax non-compliance have a strong influence on tax compliance behaviour, only when there are possible negative or positive consequences, such as legal sanctions (Wenzel, 2004b). Moreover, prior literature has indicated mixed findings on the association between personal and social norms and tax compliance. For example, in Australia, personal and social norms were found to be strongly related to tax compliance (Wenzel, 2004a). In the tax compliance context, personal norms were found to be more influential than social norms. The results were found to be consistent with those of Terry and Hogg (2000). Additionally, Feld and Tyran (2002) show that allowing participants to vote on various aspects of the laboratory tax regime affects social norms and hence compliance. In a survey of Australian taxpayers, personal and social norms were found to only have moderate effects on tax non-compliance (Wenzel, 2004b).

Internalised personal norms of tax honesty were negatively related to tax non-compliance and moderated the effects of severe sanction, suggesting deterrence effects only occur when individual ethics were weak (Wenzel, 2004b). Perceived social norms, beyond those internalised as personal norms, were not directly related to tax non-compliance but moderated the effects of sanction severity. Only when social norms were seen as strongly in favour of tax honesty was sanction severity negatively related to tax non-compliance. An experimental study with taxpayers in Minnesota found tax compliance is partly influenced by conformity to perceived social norms (Coleman, 2007). A survey of SMEs in 2008 found SME taxpayers’ compliance to be highly influenced by factors related to personal norms (Walsh, 2013). However, Wenzel (2004b) did not find a major effect of social norms on tax non-compliance after controlling for personal norms. This implies that social norms only may not influence tax compliance unless they are considered at an individual level (i.e. personal norms) (Wenzel, 2004a).

Furthermore, Kamleitner, Korunka and Kirchler (2012) found that SME taxpayers are likely to find more opportunities to be non-compliant because they perceive a higher

tax burden, lack of tax knowledge and feel they bear large tax burden in complying with tax laws. Moreover, SME taxpayer perceived unfair treated by government in terms of provision of goods and services and unfair treatment by tax authorities as compared to other group of taxpayers (Kirchler, 1998). In addition, compared to other groups of taxpayers, SME taxpayers hold different mental representations when it comes to taxation as tax tends to elicit thoughts of tax being complex and imposing limitations on their business (Kirchler, 1998). The literature suggests that compared to other group of taxpayers SME taxpayers' experiences with and competence in tax matters differed significantly and as a result, they single out the probability of being audited by tax authorities (Ahmed and Braithwaite, 2005).

According to Terkper (2003) the majority of SMEs do not register voluntarily for tax purpose, and for those who register voluntarily they fail to keep proper records of account, fail to file their returns on time and make late payment of their tax liabilities. This can be explained by the fact that the majority of SME taxpayers have a rudimentary level of education as a result, they find difficulty understanding tax laws. Therefore, in order for them to be able to comply with tax laws they have to incur the extra cost of hiring a tax adviser which they perceive as excessive, hence they choose to be non-compliant (Bodin and Koukpaizan, 2008). For example, in African countries this behaviour is exacerbated by many factors to mention a few, e.g. tax officials' misconduct i.e. insufficiently supervised, corruption and unfair competition between VAT registered SME and unregistered SME when complying with VAT law (Bodin and Koukpaizan, 2008).

Furthermore, a UK survey among business owners (Adams and Webley, 2001), and a business simulation study reported by Webley (2004) supported the assumption that many business owners regarded themselves as owners of VAT money (at least at some point in time) while only a minority viewed themselves as collectors. The perception of ownership indicates that tax money is not held in a separate mental account rather it is mentally booked to an account holding income. (Webley, 2004). However, the problem of mental accounting applied differently in different industrial sectors (Webley and Ashby, 2010). For example, while builders perceived VAT money as their own, other occupations (for example, hairdressing) did not perceive VAT money as theirs (Webley and Ashby, 2010). Perceiving VAT money as belonging to oneself was related to stronger inequity perceptions of the tax system (Adams and Webley, 2001) and to increased (self-reported) non-compliance (Webley, 2004). The

perception of VAT money as something “briefly owned then taken” may explain the dislike many small business owners reported paying VAT (Adams and Webley, 2001).

The reviewed studies in the preceding paragraphs indicate that the extent and direction of influence of personal and social norms on tax compliance is inconclusive. A range of factors like methodological differences, contextual and cultural differences in which these studies were conducted may explain the lack of conclusive findings in these studies. Therefore, the current study aims to investigate the existence of this association in a VAT context by proposing and testing the following hypotheses:

H_{2b}: VAT compliance is associated with subjective norms.

c) Perceived behavioural control

The third factor in TPB by Ajzen (1991) is perceived behavioural control, which is critical in controlling an individual’s intentions and ultimate behaviour performance. According to Ajzen (1991), this factor differentiates TPB and the theory of reasoned action (Fishbein, 1979). Perceived behavioural control can be defined as an *‘individual’s beliefs regarding the presence or absence of resources and opportunities, as well as the obstacles and impediments to perform the specific behaviour in question’* (Bobek and Hatfield, 2003, p. 19). It refers to individuals’ perceptions regarding the extent of control they have over a particular behaviour. It also indicates individuals’ level of confidence in whether they will be able to realise their intentions by performing a particular behaviour. The ability can be represented by access to resources and opportunities that are relevant in performing the behaviour. Therefore, given an individual’s attitude and the influence of subjective norms, perceived behavioural control plays a role of either strengthening or weakening the intention to perform a particular behaviour.

One source of behavioural control and its implication to a taxpayer’s intentions in dealing with tax matters is the taxpayer’s knowledge and experience of the relevant tax law. It can be hypothesised that knowledgeable and more experienced taxpayers will be expected to have (perceive to have) more control of their intentions to either comply or not comply with a particular tax law (for example, see Jackson and Milliron, 1986; Richardson, 2006). Other sources are access to tax information and services

(for example, see Mwangi, 2014; Alm *et al.*, 2010) and the use of tax advisers (see Murphy and Sakurai, 2001; Attwell and Sawyer, 2001).

Tax knowledge refers to a taxpayer's ability to correctly report his or her taxable income, claim relief and rebates, and compute tax liability (Loo, Mckerchar and Hansford, 2009). Tax knowledge is an important determinant of tax compliance, as indicated by previous research. Literature suggests that one of the more successful approaches of preventing tax non-compliance is to provide tax education both to taxpayers and the general public (Jackson and Milliron, 1986; Richardson, 2006). Tax education improves perceptions of fairness in the tax system (for example, see Eriksen and Fallan, 1996; Alm, 1991). This is because tax education may help a taxpayer's ability to understand purpose of specific tax laws (Jackson and Milliron, 1986). Jackson and Milliron (1986) argued that tax education has two elements: the general degree of fiscal knowledge and the specific degree of knowledge regarding tax non-compliance opportunities. They also suggested that enhancing the level of general fiscal knowledge improves tax compliance because the knowledge generates positive perceptions about taxation. Moreover, Park and Hyun, (2003) found that in Korea tax education was one of the more effective tools to induce taxpayers to comply more with taxation.

Other prior studies on the association between tax education and tax compliance revealed a negative association. For example, in a cross-country investigation of determinants of tax non-compliance by Richardson (2006), the study found the higher the level of general education, the lower would be the level of tax compliance. In addition, Richardson and Sawyer (2001) and Wallschutzky (1984) found remove a negative association between taxpayers' general education level and tax compliance. Similarly, well-educated taxpayers tended to have better reading comprehension and ability to understand tax compliance responsibilities, but also have more opportunities for tax non-compliance (Jackson and Milliron, 1986). These studies indicate that tax education has a negative influence on tax compliance because it gives taxpayers a sense of confidence and control over their behaviour, hence more likely to assist non-compliance.

The economic theory of compliance assumes that tax authorities view taxpayers as potential criminals, and emphasises administration of tax audits and penalties for uncompliant taxpayers (Alm *et al.*, 2010). Economic theory also strongly assume that

taxpayers are fully informed of all the aspects that cover the tax reporting processes, but this is not always the case (Andreoni, Erard and Feinstein, 1998). Prior research indicates that taxpayer information and services are important factors in enhancing tax compliance (for example, see Mwangi, 2014; Alm *et al.*, 2010).

Mwangi (2014) suggests that taxpayers who are less educated are less exposed to tax compliance information and relevant services and thus are more prone to non-compliance. Moreover, complexity of tax law was found to be the most important determinant of tax non-compliance (Richardson, 2006) as it may lead to unintentional non-compliance, for instance, if taxpayers have problems in filling tax returns (Mwangi, 2014). Furthermore, the experimental study by Alm *et al.*, (2010) indicates that taxpayers faced with tax liability uncertainty may choose to either file a tax return or not, and may also report less tax liabilities. But as reported by Alm *et al.*, 2010 (2010), tax information conveyed to taxpayers helped to offset the non-compliant behaviour of sampled taxpayers (i.e. non-filing of tax returns and reporting less tax liabilities).

Furthermore, in some OECD countries the development of large unregistered taxpayers operating outside the tax net is clear signal of weak tax administration (Bodin and Koukpaizan, 2008). For example the construction, transport, garment and services industries comprising underground activities, such as recruitment of informal labour force to reduce production cost, use false invoices to cover informal labour, purchases and sales without invoices and as a result, produce fraudulent VAT refund claims. Additionally, taxpayers operating outside the tax net result in an inequitable distribution of the tax burden, as the tax burden are shifted away from taxpayers who have the ability to choose not to comply towards taxpayers who have little choice but to comply (Schuetze, 2002).

Many tax authorities have recognised the new “service” paradigm. For example, Singapore has increased service-oriented approaches like the extensive use of electronic filing, providing a one-stop service, the ability for filers to see the entire tax form with any corrections before it is submitted. In addition , the country allows the use of interest-free instalment plans for paying taxes with direct deduction from bank accounts, separate functional areas within the tax administration with little opportunity for corruption, and a changed attitude of officials toward taxpayers (Alm

et al., 2010)¹⁰. The same type of strategies were also pursued by the Australian Tax Authority (Braithwaite, 2003). Literature indicates that the emphasis in multi-faceted approaches which included information provision and better services to taxpayers will significantly improve tax compliance (Alm *et al.*, 2010).

Past studies on tax compliance and the use of tax advisers (i.e. paid tax preparers) has produced mixed results. The idea that the use of tax advisers increases tax non-compliance is based on the belief that tax advisers and their clients are normally inclined to aggressive tax reporting (see Murphy and Sakurai, 2001; Attwell and Sawyer, 2001). This view advocates that taxpayers will normally pay for tax advisers to minimise their tax liabilities, and tax advisers will use their tax expertise in existing tax law to serve their clients' interests (Klepper and Nagin, 1989b; Klepper, Mazur and Nagin, 1991). However, the relatively one-sided idea that tax advisers will normally tend to help taxpayers to be more non-compliant has been challenged (Finn, Chonko and Hunt, 1988; Marshall, Smith and Armstrong, 1997; Murphy and Sakurai, 2001). For example, it has been found that taxpayers may seek professional assistance for genuinely positive reasons, for example, to reduce or deal with complexity in the tax system, deal with legal uncertainty, and save time or contrastingly to exploit 'grey areas' of the law to reduce their tax liability i.e. to avoid or evade tax. Thus, depending upon the motivations of taxpayers, the technical knowledge and professional experience of tax practitioners can be used to improve compliance, or undermine it (Murphy and Sakurai, 2001). Reliance on tax advisers has also been found to be an important factor in SMEs compliance behaviour (Ashby and Webley, 2008)

According to the literature, taxpayers have increased the use tax advisers in recent years significantly (for example, see Hasseldine *et al.*, 2007; Kirchler, Niemirowski and Wearing, 2006). For example in USA 60% of tax returns filed in year 2001 were signed by a tax preparer, and 75% in Australia (Braithwaite, 2005; Kirchler, Niemirowski and Wearing, 2006). Therefore, if taxpayers are unable to understand the complexity in tax law they normally seek help from tax adviser (Sakurai and Braithwaite, 2003; Kirchler, 2007). According to Kirchler (2007) taxpayers use tax

¹⁰ During the last decade, Singapore tax authority service has gone from being the lowest rated government agency in public satisfaction to one that 90% of the taxpayers found to provide courteous, competent, and convenient services

advisers with the goal of preparing correct tax returns rather than using aggressive strategies to reduce their tax liabilities. This then implies that the use of tax advisers would normally result into taxpayers becoming more tax compliant.

Generally, the literature suggests that, tax advisers play a key role in persuading taxpayers to comply (for example, see Kirchler, 2007; Sakurai and Braithwaite, 2003). However, how exactly tax advisers affect taxpayer compliance is inconclusive (Hasseldine *et al.*, 2007). For example Klepper (1989c) and Ayres, Jackson and Hite (1989), in behavioural experiments using hypothetical cases found that tax advisers may be promoting aggressive reporting behaviour, while others conclude that using a paid tax adviser results in more compliant reporting (Cuccia, 1994) cited from Hasseldine *et al.*, (2007). In a survey of Australia taxpayers, Sakurai and Braithwaite (2003) found most taxpayers were in favour of tax advisers who were honest and risk averse, and hence, less likely to advise their clients not to comply with tax law¹¹. Studies also show that there might be other motives moderate the influence of tax advisers on taxpayers' tax compliance behaviour. For example, the possibility of getting a tax refund may motivate tax advisers to exploit the tax refund system, hence making them more likely to advise or influence taxpayers to be less tax compliant (Jackson and Hatfield, 2005).

The reviewed studies in the preceding paragraphs indicate tax knowledge, access to taxpayers' information and services, and the use of tax advisers are the sources of taxpayers' perceived behavioural control. They provide taxpayers with opportunities or limitation in controlling their tax compliance behaviour. However, the literature has also shown that the association between these sources of perceived behavioural control and tax compliance is not a one-directional relationship. In some cases, the association was positive but in others, it was negative. Therefore, the current study aims to investigate the association between perceived behavioural control and VAT non-compliance by testing the following hypothesis:

¹¹ Sakurai and Braithwaite (2003, p. 375) survey identified three types of 'ideal' tax adviser. 'A minority ... indicated their ideal was a *creative, aggressive tax planning* type, a person who was well networked and familiar with tax office intelligence and enforcement priorities. A second type of idealised practitioner engaged in the *cautious minimisation of tax*. ...this type avoided conflict, while being sophisticated about identifying opportunities to minimise tax. The most popular idealised type was the *low risk, no fuss* practitioner who was honest and risk averse'.

H_{2c}: VAT compliance is associated with perceived behavioural control

3.3.4 Other factors in tax compliance literature

a) Gender

The review of prior literature has indicated mixed findings on the association between gender differences and tax compliance. For example, an experimental study by Baldry (1987) found females to be more compliant than males. Subsequently, Jackson and Jaouen (1989) compared the response of females and males to communicated sanction threats or appeals to conscience. They found males to be less responsive to conscience appeals than females, and the opposite was the case in responding to sanction threats. This finding suggests that gender differences might make a difference when responding to tax authorities' efforts to change taxpayers' compliance behaviour.

Furthermore, using university students studying taxation Fallan (1999) found that female and male were differently influenced by tax knowledge aimed at changing their tax behaviour. While males appeared to be more influenced to change their own ethical positions towards tax compliance than females, females appeared to be more influenced to reconsider other people's tax compliance behaviour. Moreover, Roberts and Hite's (1994) results reveal higher past tax non-compliance for males and for those with fewer years as taxpayers. This may imply, compared to females, males are more difficult to change from their historical pattern of non-compliant behaviour. Furthermore, compared to older taxpayers, newer taxpayers are likely to be less tax compliant. In addition, Kirchler and Maciejovsky (2001) found men to be more compliant than women, however, they noted that their actual sample was not representative and thus their conclusions about gender and tax compliance cannot be generalised.

In a more recent study Kastlunger et al. (2010) investigate taxpayers' compliance and strategic taxpaying behaviour as related to gender. They found that men were more compliant than women were, and women were found to be more likely to act strategically when paying taxes. This finding was different from previous studies such as Hasseldine and Hite (2003), where woman were found to be more compliant than men.

The reviewed studies in the preceding paragraphs indicate the extent and direction of influence of gender on tax compliance is still not clear. A range of factors like methodological differences contextual and cultural differences in which these studies were conducted may explain the lack of conclusive findings in these studies. Although these studies do not provide a conclusive finding on the extent and direction of influence of gender on tax compliance, they all appear to suggest that there is a possibility of an association between gender and tax compliance behaviour. Therefore, the current study aims to investigate the existence of this association in a VAT context by proposing and testing the following hypothesis:

H_{3a}: VAT compliance is associated with gender.

b) Age

Generally, the literature suggests that there is a positive association between age and tax compliance (Baldry, 1987). Jackson and Milliron (2002) concluded that taxpayers' age is one of the most influential factors in determining tax non-compliance. For example, Tittle (1980) and Clotfelter (1983) found that older taxpayers were generally more compliant than younger taxpayers. Roberts and Hite (1994) study also found that there was an increase of tax non-compliance behaviour among younger taxpayers.

Some of the reasons cited in the literature for younger taxpayers' uncompliant behaviour are younger taxpayers being more risk seeking than older taxpayers and being less sensitive to penalties (see Clotfelter, 1983; Tittle, 1980). Moreover, in Tittle (1980), found variations in lifecycle and differences between generations were important variables in explaining the relationship between age and tax compliance behaviour. This implies that it was not purely about age affecting tax compliance, but it was more about social, political and economic aspects influencing a particular generation, which linked age and tax compliance. These lifecycle aspects may have different levels of influence on specific age groups, which may in turn explain why they would behave differently on tax compliance issues.

The reviewed literature above shows a positive relationship between taxpayers' age and tax compliance. However, as Tittle (1980) found, this positive association between age and tax compliance was a lifecycle and generational aspect, and may

not have been purely about age. Therefore, this study aimed to test a non-directional hypothesis between age and VAT non-compliance as stated below:

H_{3b}: VAT compliance is associated with taxpayer's age.

c) Business size

According to Mwangi (2014), low levels of tax compliance in SMEs are caused by several factors. Adams and Webley (2001) found that some taxpayers had a feeling that small businesses were unfairly treated because they had to pay a relatively bigger share of VAT compared to larger businesses. However Adams and Webley (2001) suggested that such perceptions were more related to mental accounting errors because all business had to pay all the VAT collected from customers. The other aspect of equity in VAT system was the penalty structure. Some taxpayers indicated that penalties should be rigidly applied, while, other taxpayers' favoured flexibility in the penalty structure.

Other size related factors include poor management and internal control practices as owners try to "make ends meet". The way SMEs are formed, operated and dissolve is often informal, which makes them very mobile and very difficult for tax authorities to keep track of and enforce compliance measures. Moreover, SMEs operating in significantly cash-based economies tend to maintain inadequate accounting records and audit trails in practice.

Furthermore, compliance costs for SMEs are relatively high compared to large businesses, thus SMEs are disadvantaged in this respect. VAT compliance costs comprise core costs and total costs. Core costs are the mandatory costs incurred in order to comply with the VAT legislation and regulations and total costs include VAT planning and one-off costs (Hansford, Hasseldine and Howorth, 2003). Core compliance costs represent a larger proportion of total compliance costs for SMEs than is the case for larger businesses. Therefore, a reduction in core costs would have a significant impact on the total VAT-compliance costs for SMEs (Hansford et al., 2003). For instance, these relatively higher core compliance costs may cause SMEs taxpayers to resent collecting and paying VAT on behalf of the government as they may perceive this obligation as a costly but an 'unpaid work', hence unfair. However, in the study by Adams and Webley, (2001) the majority of SMEs taxpayers did not seem to be particularly concerned about the costs incurred in collecting VAT.

According to Adams and according to Webley (2001), SMEs taxpayers either accepted these costs as their normal business costs or they have never given a thought on these core costs of administering VAT.

Hansford, Hasseldine and Howorth (2003) found that higher VAT compliance costs were associated with newly VAT registered taxpayers and increased VAT complexity. Hansford, Hasseldine and Howorth (2003) indicated that VAT complexity exists in sectors which provide mixed products or services, for example, professional services, where some are categorised as standard-rated and some are exempted for VAT purposes. Logically, VAT complexity would be expected to increase VAT compliance costs, for example, by taxpayers incurring more costs to pay for qualified tax professionals and external tax advisors (Hansford and Hasseldine, 2012).

For effective and efficient VAT administration and practice, there must be a shared tax knowledge base and good communication between taxpayers (or/and their tax adviser) on one hand, and tax official on the other. For example, knowledge about tax policy, tax law and tax administration may help to minimise some of the misconception taxpayers may have over the role of tax officials. These three parties (taxpayers and their advisers and tax officials) play an important role, in their own their own sphere in securing overall VAT compliance. Lack of good communication between these parties, limited resources and lack of support available to SMEs (Mwangi, 2014), may lead to even higher compliance costs borne by VAT registered taxpayers (Hansford and Hasseldine, 2002). Another tax non-compliance contributor for SMEs is the limited resources and other support available to SMEs (Mwangi, 2014).

Furthermore, because of their relatively low potential for tax revenue relative to large businesses, tax authorities tend to devote less resources to tax enforcement for SMEs with the consequences that opportunities for further tax non-compliance become available to SMEs (Mwangi, 2014). Generally 70% of VAT revenue comes from only 1% of the enterprises, (mostly larger businesses) and only 5-10% of the VAT revenue comes from 80-90% of the firms (mainly SMEs ones) (Bodin and Koukpaizan, 2008). The other issue is the size of the businesses making it easier for such taxpayers to remain outside the tax net (Mwangi, 2014).

Slemrod (2004) concluded that the literature indicates that small taxpayers are the most non-compliant group of taxpayers, probably because they have borne the

heaviest burden of higher VAT compliance costs as compared to larger taxpayers (Hansford, Hasseldine and Howorth, 2003).

The reviewed literature above shows that the relationship between business size and tax compliance is more likely to be a negative one. Therefore, this study aimed to test the following hypothesis between business size and VAT non-compliance:

H_{3c}: VAT compliance is associated with business size.

3.4 Chapter Summary

As discussed in preceding paragraphs a considerable body of literature exists on tax compliance and factors influencing taxpayers' compliance decisions. Tax compliance behaviour has been investigated using a diverse range of theories, for example economic theory developed by Allingham and Sandmo (1972) and the theory of planned behaviour by Ajzen (1991). The current study uses both theories and factors from tax compliance literature to investigate VAT compliance in Tanzania.

Chapter Four

Research methodology and approaches

4.1 Introduction

This chapter discusses the research methodology employed in examining the factors that explain VAT compliance in Tanzania. Based on philosophical assumptions and the research problem for this study, the chapter discusses the adopted research paradigm and research approach. In addition, the chapter presents the adopted mixed research methods, which includes methods of data collection.

4.2 Philosophical assumptions and research paradigms

A researcher can decide how to conduct a research in light of different philosophical assumptions and related paradigms. A research paradigm is a general framework that guides how research should be conducted, based on philosophical assumptions about how people view the world and the nature of knowledge (Collis and Hussey, 2009, p. 55).

4.2.1 Philosophical assumptions in social science

Philosophical assumptions relate to three main questions in the design of research approaches. Firstly, it is the question of what reality is, and whether objects really exist (i.e. ontology). Ontology is the question of whether reality is objective and independent of the researcher or subjective and internal to the researcher (Ryan, Scapens and Theobald, 2002; Creswell, 2009). Secondly, an ontological position leads to the question of how researchers can relate to the object of research and gain knowledge (i.e. epistemology). Finally, is the question of which general research approach is appropriate, given a particular ontological and epistemological assumptions held by the researcher (Creswell, 2009; Burrell and Morgan, 1979; Tomkins and Groves, 1983). The researcher's positions on these philosophical assumptions will indicate their adopted research paradigms. Furthermore, based on these philosophical assumptions, social science methodological literature is very extensive, and categorises research paradigms in several ways (for example, see Tomkins and Groves, 1983; Burrell and Morgan, 1979; Ryan, Scapens and Theobald,

2002). Categorisations of research paradigms include positivism and interpretivism (Saunders, Lewis and Thornhill, 2009).

4.2.2 Research paradigms in social science

The ontological assumption in a positivist paradigm is that social reality is singular, objective and the researcher or the act of researching cannot affect it. Whereas, in an interpretivist paradigm the ontological assumption is that social reality is in the researcher's mind, subjective and multiple, and is affected by the act of investigating it (Collis and Hussey, 2009). In a positivist approach the research involves deductive process with a view to providing explanatory theories to understand social phenomena while in interpretivist approach the research involves an inductive process with a view to providing interpretive understanding of social phenomena within a particular context (Collis and Hussey, 2009).

The knowledge that develops through a positivist lens is based on careful observation and measurement of the objective reality that exists "out there" in the world (Creswell, 2009). Meaning, there is real world out there, that one can know more or less and where one could explain relationships among phenomena and attempt to generalize from the situation to another (Slemrod, 2007). Positivism approach is heavily quantitative and researchers adopting this approach believe in treating social observations such as entities and people they represent (for example, managers, employees and taxpayers) in much the same way as physical scientists would treat physical phenomena (Ivankova, Creswell and Stick, 2006). Positivist researchers regard both the social world and the natural world as being bound by certain fixed laws in a sequence of cause and effect (Hussey and Hussey, 1997). This approach claims that science involves confirmation and falsification, and employing research methods and procedures objectively is the aim (Onwuegbuzie and Collins, 2007).

Contrary to positivism, interpretivism researchers argue that it is meaningless to consider that there is a "real world out there", rather the researcher should concentrate on reporting and clarifying people's interpretations of reality of what is happening in their specific settings (Slemrod, 2007). The belief is that reality is socially constructed, mutually and simultaneously shaped as the researcher and the researched interact and interpret the study's phenomena in an actual situation (Collis and Hussey, 2009). Research methods used in interpretivism paradigm are an array

of interpretative techniques, which seek to describe, translate and come to terms with the meaning attached to the phenomena (Forest and Kirchler, 2010, p. 9).

Comparing positivist and interpretivist paradigms, positivists tend to take realist position and assume that a single, objective reality exists independently, which is a limitation in researching social actors. An interpretivist paradigm, however, considers the presence of human beings and their effects on the business setting rather than generalization of the business environment.

Conclusively, given the typical distinctions between these two paradigms, the choice of the methodological approach to adopt depends on the nature and purpose of research. Therefore, if the researcher's ideas are testable and the interest is to generalize the findings, then, the positivist's paradigm should be useful. But, if the researcher is focusing in understanding a particular phenomenon and whatever meaning studied participants construct about some events, then an interpretivist paradigm is the appropriate choice (Newman and Hitchcock, 2011).

4.2.3 The paradigm adopted in this study

The choice of an appropriate research paradigm, which is based on the researcher's philosophical assumptions, will provide the researcher with a clear research design for data collection and analysis (Creswell, 2009). Furthermore, the choice of a particular research paradigm is not normally based on the superiority of that paradigm but on its appropriateness to the research questions and hypothesis to be tested (Saunders, Lewis and Thornhill, 2009). Therefore, based on the preceding arguments, the current study adopts a positivistic paradigm. This is because the current study uses existing economic and behavioural theories to develop testable hypotheses of the relationship between factors identified in the literature, which may affect VAT compliance in Tanzania. As pointed out by Creswell (2009) this world is governed by theories and laws which need to be tested or verified and refined for better understanding of the world.

4.3 Research approaches

Research approaches adopted in studies should be consistent with the chosen paradigm. A research approach allows the researcher to plan the whole process of

data collection and further influences the nature of data analysis (Creswell, 2009; Hussey and Hussey, 1997). In order to appreciate the nature of research approach adopted in a study, it is important to understand how research is classified. According to Collis and Hussey (2009) research can be classified based on the research purposes, logic, process and output. Based on research purpose, a research can be exploratory, descriptive, analytical or predictive. In terms of the research process, research can be quantitative or qualitative, and based on the research outcome; there is applied or basic research. Finally, the deductive or inductive research classification is when a research is classified based on logic. Although Collis and Hussey (2009) recognises the difficulty of classifying research, the current study uses the classification based on the research purpose to argue for the type of research approach adopted in this study.

Exploratory studies seek to investigate new phenomena, whereas descriptive research aims to give a clear picture of data, and simply describe the phenomenon under investigation. Furthermore, in an explanatory research the purpose is to provide the causal relationships between variables of interest, which are examined statistically (Hussey and Hussey, 1997). This research aims to investigate the association between factors hypothesised to influence tax compliance. This purpose calls for an explanatory research approach. Consistent with an explanatory research approach, the current study uses a deductive logic, which starts from theory, development of hypotheses, data collection and testing of the hypotheses (Robson, 2002). A deductive approach allows a logical representation of the hypotheses on the subjects of interest, and is used to evaluate the hypotheses for their falsifiability, logical consistency, relative explanatory power and survival (Ryan, Scapens and Theobald, 2002). The deductive approach adds or extends knowledge by testing the significance of the hypothesised relationships, and either rejects or fails to reject the hypotheses (Hussey and Hussey, 1997). This research statistically tests the hypotheses presented in Chapter 3.

Primarily this study takes a positivist stand and uses deductive approaches to investigate the explanatory factors for VAT compliance in Tanzania. This research aims at explaining the relationships between tax compliance factors and VAT compliance. Therefore, it is an explanatory study seeking to test the association between tax compliance factors and VAT compliance of SME taxpayers.

4.4 Mixed research methods

Mixed research methods are defined as ‘the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study’ (Johnson and Onwuegbuzie, 2004, p. 17). The method can be designed to incorporate various quantitative or qualitative data collection and analysis methods within a single study (Morse, 2003). The literature indicates that the method can mitigate the biases of stand-alone quantitative or qualitative methods, as it allows the researcher to base their knowledge claims on pragmatic grounds (Creswell, 2009).

4.4.1 The rationale for adopting mixed research methods

According to Greene, Caracelli and Graham (1989, p. 259), there are five major purposes and related rationales for employing mixed research methods. The following five brief paragraphs (a) to (e) adopt (Greene, Caracelli and Graham, (1989, p. 259, Table 1)) and present these purposes and rationales, and highlight those relevant for the current study:

- (a) Triangulation: The purpose is to seek convergence, corroboration, and correspondence of results from different methods and designs studying the same phenomenon. The rationale for triangulation is to increase the validity of constructs, and minimise biases, for example of a single method or substantive theory.
- For the current study, triangulation was the primary purpose of adopting mixed research methods. The corroboration of quantitative and qualitative data collection and analysis was important because of the novelty of this study in Tanzanian context. Moreover, the adopted theories in this study were developed within developed countries contexts, and their appropriateness in developing countries contexts has not well been established. Therefore, relying entirely on either qualitative or quantitative method would have greatly threatened the validity of the constructs. Furthermore, reliable third party information about VAT compliance in Tanzania is not publicly available (this point is further elaborated in subsequent paragraphs).

- (b) Complementarity: The purpose is to seek elaboration, enhancement, illustration and clarification of the results from one method with results from the other method. The rationale is to increase the interpretability, meaningfulness, and validity of constructs and inquiry results by both capitalizing on inherent method strengths and counteracting inherent biases in methods and other sources.
- For the current study, the intention of using mixed research methods was to capture/measure ‘overlapping but also different facets of SMEs’ tax compliance behaviour, which helped to improve (e.g. broaden) understanding of VAT compliance in Tanzania. For example, on one hand, the study used of qualitative interview questions to collect tax officials’ perceptions on the nature and level of VAT compliance in Tanzania. Complementarily, on the other hand, the study used quantitative questionnaire to measure the nature and perceived VAT compliance levels of SMEs VAT taxpayers.
- (c) Development: The purpose is to use the results from one method to help develop or inform the other method, where development is broadly construed to include sampling and implementation, as well as measurement decisions. The rationale is to increase the validity of constructs and inquiry results by capitalizing on inherent method strengths.
- For the current study, this purpose and rationale was not relevant. This is because the study implemented both the qualitative and quantitative methods simultaneously (i.e. concurrently on a single phase). In other words, the current study did not employ ‘sequential use of qualitative and quantitative methods, where the first method is used to help inform the development of the second’ (Greene, Caracelli and Graham, 1989, p. 260)
- (d) Initiation: The purpose is to seek the discovery of paradoxes and contradictions that lead to a re-framing of the research questions. The rationale is to increase the breadth and depth of inquiry results and interpretations by analysing them from the different perspectives of different methods and paradigms.
- For the current study, the implementation of this purpose and rationale was partial. This is because the study implemented both the qualitative

and quantitative methods simultaneously, and employed semi-structured interview questions. However, for example, because of the open-ended questions in the interview guide, some ‘paradoxes and contradictions’ between qualitative and quantitative data emerged from participants’ responses. The consistencies and discrepancies in qualitative and quantitative results formed part of breadth and depth of knowledge generated in the current study.

(e) Expansion: The purpose is to expand the breadth and range of research by using different methods for different inquiry components. The rationale is to increase the scope of inquiry by selecting the methods most appropriate for multiple inquiry components.

- For the current study, this purpose and rationale was not relevant.

Tax researchers have raised methodological issues about the suitability and limitations of different research methods in VAT compliance research. For example, Adams and Webley (2001), in their UK SME VAT compliance study, acknowledge the relevance of using of qualitative research methods for tax studies. Other researchers in VAT compliance also acknowledge the use of quantitative research methods (for example, see Hansford, Hasseldine and Howorth, 2003; Keen and Smith, 2006). Furthermore, the current study acknowledges the use of both qualitative and quantitative research methods in studying VAT compliance. For example, the study by Yesegat (2008) used both quantitative and qualitative research methods for data collection and analysis to study VAT compliance costs in Ethiopia. Creswell (2009) pointed out that using both qualitative and quantitative research methods for data collection provides better insights and understanding of the researched subject.

Therefore, this study adopted mixed research methods, in which the researcher used both quantitative and qualitative data collection and analysis methods. The main reason for adopting mixed research methods is that reliable third party information about VAT compliance in Tanzania is not publicly available. Information access and reliability is a common challenge in investigating sensitive phenomena such as taxation. Furthermore, using mixed research methods enabled the researcher to gather data not easily obtainable using a single method, in particular, data based on first-hand experience of taxpayers, explaining why they choose either to be VAT

compliant or non-compliant. Data collection involved both face-to-face interviews of semi-structured nature with tax officials and survey of taxpayers.

4.4.2 Designs and choice of mixed research methods

The literature identifies three different designs of mixed research methods, concurrent or simultaneous, sequential and transformative. In a concurrent design, qualitative and quantitative phases occur simultaneously. In a sequential design, the researcher starts with gathering qualitative data and then gathers quantitative data or vice versa in two different phases. Lastly, in a transformative design, the researcher uses a particular theoretical perspective and employs a data collection method concurrently or sequentially (Creswell, 2003).

Generally, the choice between these three mixed research designs depends on the research problems and the underlying philosophical assumptions of the adopted research approach. This implies that either the research problem is based on a framework developed deductively through a review of the literature or the research problem is allowed to emerge from participants in the projects, or it can be from both (Creswell, 2009). Furthermore, sequential mixed research design can be in the form of exploratory, explanatory, or transformative strategy. Whereas, simultaneous or concurrent mixed research design can take the form of triangulation, embedded, and transformative (Creswell, 2009). Therefore, in order to choose an appropriate mixed research design, the researcher must make two primary decisions: (a) whether the researcher wants to approach data collection and analysis deductively, and operate largely within one dominant paradigm or not, and (b) whether the researcher wants to conduct the phases concurrently or sequentially (Johnson and Onwuegbuzie, 2004). The current study adopts (a) a deductive approach, largely within one dominant paradigm, which is positivist, and (b) the collection of qualitative and quantitative data, which took place concurrently on a single phase.

The literature shows some strengths and weaknesses of adopting mixed research methods. There are several strengths identified in the literature. For example, on the one hand the use of different forms of data like words and narratives is beneficial in adding meaning to numbers. On the other hand, numbers can add precision to words and narratives. The other strength is the method allows researchers to answer a broad range of questions because they are not limited to a single method. Furthermore, the

strengths of a quantitative method, for example, can compensate for the limitations of a qualitative method when a researcher uses both methods. In addition, the methods give a room for convergence and corroboration at a level of data collection and analysis strength. Mixed research method also increases generalisability as it is claimed to produce a more complete knowledge in informing theory and practice (Johnson and Onwuegbuzie, 2004).

The challenges in using mixed research methods include the difficulties in implementation if a single researcher, particularly in implementing a concurrent design, undertakes the research. The method requires the learning of multiple methods and approaches and the skill in mixing them. As result it is relatively more time consuming and expensive (Johnson and Onwuegbuzie, 2004).

While acknowledging the strengths and challenges of this method, the researcher adopted the concurrent embedded design. With this approach there is use of both qualitative and quantitative methods in which there is limited interaction between the two sources of data during the data collection stage, but the findings complement one another at the data interpretation stage (Creswell, 2009; Morse, 2003). It was necessary to use this design because both qualitative and quantitative data were collected in one phase. In addition, it was important to gain the perspective of both tax officials and taxpayers in order to be able to explain VAT compliance in Tanzania. Furthermore, at the analysis stage, qualitative data plays an important role by interpreting, clarifying, describing and validating the quantitative results as well as generalizing the findings.

4.5 Data collection instruments

The quantitative data collection instrument was a survey using questionnaires, while for the qualitative part the researcher conducted semi-structured interviews. This section presents these data collection instruments, which include the discussion of sampling, instrument design and how the researcher administered the instruments in the research field.

4.5.1 Interviews

Interview strategies are associated with both positivist and interpretivist methodologies (Saunders, Lewis and Thornhill, 2009). The researcher conducted semi-structured interviews because of the explanatory nature of this study. The researcher obtained consent of thirty-two respondents for the interview. The respondents were TRA officials in the Domestic Revenue Department (DRD) at the TRA headquarters (1 respondent) and the seven tax regions (31 respondents). In total, from all seven tax-regions, six respondents were regional managers, six compliance managers, seven heads of tax audit and investigation, seven heads of VAT refunds and five principal tax officers. The respondent from headquarters was a DRD manager. These departments were compliance and debts management, audit, refund and taxpayer's education. The interviews intended to elicit information about VAT administration practices and identify issues related to VAT compliance in Tanzania.

Relevant compliance theories guided the formulation of questions included in the interview guide. The deductive logic approach in formulating interview question was consistent with the overall approach of this study, which was explanatory. For example, as mentioned earlier, the administered semi-structured interviews questions aimed at reducing bias in respondents' responses. The interview guide contained the following seven main sections with their respective questions:

Section 1: TRA's VAT compliance strategies: This section-contained question on how TRA's officials assessed compliance effectiveness, their impressions of how taxpayers complied in terms of: registration, filing of VAT returns the accuracy of filed VAT returns and payment of VAT money. In addition, this section asked respondents to indicate if there were any patterns in the way small, medium and large taxpayers complied with VAT law. Finally, this section asked respondents to indicate the factors that they perceived to influence VAT compliance levels.

Section 2: Fairness: This section asked questions on fairness of VAT system in Tanzania. The questions included were on the overall taxpayers' perceptions about the VAT system, and if TRA officials viewed taxpayers' perception of fairness as important to TRA. The section also asked the views of respondents on taxpayers' VAT payment behaviour such as paying the correct amount of VAT. Finally, the section included questions on the extent to which perceived fairness would enhance

voluntary compliance of VAT law and whether taxpayers' related fairness with the provision of public goods and services.

Section 3: VAT audit in relation to compliance: This section included two sets of questions. Firstly, the section included questions on TRA conducting VAT audit. The questions asked about the criteria for selecting taxpayers to be audited whether TRA conducted repeated and/or random VAT audits. Secondly, two questions asked about the extent to which respondents perceived that VAT audit would improve both VAT revenue collection and individual taxpayers' compliance.

Section 4: Sanctions and VAT compliance: This section contained questions on the number of sanctions and their influence on VAT compliance as perceived by the respondents. The section examines respondents' perception of the most influential sanctions and the overall influence of VAT sanctions on VAT compliance. Finally, the section included questions on the extent to which penalties play a role of enhancing or reducing VAT compliance.

Section 5: Taxpayers' attitudes and norms: This section contained questions that asked respondents to explain their perception of taxpayers' attitudes and norms. The questions were about whether taxpayers' were registering voluntarily, submitting their VAT returns on time, or making intentional/deliberate mistakes or errors in preparing their VAT returns. VAT compliance theories indicate these issues are part of attitudes and personal and individual norms that influence taxpayers' behaviour.

Section 6: Tax knowledge: This section included questions on general and VAT related tax knowledge and education. Questions asked respondents the extent to which TRA provided tax/VAT knowledge and education, and whether respondents perceived taxpayers as having the basic VAT knowledge to help them to be compliant. One question also asked how TRA was providing tax knowledge to taxpayers. Another question asked respondents to describe the response/reaction of taxpayers when TRA communicated to taxpayers about changes in VAT legislation.

Section 7: TRA activities: This section contained questions on the specific TRA activities related to VAT: VAT refund procedures, how long it took TRA to pay VAT refund claimants, and the way TRA officials were able to distinguish between legitimate and illegitimate VAT refund claims. Another question was on the extent to which taxpayers were involved in cash transactions and measures TRA was taking to

ensure taxpayers involved in cash transactions were paying their fair share VAT liabilities.

Prior to data collection, the researcher conducted a pre-survey evaluation of the semi-structured interview guide. In addition, before starting the interviews, the researcher had the opportunity to explain to the respondents the objective of the research. In addition, the researcher informed the respondents that the interviews would be confidential. The researcher also sought for consent to record the interviews, but all respondents were unhappy about recording the interviews and all refused. Therefore, hand-written notes were taken in an attempt to reduce anxiety in respondents. Additionally, obeying ethical issues like accepting interview conditions put-forward by interviewees was observed. The interviews were mainly in the Swahili language.

The researcher used semi-structured interview questions with probing techniques to gain qualitative data. Semi-structure interviews allowed the researcher to probe answers for explanation, or to encourage interviewees to build on their responses (Saunders, Lewis and Thornhill, 2009). The researcher was not strict following questions in the interview guide, sometimes temporarily diverting from the interview guide whenever respondents raised interesting topics worth noting because of their rich and detailed nature. As a result the interviews became very much like a form of communicative interaction, rather than a strictly adherence to researcher-researched based interaction. Furthermore, the researcher sought to benefit from further description and clarification of how TRA officials explained tax compliance. These face-to-face interviews lasted on average 40 minutes to 1 hour; the longest was one and half hours and the shortest were forty minutes.

4.5.2 Survey

Surveys are one way of collecting quantitative or numeric description of trends, attitudes or opinions of a population from a sample of interest in a population (Creswell, 2009). The success and efficiency of a survey depends on the quality of the sample selected, and whether the sample is large enough to represent the population researched (Saunders, Lewis and Thornhill, 2009). The main purpose of surveys is to collect data from a sample of research subjects, which can statistically be analysed and the results generalised to the population (Saunders, Lewis and Thornhill, 2009;

Creswell, 2009). The implementation of the survey was through a semi-structured survey, administered to SMEs taxpayers in Tanzania.

One commonly used survey is mail survey, which has the advantage of reaching a larger geographical population at a low cost. However, low response is a likely outcome of a mail survey (Sekaran, 1992). The literature indicates other limitations of mail survey as difficulties in obtaining reliable responses from survey respondents with low level of education (Sekaran, 1992) and respondents' lack of the required level of reading and writing skills (Fowler Jr, 1984). One way of overcoming these limitations of mail surveys is to use face-to-face surveys and interviews, which may appear easier to respondents rather than completing mail surveys. However, as indicated by (Sandford, Godwin and Hardwick (1989) and Yesegat (2008), although face-to-face surveys were the best method of obtaining accurate and meaningful response they were expensive.

In light of the above, this study benefited mainly from a face-to-face survey designed a semi-structured survey, administered to SME taxpayers. The face-to-face survey was, arguably, the most ideal in studying SMEs in the Tanzanian context. This is because of poor communication system, widespread illiteracy among SME taxpayers, and the general lack of the culture of being transparent. Therefore, reliance on mail survey for this study would not have helped to gather the desired quality and amount of information.

There were, however, some drawbacks in administering the semi-structured survey. One of the drawbacks was respondents' feeling and fear of disclosure of their responses, which they preferred to remain private. The researcher undertook some steps to minimise the effect of this drawback of the worries about their responses. This was achieved formally, through an official letter from the Institute of Finance Management (IFM) informing the respondents that their responses would be confidential and be only used for the purpose of this research.

a) Sampling design

The current study adopted a stratified sampling design. The sampling design aimed at achieving a representative sample. The population of interest was SME taxpayers and the sampling frame comprised all VAT registered SME taxpayers in seven tax-regions in Tanzania. The total potential taxpayers in the sampling frame was 15,273

VAT registered SME taxpayers, representing about 78% of the total population of VAT registered SME taxpayers in Tanzania. The researcher randomly selected 7 out of 23 tax-regions in Tanzania.

The selected tax-regions represented three main levels (strata) of VAT collection performance. Based on a 5-years average¹² of VAT collections, the tax regions were stratified into low, medium and high VAT collection performance.¹³ The sample included two high performance regions (Ilala and Kinondoni) three medium performance regions (Arusha, Temeke and Mwanza) and two low performance regions (Dodoma and Singida). The inclusion in the sample of all the three levels of regional VAT collection performance aimed to achieve a good representation of taxpayers' and tax officials' responses or perceptions on VAT compliance issues affecting these regions. This sampling design was important in generalising the findings.

In addition, due to the geographical distribution of SME in Tanzania, most of the VAT registered SME taxpayers are situated in urban areas where there is high degree of economic activity. The revenue collected in urban areas contributes more than 95% of the total VAT revenue in Tanzania (TRA 2010). Therefore, the sampling design took into account these SMEs' geographical and VAT revenue characteristics. As indicated in the stratified sample, the high and medium VAT collection performing regions were over-represented (100%) relative to low collection performing regions (11%). This was because of two main reasons. First, the importance of the high and medium performing regions in terms of the level of respondents' education and tax knowledge (relatively higher than respondents in low performing regions). Second, the geographical proximity of the sampled regions was another factor. This was

¹² The 5 years are the financial years 2005/06 to 2009/10. The starting financial year 2005/06 was selected because it is the year in which the main VAT revenue-generating region (i.e. Dar es Salaam) was divided into 3 tax regions (Ilala, Kinondoni and Temeke). In order to compare the average of these three regions and other regions, the year 2005/06 was appropriate. The financial year 2009/10 was the year the researcher sampled the regions before going for data collection in April 2011.

¹³ The researcher based the stratification of tax regions into low, medium and high initially on TRA VAT collection statistics and later confirmation by TRA officials during fieldwork. On average, VAT collection performance were – low: Tshs. 0 – 3,000 million (18 tax regions), medium: Tshs. 3,001 – 9,000 million (3 tax regions) and high: Tshs. 9,001 and – 25,000 million (2 tax regions).

because extending the sample to other tax-regions, for example, tax-regions that were far apart, would not have been practical because of time and resource limitations.

In order to achieve equal representation in each sample tax-region, and given the time and resource constraints, the researcher distributed 50 surveys in each of the seven tax regions. Initially, the aim was to use systematic random sampling in distributing the questionnaires. However, the limitation in using a systematic random was that the TRA refused to provide a list (i.e. a sampling frame) of VAT registered taxpayers. The TRA refused to provide the list on confidentiality grounds¹⁴. As a result, the researcher had to rely on regional tax officials' knowledge of their taxpayers' (respondents) physical addresses. Based on regional tax officials' advice on where to find the target respondents, the researcher was able to locate and visit the respondents at their physical addresses. In the end, the researcher managed to distribute 350 surveys. In light of the challenges faced by the researcher as explained above, the researcher was able to achieve the stratification of the sample tax-region, but the intended probability sampling within each stratum was limited because of the TRA's decision. However, it is the researcher's belief that the study was able to achieve the best sample given the circumstances.

The respondents were owners or representatives of VAT registered taxpayers in SMEs. The main trading activities of the respondents were in the following sectors: agriculture, education, livestock and forestry, manufacturing, construction, wholesale and retail trade, hotel and restaurants, storage and transportation, and real estate and renting.

b) The survey instrument

The design of the survey required a careful consideration of wording in formulating questions and instructions for completing the survey. Appropriate instructions and relevant questions helped to avoid ambiguities and enabled the collection of relevant data for the research. The survey consisted of both closed and open-ended questions. Survey questions aimed to collect taxpayers' scaled perceptions on certain VAT

¹⁴ Initially and before travelling to Tanzania for data collection TRA agreed to provide this list.

compliance issues; these were tax audit probability, VAT sanctions, fairness, attitudes, norms, VAT refund and VAT knowledge. The survey was prepared in both the English language and Swahili language, which is the national language in Tanzania. The survey comprised three sections as explained below.

Section 1: Biographical details: This section intended to gather general information about the respondents such as respondents' personal and business related information. In particular, this part elicited information on respondents' gender, age, nature of the business, length of time in the business and number of employees.

Section 2: VAT status: This section consisted of questions on general VAT compliance issues such as taxpayers' time of VAT registration, type of VAT registration, if a taxpayer submits VAT returns on time, and how often the taxpayer submitted VAT returns on time. In addition, some questions sought to gather information on whether or not taxpayers used tax advisers, and the source of any advice and information sought for VAT purposes. Furthermore, some questions focused on collecting data concerning the reasons for taxpayers' mistakes in completing VAT returns. There were also questions on under or over payment of VAT-money and issues of VAT return procedures, VAT refunds and challenges.

Section 3: Attitude to VAT: This section included questions on taxpayers' general attitudes towards VAT. The questions presented in this section assessed VAT attitudes by addressing the following: taxpayers' involvement in cash transactions, audit trend and how audit probability could change taxpayers' tax paying behaviour. Other questions were on respondents' attitudes, norms towards VAT compliance, and perceived fairness of the tax system. Additionally, this section also sought to elicit information about the relationship between tax officials and taxpayers, the extent taxpayers had knowledge of sanctions, the effect of sanctions and the extent to which sanctions would change taxpayers' future compliance behaviour. Further, this part provided the respondents with the opportunity to provide their advice on possible solutions to improve VAT compliance in Tanzania.

c) Pre-survey evaluation

Pre-survey evaluation involved 17 people at the Institute of Finance Management (IFM): twelve academic members of staff from the Accounting and Finance Department and five masters' students studying accounting and finance. The pre-

survey evaluation took place from 18th March to 4th April 2011. The purpose of this pre-survey was to assess the comprehensibility of the survey and the wording of questions to enhance its reliability. The literature suggests that an effective pre-survey evaluation improves the wording of the survey, increases understanding of the meaning of the questions for both researcher and respondents, and hence helps to increase response reliability (Robson, 2002). However, following the pre-survey evaluation no comments were received which required major changes of the original survey.

d) Conducting the survey

Data collection (survey and interviews) took 7 months from 18th April to 4th November 2011. The general approach in administering the survey was to locate potential respondents, explain the purpose of the study and response confidentiality, and obtain their consent to participate in the survey. The researcher succeeded in locating potential respondents who were willing to participate by completing the survey. However, not all the visited respondents agreed to complete the survey. Some respondents repeatedly changed their appointment dates or changed their mind and refused to participate in the study. Some respondents initially agreed to participate, but subsequently changed their mind and used some tactics to avoid participation such as excusing themselves by advising the researcher to call later. Generally, for those who finally participated, the researcher had to visit them repeatedly because of their postponing the appointments for face-to-face survey completion. However, other respondents were able to keep their original appointments, and they were supportive.

A number of challenges emerged during the exercise. The main challenges were; taxpayers' unwillingness to complete some of the questions in the survey and many respondents were sceptical about the motive and objective of the research. The other issue noted was the animosity in the relationship between taxpayers and tax officials. Some of the visited respondents could not believe that the researcher was not a tax officer or a government agent. As a result, taxpayers became reluctant or uncooperative to participate in the study.

Furthermore, geographically Tanzania's size is about four times the size of the UK. Combined with poor infrastructure, it was a challenge for the researcher to move from one tax-region to another even moving within one tax-region to locate

respondents. Low VAT registered taxpayers' education was another challenge faced by the researcher. Most have only basic education equivalent to year 7 in the United Kingdom education system.

In light of the above challenges, the researcher managed to contact 350 VAT registered taxpayers. The researcher managed to collect 205 completed surveys. The total response rate for this survey was 59%, which is a good rate and allows for generalisation of the sample findings to the population of VAT registered taxpayers in Tanzania (Saunders, Lewis and Thornhill, 2009). Administering survey face-to-face has its difficulties because it involves asking respondents to talk about some sensitive issues with regard to their VAT matters. However, it appeared that there was no other possible method of studying SME VAT compliance in Tanzania other than using a face-to-face method, particularly, in attempting to increase the response rate from sampled taxpayers.

4.6 Chapter Summary

The underlying philosophical assumptions and paradigms, which guided the adoption of the research methodology and approaches for this study, were as follows. This study adopted a positivist paradigm that assumes that the reality is external to the researcher and knowledge generation is through a deductive logic. The study employed a deductive logic with the objective of explaining the relationship between theoretical tax compliance factors and VAT compliance. Relying on existing tax compliance theories, the researcher formulated testable hypotheses to assess the relationships between variables. For data collection and analysis, the study adopted mixed research method using a concurrent embedded strategy.

The study covered seven tax regions in Tanzania in collecting qualitative data from semi-structured interview and quantitative data from using a survey (i.e. questionnaire). The research sample comprised 32 tax officials for the semi-structured interviews and 205 taxpayers for the survey. The researcher simultaneously collected the qualitative and quantitative data in a single data collection phase. Prior to data collection, the researcher conducted a pre-survey evaluation of the data collection instruments. The pre-survey evaluation aimed to test the effectiveness of the tools in gathering required and suitable data.

Finally, the collected data were analysed as follows: qualitative data was analysed using NVivo10 while quantitative data analysis was processed using SPSS20 and STATA12. The next chapter discusses the analytical techniques and data analysis.

Chapter Five

Analytical techniques and data analysis

5.1 Introduction

This chapter discusses the analytical techniques adopted in this study. In analysing qualitative data, the research adopted content analysis. In addition, tax compliance is a complex phenomenon and therefore cannot be measured directly, for example by asking taxpayers a direct question like ‘do you comply or not?’ Therefore, this study uses hypothetical statements to measure different variables in the survey for data collection. Furthermore, it is important for a researcher to be scientifically confident that the several observed variables reproduce one single factor or latent variable. Therefore, factor analysis is one of the techniques used to solve this problem. In order to test the variables and their respective relationships as stated in the research hypotheses, the research adopted appropriate logistic and multiple ordinary regression models.

5.2 Content analysis

Content analysis can be defined as a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding (Krippendorff, 1980; Weber, 1990). In analysing the qualitative data collected through interviews (see section 5.4.2) this research used content analysis. This section discusses the adopted content analysis approach. It aims to highlight the existing content analysis approaches, the suitability of the adopted approach and how the approach was implemented.

5.2.1 Existing approaches to content analysis

Overall, content analysis can be implemented deductively or inductively, depending on the overall research design and the philosophical underpinnings of a study (Krippendorff, 1980). According to Hsieh and Shannon (2005), there are three approaches in applying content analysis. These are conventional content analysis, summative content analysis and directed content analysis.

The conventional approach in content analysis is normally applied in a study that aims to gain an understanding of a phenomenon. The phenomenon under investigation is normally new, with limited theory or research literature to explain its emergence or existence (Hsieh and Shannon, 2005). Summative content analysis involves the identification and quantification of certain words in the text content. The emphasis under the summative content analysis approach is to find the extent and the contextual use of the identified and quantified words (Hsieh and Shannon, 2005). The two content analysis approaches, the conventional and the summative, are significantly inductive in their design. Given the significantly deductive research design of this study, these two approaches were not appropriate for this study. Therefore, the directed content analysis approach in Hsieh and Shannon (2005) was adopted in this study, and it is the subject of discussion in the following sub-section.

5.2.2 The suitability of the directed content analysis

According to Hsieh and Shannon (2005) the directed content analysis approach is designed to help the researcher use the collected data to conceptually validate or extend existing theories. In using this approach, existing theories or relevant research findings help in focusing the research questions and the coding of themes. The researcher uses existing theories to predict and categorise emerging concepts from, for example, interview responses, into themes and sub-themes. In addition, the existing theories were used to explain the relationship among themes and sub-themes (Hsieh and Shannon, 2005; Mayring, 2004).

This research uses the directed content analysis approach because the researcher is studying a phenomenon of which there are theories that can be used to explain or predict the emergence or existence of the phenomenon (Milne and Adler, 1999; Hsieh and Shannon, 2005). One of the benefits of this approach is that the researcher does not assume 'naivety' in his/her empirically based knowledge search as is the case in naturalistic research approaches (Hsieh and Shannon, 2005). Furthermore, the use of this approach helped the researcher in two important ways in addressing the three key research questions. First, in addressing research questions one and two, the approach helped the researcher to extend the interpretation, clarification and description of adopted theories and the factors that explain VAT compliance in Tanzania. Second, in addressing research question three, the approach helped to

identify the strategies employed to encourage VAT compliance in Tanzania. The research hypotheses presented in Chapter 2 formed the bases i.e. the pre-determined coding rules for categorising the qualitative data into themes and sub-themes.

Notwithstanding the suitability of this approach for this study, the approach has some limitations. The literature identifies some of these limitations as researcher-bias and blindness to contextual factors of the phenomenon under investigation due to over reliance on existing theories and respondents' bias due to the possibility of getting cues to answer in a particular way (Hsieh and Shannon, 2005). The coding subjectivity and over emphasis of quantification and less focus on qualitative elements of the data are other problems encountered in content analysis (for example, see Milne and Adler, 1999; Gray, Kouhy and Lavers, 1995; Guthrie *et al.*, 2004). The researcher appreciated the existence of these limitations and attempted to implement certain measures to minimise their effect on this study. The following sub-section, which discusses the implementation of the directed content analysis approach, will further discuss these limitations and the measures employed to enhance the reliability of the collected qualitative data and its analysis.

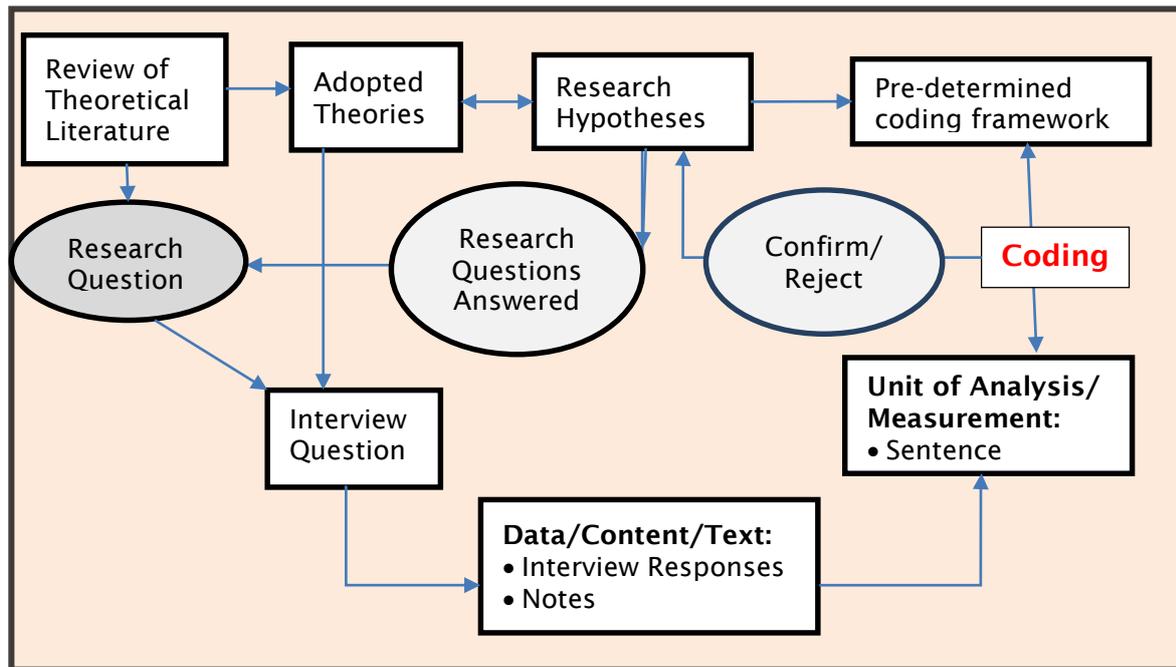
5.2.3 Implementation of the directed content analysis

The implementation of directed content analysis requires the use of a theory or theories from which a coding framework is adopted and the selection of an appropriate unit of analysis, i.e. basis of coding and the unit of measurement (Krippendorff, 1980; Neuendorf, 2002; Beattie and Thomson, 2007). Therefore, interview questions were mainly based on theories adopted in this study, see chapter 3). In addition, semi-structured interview questions were conducted to respondents during fieldwork, see section 4.5.2. As a quantitative analysis, this approach aims to 'produce counts of key categories and measurement of the amount of other variables' (Neuendorf, 2002, p. 14). Consistent with how the interview questions were formulated, the coding themes were also deduced from the research hypotheses.

Figure 3 summarises the process of implementing the adopted directed content analysis approach. The figure shows that the review of theoretical literature helped to identify the theories, which informed this study. Both the research questions and research hypotheses were formulated from the adopted theories. Furthermore, the

predetermined coding rules were deduced from the research hypotheses. In identifying which was the appropriate unit of analysis and measurement, the research was influenced by the methodological discussion of content analysis as found in Guthrie *et al.* (2004), Gray, Kouhy and Lavers (1995) and Farrar, Donnelly and Dhaliwal (2013). The discussion of interviews is covered in section 5.4.2.

Figure 3: Directed Content Analysis



Source: Developed by author and inspired by (Farrar, Donnelly and Dhaliwal, 2013; Hsieh and Shannon, 2005; Guthrie *et al.*, 2004; Gray, Kouhy and Lavers, 1995).

As already indicated above, the use of directed content analysis aimed at quantifying the extent, i.e. the frequency to which interviewees' responses indicated VAT compliance issues related to the pre-determined coding themes. This frequency of occurrence indicated the importance of the respective themes in confirming or rejecting the proposed theories (Neuendorf, 2002; Krippendorff, 1980).

The frequency is determined based on what the researcher has selected as his/her unit of analysis and unit of measurement (Guthrie *et al.*, 2004). The unit of analysis can be described as a specific part of content such as text, picture, audio, video, and figures that can be classified into a given theoretical theme (Guthrie *et al.*, 2004). According to Guthrie *et al.*, (2004) and Gray, Kouhy and Lavers, (1995), the unit of analysis can be a word, a sentence, and portion of pages or a paragraph. The unit of analysis for this study was a sentence and the unit of measurement was a sentence

containing a tax compliance issue, which were deemed consistent with the pre-determined coding themes.

The use of a whole sentence as a unit of analysis and a base for quantification will normally provide more complete, reliable and meaningful results than other units of analysis like a word or a paragraph (Hackston and Milne, 1996; Tsang, 1998; Unerman, 2000; Milne and Adler, 1999). One argument for using a sentence as a unit of analysis is that a sentence is significantly more likely to convey meaning than individual words in isolation (Unerman, 2000). Furthermore, the literature suggests that the use of sentences is less likely to result into counting errors than using words as units of analysis. In order to identify tax compliance issues, discerning the meaning carried in respondents' responses was important. This meant that the use of a sentence as a unit of analysis was appropriate for this study. On this basis, each sentence from interviewee responses was analysed to determine if it provided meaningful evidence or indicator to either support or reject the pre-determined themes.

As already highlighted in section 5.4.2, content analysis has some limitations. The limitations identified in the literature are at the philosophical, methodological and specific analytical methods levels (Hsieh and Shannon, 2005). The following paragraphs will therefore provide a general discussion of these limitations, the suggested strategies in minimising their effect on reliability of data collection and content analysis, and highlight the actual strategies that this study employed during data collection and content analysis.

Firstly, reliance on existing theories means that the researcher can be exposed to the risk of bias and a higher level of likelihood that the evidence collected will support the adopted theories (Hsieh and Shannon, 2005). This is because the researcher will normally approach the data with a certain level of knowledge and prior experience about the phenomenon. Secondly, it is also possible that the researcher's probing interview questions will trigger certain respondents' answers, for example, in line with what the respondents perceive to be the researcher's desired answer. Thirdly, in emphasising theories, very important contextual issues related to the phenomenon under investigation may either be ignored or overlooked.

The literature on content analysis suggests some strategies that can be employed to minimise the limitations as a result of subjectivity and bias (for example, see Hsieh and Shannon, 2005). Hsieh and Shannon (2005) argue for the use of audit trail and process where another person reviews and examines the pre-determined coding rules before the actual coding starts could minimise bias. While not formally employed in this study, the researcher and her supervisor were able to discuss with some of her PhD colleagues the pre-determined coding rule at an early stage of the coding process. This provided the researcher an opportunity to check the reliability of the categorisation of themes identified in respondents' sentences¹⁵ in relation to the pre-determined themes.

Milne and Adler (1999) indicate that the coding reliability can be achieved by the use of multiple coders. They argue that few discrepancies between coders or resolved discrepancies will indicate improved coding reliability. They also argue that a sufficient training period for the content analyst and piloting the coding rules for a data sample before the actual coding can enhance reliability. As this was a PhD study, the use of multiple coders was not appropriate. However, the researcher used an arguably sufficient time in conducting a literature review on content analysis before starting the coding process. Furthermore, the piloting of the coding rules was informally conducted when the researcher was able to discuss with her PhD colleagues the early coding of the respondents' sentences. The coding scheme and coding were discussed and reviewed by the researcher's supervisor.

5.2.4 Summary and conclusion

In concluding, this sub-section has discussed the implementation of a directed content analysis approach. It has highlighted the justification for its use and limitations; how these limitations were dealt with in enhancing the reliability of data, i.e. content and the content analysis process. Chapter 6 presents the results of this content analysis.

¹⁵ A sentence was the unit of content analysis in this study.

5.3 Factor analysis

Factor analysis is defined as a statistical approach that can be used to analyse interrelationships among a large number of variables and to explain these variables in terms of their common underlying dimensions or factors (Hair *et al.*, 2010, p. 16). Factor analysis (FA) and principal component analysis (PCA) are techniques used in locating underlying dimensions of data set (Hair *et al.*, 2010; Field, 2009). Furthermore, there are two types of factor analysis, these are: explanatory (EFA) and confirmatory (CFA) (Tabachnick and Fidell, 2007).

EFA and PCA techniques differ in the communality estimates used (Field, 2009), EFA derives a mathematical model from which factors are estimated, whereas, PCA merely decomposes the original data into a set of linear varieties (Dunteman, 1989). PCA is the method of transforming a given set of observed variables into another set of variables (Kim and Mueller, 1978). It should be noted, PCA can only be used if the primary concern is to reduce a large number of variables down into a small number of components (Tabachnick and Fidell, 2007). The main goal of PCA is to extract maximum orthogonal variance from the data set with each succeeding factor (Tabachnick and Fidell, 2007).

Statistical theorists disagree on whether PCA is the “true” factor analysis approach, and when it if at all should be used,(for example, see Costello and Osborne, 2005). Some argue for a harshly restricted use of PCA in favour of EFA (Gorsuch, 1990; Bentler and Kano, 1990; Maccallum *et al.*, 2001; Widaman, 1993). Others disagree, and put forward that, either there is almost no difference between PCA and EFA, or that PCA is preferable (Guadagnoli and Velicer, 1988; Velicer and Jackson, 1990). Matsunaga (2010) concluded that, PCA does not provide a substitute of EFA in either theoretical or statistical sense. Furthermore, in PCA the observed items are assumed to have been assessed without measurement error, whereas, both techniques are computed based on correlation matrices, PCA assumes the value of 1.00 i.e., perfect reliability in the diagonal elements while EFA utilizes reliability estimates (Matsunaga, 2010).

5.3.1 Explanatory factor analysis (EFA)

Factor analysis is considered as a tool in analysing the structure of interrelationships or correlations among a larger number of variables by defining sets of variables that are highly interrelated, known as factors (Hair *et al.*, 2010). Factor analysis is one of the statistical techniques used by researchers to help in three situations: designing a survey for measuring latent variables; discovering the construction of a set of variables and decreasing the number of variables to make them more manageable without losing the relevant and distinct information (Field, 2009). The main objective of factor analytic techniques is to find a way to condense or summarise the information contained in original variables into the smallest set of varieties or factors within a minimum loss of information (Hair *et al.*, 2010). In addition to that, factor analysis is used at this stage so as to avoid the use of only a single variable to represent a concept; instead it uses several variables as indicators, all representing different facets of the concept to obtain a more well-rounded perspective (Hair *et al.*, 2010). As Hair *et al.* (2010) suggested, the multiple responses reflect the 'true' response more accurately than does a single response. Field (2009) also suggested that by reducing a data set from a group of interrelated variables to a smallest set of factors, factor analysis achieve parsimony by explaining the maximum amount of common variance in a smallest number of explanatory constraints.

The main logic of factor analysis is the high correlation between each group of observed variables, which are the questions or items of the survey, and low or zero correlation with the variable outside of that group, so each group would be regarded as common factor or latent variable (Hair *et al.*, 2010; Field, 2009). Therefore, each factor or latent variable could be used as a dependent or independent variable in regression modelling.

Tabachnick and Fidell (2007) point out that EFA seeks to describe and summarize data by grouping together variables that correlate with each other, whereas, CFA variables are carefully and specifically chosen to reveal underlying processes. In addition to that, EFA technique is always performed in early stage of analysis as it provides tools for consolidating variables and for generating hypotheses about underlying process whereas CFA used in advanced stage of the research to test theory about latent process, often performed through structural equation modelling. For the purpose of this study EFA is used, because, this study aims at testing theories in a

new setting i.e. a developing economy by exploring the latent factors that best accounts for the variations and interrelationships of the manifest variable (Henson and Roberts, 2006).

Another reasons is that EFA produces factors while PCA produces components Tabachnick and Fidell (2007). As such, EFA estimates the underlying factors and it relies on various assumptions for these estimates to be accurate, whereas, PCA is concerned only with establishing which linear components exist within the data and how a particular variable might contribute to that component (Dunteman, 1989; Field, 2009). However, Guadagnoli and Velicer (1988) concluded that the solution generated from PCA differ very little from those derived from EFA techniques. In contrary to that, Stevens (2002) summarises the evidence and concludes that, with 30 or more variables and communalities greater than 0.7 for all variables, different solutions are unlikely; however, with fewer than 20 variables and low communalities < 0.4 difference can occur.

5.3.2 Data summarisation and reduction

Factor analysis relies on four principles in meeting its objectives; specifying unit of analysis, achieving data summarisation and or data reduction, variable selection and using factor analysis results for further analysis (Hair *et al.*, 2010). Data summarisation and data reduction are two distinct but interrelated outcomes of factor analysis. In summarising data, factor analysis derives underlying dimensions that, when interpreted and understood, describe the data in a much smaller number of concepts than the original individual variables, whereas, data reduction extends this process by deriving an empirical value or factor score for each dimension or factor and then substituting this value for the original values (Hair *et al.*, 2010). The main goal is achieved when a small number of factors are defined, and adequately represents the original set of variables, which range from the most detailed level (individual variable). In order to have a more generalisable result, individual variables are grouped and then viewed not for what they represent individually, but for what they represent collectively in expressing a concept (Hair *et al.*, 2010).

Factor analysis can also be used to achieved data reduction, first by identifying the representative variables from a much larger set of variables for use in subsequent analysis, or second, creating an entirely new set of variables much smaller in number

to completely replace the original variables, but reduced in number to simplify the subsequent multivariate techniques (Hair *et al.*, 2010). Both techniques uses factor loadings data summarization to estimates the factors and identify contributions of each variable to the factor, whereas, data reduction uses identifying variables for subsequent analysis with other techniques such as factor score or summated scales (Hair *et al.*, 2010).

5.3.3 Variable selection

The main point to consider is the type of variable used and how many variables should be used in factor analysis and in terms of type of variables included. The primary requirement is that a correlation value can be calculated among all variables (Hair *et al.*, 2010). For example, metric variables are easily measured but this is not the case for non-metric variables. This is because different types of correlation can be used to measurer metric variable but not the same types of correlation can be used in non-metric variables (Hair *et al.*, 2010). Therefore, if non-metric variables have to be used, then dummy variables (coded 0-1) should be used to represent these categories.

Reviewed literature on factor analysis suggested a range of recommendations regarding the minimum sample size necessary to obtain factor solutions that are adequately stable and that correspond closely to population factors (Preacher and Maccallum, 2002; Maccallum *et al.*, 1999; Maccallum *et al.*, 2001). Reliability depends on the sample size, however, the necessary sample size for factor analysis is debateable (Field, 2009). Several rules of thumb have been developed for minimum sample, for instance, (Gorsuch, 1997) suggested no fewer than 100, whereas Goldberg and Digman (1994) suggested between 500 and 1000 respondents are required. The common rule is the researcher should have at least 10-15 observations per variable (Field, 2009) However, a minimum absolute sample size should not be less than 50 observations; preferably, the sample should be greater than 100 for factor analysis (Hair *et al.*, 2010). Indeed, Tabachnick and Fidell (2007) agree that, it is preferable to have at least 300 cases for factor analysis, Comrey and Lee (1992) offered a rough rating scale by classify sample size as follows: 100 is poor, 200 is fair, 300 is good, 500 is very good and 1000 or more is excellent. In case of ratio of variables to be analysed, Gorsuch (1997) argue for a minimum ratio of 5, whereas Everitt (1975) recommended being at least 10.

Before conducting factor analysis, either EFA or PCA, the researcher checked the inter-correlation between variables and therefore Bartlett's tests of Sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy tests of whether the correlations between questions are sufficiently large for factor analyses to be appropriate and the test of whether the correlation matrix is sufficiently different from the identity matrix (Field, 2009; Kaiser, 1970). KMO statistics vary between 0 and 1: a value of 0, indicates that the sum of partial correlations is large relative to the sum of correlations, indicating diffusion in the pattern of correlations; hence, factor analysis is likely to be inappropriate (Kaiser, 1970). Whereas, a value close to 1, indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. Kaiser (1974) recommends accepting measure of sampling adequacy (MSA) value greater than 0.5 as barely acceptable. Furthermore, MSA values between 0.5 and 0.7 are "mediocre", values between 0.7 and 0.8 are "good", values between 0.8 and 0.9 are "great" and values above 0.9 are "superb" (Hutchinson and Sofroniou, 1999).

In deciding how many factors are statistically important, the criterion of eigenvalue is used. Eigenvalue indicates how much each factor contributes to explaining a variance; therefore only the factors with large eigenvalues, of at least one or greater, are considered meaningful. However, it is argued that a scree plot of eigenvalues and factors is a better way of determining the number of factors by looking at the inflexion of the plot and selecting the factors before the scree plot becomes flat, provided the sample size is larger than 200 (Stevens, 2002). Another criterion for selecting the number of factors is communality.¹⁶ When fewer factors are chosen, the communalities are lower; thus, to avoid having very small communality, sufficient factors should be selected. Moreover, communalities which are more than 0.5 for a sample size larger than 100 are considered sufficient (Field, 2009).

Factor rotation was used to specify the related observed variables for each factor. There are two main types of factor rotation, namely orthogonal, i.e., for uncorrelated factor rotation and oblique rotation, i.e., for correlated factor rotation. Thus, if it is

¹⁶ Communality is in fact the ratio of common variance to total variance of a variable. The variance of each variable consists of two parts: common variance and unique variance; the common variance is that part of the variable's variance that is shared with the other variables and the remainder is unique variance (Field, 2009).

theoretically supposed and expected that factors are related, oblique rotation should be chosen otherwise orthogonal rotation may be a better solution (Field, 2009).

According to Guadagnoli and Velicer (1988) another criterion to accept any observed variables as an underlying measure for common factor or latent variable in determine reliable factor solutions, is absolute sample size and significance of factor loading.¹⁷ This implies that if a factor has four or more loadings greater than 0.6 then it is reliable regardless of the sample size. Furthermore, a factor loading greater than 0.4 could be considered significant; but, Stevens (2002) suggested that the sample size should be considered important in the significance of factor loading. Stevens (2002) pointed out that for small sample sizes such as 50 and 100, factor loadings of 0.72 and 0.51 respectively could be assumed significant whereas, for larger sample sizes, for example 600 and 1000, the loadings could be more than 0.21 and 0.16 respectively.

5.3.4 Summary and conclusion

In light of reviewed studies in the preceding paragraphs, this research uses EFA because of limited existing knowledge about the underlying mechanisms of the target phenomena, and therefore uncertainty of how variables would operate vis-à-vis one another. The EFA will be a useful technique to analyse interrelationships among a number of variables and explain these variables in terms of their common underlying factors. The current study uses a cut-off point of greater than 0.5 for MSA value to identify whether the correlations between variables are sufficiently larger for factor analyses to be appropriate. Further, this study uses principal factor methods and extraction method, and a number of factors were extracted using Kaiser's criteria of retaining factor with eigenvalues greater than 1. The sample size for this study is 205 which is categorised as 'fair' by (Comrey and Lee, 1992). A communalities cut-off of more than 0.5 was used in this study as the sample size is larger than 100 (Field, 2009) Additionally, oblique rotation was used because tax compliance factors are theoretically expected to be correlated. Furthermore, a factor loading greater than

¹⁷ Factor loading refers to regression coefficient in factor analysis model (Kaiser, 1974)

0.4 was used to significantly determine factor loading as suggested by Stevens (2002).

The surveyed data obtained from taxpayers contains several variables. Therefore, exploratory factor analysis (EFA) was used to identify significant variables explaining VAT compliance, while removing those variables, which have lesser impact. These factors were then used in regression models of tax compliance behaviour to test the hypotheses.

5.4 Regression analysis

5.4.1 Logistic Regression

A logistic model was considered as an appropriate analytical technique to analyse the relationship between several explanatory variables and VAT non-compliance measures. This method facilitates the determination of variables associated with VAT compliance and estimates the extent of the overall effect of the explanatory variables on the outcome of this study.

Logistic regression predicts the logit of an event outcome from a set of predictors (Hosmer, Lemeshow and Sturdivant, 2013). The logit is the natural logarithm (ln) of an odds ratio of Y, and odds are ratios of probabilities (π) of Y happening to the probabilities, $(1 - \pi)$ of Y not happening. Logistic regression estimates the relationship between an outcome that is a categorical variable and predictor variables that are continuous or categorical (Bergman, 2002; Hosmer, Lemeshow and Sturdivant, 2013). The technique is well suited for describing and testing hypothesis about relationships between a categorical outcome variable and one or more categorical or continuous predictor variables (Peng, Lee and Ingersoll, 2002b). In the simplest case of one predictor X and one dichotomous outcome variable Y, the logistic regression model predicts the logit of Y from X. The logit of an odds ratio: probabilities of Y happening (π) (compliance), to the probabilities of Y not happening (i.e. non-compliance) $(1 - \pi)$, the simple logistic regression model has the form:

$$\text{logit}[\pi(x)] = \left(\frac{\pi(x)}{1 - \pi(x)} \right) = \alpha + \beta x \quad (3.1)$$

where α and β are the regression parameters estimated by the maximum likelihood method (Agresti and Finlay, 1997).

According to Hair *et al.*, (2010), there are two main objectives of using logistic regression: first, is to identify the independent variables that impact group membership in the dependent variables; second is establishing a classification system based on the logistic model for determining group membership. Hence, the purpose is to use logistic regression model to determine the relationship between dependent and independent variables that significantly explain VAT non-compliance for SME's taxpayers in Tanzania.

To measure VAT compliance, respondents were asked seven questions. The first question aimed to understand taxpayers' VAT registration decision. The question asked, "How did you register for VAT purpose?" ('voluntarily registration =0, enforced registration=1'), (subsequently abbreviated to T_VAT_REG) [7]. To measure timely submission of VAT returns, the question asked, "Do you submit your VAT returns on time?" ('Yes = 0', 'No = 1'), (VAT_RTN_ON_TM) [8]. The third question intends to understand if taxpayers' notification errors on their VAT return to TRA. The question asked, "If it comes to your attention that there is an over/under payment in the VAT return submitted, would you notify the TRA?" ('Yes = 0', 'No = 1'), (ERR_VAT_RTN) [14].

The fourth question intends to understand the frequency of taxpayers submitting their VAT returns on time. The question asked, "How often are your VAT returns made on time?" ('Very Often = 1', 'Often = 2', 'Sometimes = 3', 'Rarely = 4', 'Never = 5'), (N_TM_SUB) [9]. To measure if respondents were involved in cash transaction the question asked, "How often have you been involved in cash transactions so as to reduce VAT payments?" ('Very Often = 1', 'Often = 2', 'Sometimes = 3', 'Rarely = 4', 'Never = 5'), (INV_CASH_TRS) [19]. The questions also consisted of hypothetical statements about attitudinal behaviour: "If there was absolutely no chance of being caught I would have paid less VAT than I should" [LES_VAT_PAID [22(c)], and "I sometimes make an intentional mistake to reduce my VAT liabilities" [INTMSK_REDC_VAT) [22(e)]. For both questions respondents were asked to indicate the extent to which they agree or disagree with the statements ('Strong disagree = 1', 'Disagree = 2', 'Neutral = 3', 'Agree = 4', 'Strong agree = 5').

Therefore, the factors obtained from EFA of the response to the above questions (see section 6.3.1) were used in a logistic regression model. This research used binary logistic regression (see section 6.5.1) and ordinal logistic regression (see section 6.5.2). Binary dependent variables has only the value of 0 and 1; this implies that a value close to 0 means that the probability of Y is very unlikely to have occurred, and the value close to 1 means that Y is very likely to have occurred (Field, 2009; Hair *et al.*, 2010). However, ordinal dependent variables use ordinal scale, e.g., from low to high, or more or less of something. Ordinal regression is based on the proportional odds model (McCullagh, 1980), and this model turns the ordinal scale into a number of binary cut-off points, the number of cut-off points always being one less than the number of categories.

Evaluation of logistic regression models

As a starting point, the inclusion of predictors in a logistic regression model, i.e. full model¹⁸ should make a difference by improving the null model, i.e. with an intercept only (Demaris, 1995; Peng, Lee and Ingersoll, 2002a; Agresti, 2007). An improvement to the null model means the logistic regression model provides a better fit of the data (Agresti, 2007). The null model contains no predictors, hence it provides a good baseline and its improvement can be examined by inferential statistics tests, namely likelihood ratio test or Wald statistic test (Hosmer, Lemeshow and Sturdivant, 2013). In addition, the same inferential statistics tests are used to evaluate individual predictors.

Assessing the goodness-of-fit of the estimated model

According to Hair *et al.*, (2010), in assessing goodness-of-fit for logistic regression models three approaches can be used, and these are: statistical measure of the overall model fit, pseudo R^2 measures and classification accuracy. The first statistical measure, the likelihood ratio test compares the fit of the two models, i.e. the full model and the null model by using log-likelihood (Hosmer, Lemeshow and Sturdivant, 2013). The log-likelihood is based on summing the probabilities associated with predicted and actual outcomes; it is an indicator of how much explained information

¹⁸ Some authors use the term saturated models to refer to full models (Hosmer, D., W, Lemeshow, S. and Sturdivant, R., X (2013). In this study, the use of full models is preferred because most the reviewed literature use this term.

there is after the model has been fitted (Tabachnick and Fidell, 2007; Bergman, 2002). The measure is important in order to get a quantity with a known distribution for purposes of hypotheses testing (Hosmer, Lemeshow and Sturdivant, 2013). The model improvement can be calculated as follows:

$$x^2 = [(-2LL (null model)) - (-2LL(full model))] \quad (3.2)$$

It is distributed chi-square in the test for the change in $-2LL$ value from the null model, the minimum value for $-2LL$ is 0, which corresponds to a perfect fit, i.e. likelihood =1 and $-2LL$ is then 0. Thus the lower the $-2LL$ values, the better the fit of the model (Hair *et al.*, 2010). In contrast, the larger the value of $-2LL$ value indicates a poorly fitted the model, because the larger the value of $2LL$ indicates that there are more unexplained observations (Bergman, 2002; Field, 2009).

The second statistical measure of the overall model fit is Wald chi-square statistic test. This tests whether the individual predictors in the logistic regression model are significantly different from zero (Field, 2009). If the coefficient is significantly different from zero then it is assumed that the predictor is making a significant contribution to the prediction of the outcome (Field, 2009). However, the reviewed literature suggests that the likelihood-ratio test is more powerful than the Wald statistic (Agresti, 2007). The disadvantage of using Wald statistic is that for a large β , the estimated standard error is inflated, resulting in failure to reject the null hypothesis when the null hypothesis is false (Menard, 2001). The inflation of the standard error increases the probability of rejecting predictors as being significant when in reality it is making a significant contribution to the model i.e. making Type II error (Field, 2009).

Furthermore, the Hosmer Lemeshow (H_L) test is another statistical measure for overall model fit (Hair *et al.*, 2010). This test measures the correspondence of the actual and predicted values of the dependent variable, and a better model fit is indicated by a smaller difference in the observed and predicted classification (Hair *et al.*, 2010). Therefore, if the H-L goodness-of-fit test statistic is greater than 0.05 we fail to reject the null hypothesis (Hosmer, Lemeshow and Sturdivant, 2013). This means that there is no difference between observed and model-predicted values, implying that the model's estimates fit the data at an acceptable level. Therefore,

well-fitting models show non-significance on the goodness-of-fit test, indicating model prediction that is not significantly different from observed values.

Pseudo R^2 measures show how well the model fits the data. The different pseudo R^2 have been proposed and all these measures are based on the reduction of the -2LL value (Hair *et al.*, 2010). First, there is Hosmer Lemeshow measure R^2 (1989) which varies between 0 (indicating that the predictors have no value at predicting the outcome variable) and 1 (indicating that the model predicts the outcome variable perfectly). Cox and Snell's R^2 (1989) is another pseudo R^2 , but this measure is limited in that it cannot reach the maximum value of 1, therefore, Nagelkerke (1991) proposed a modification that range from 0 to 1. Generally, both of these additional measures are interpreted as reflecting the amount of variation accounted for by the logistic model, with higher value (i.e. 1.0) indicating a perfect model fit (Hair *et al.*, 2010).

The overall model fit is based on the classification of accuracy of the model in the final measure of practical significance. The classification of accuracy, i.e. the 'hit ratio' that the percentage of cases correctly classified represents the levels of predictive accuracy achieved by the logistic model (Hair *et al.*, 2010). Therefore, the values were calculated in null and full model; hence, the comparison can be made representing the classification levels of predictive accuracy achieved.

5.4.2 Multiple ordinary least squares (OLS) regression

Multiple ordinary least squares (OLS) regression models the relationship between a dependent variable and a collection of independent variables. The estimated value of a dependent variable in a multiple OLS regression model is defined as a liner combination of the independent variables plus an error term. A multiple OLS regression model has the following general form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon \quad (3.3)$$

Where the β s are the regression coefficients, X s are column vectors for the independent variables and ε is a vector of errors of prediction. The β s are linear estimates but may be fitted in a non-liner regression model between the X s and Y . The regression coefficients are interpreted as the change in the expected value of Y

associated with a one-unit increase in independent variables, with the other independent variables held constant (Pohlman and Leitner, 2003).

There are three main underlying assumptions of multiple OLS regression, which have to be tested before regression analysis results can reliably be reported. These assumptions are normality of variable distributions, linearity of the relationship between the independent and dependent variables, and homoscedasticity, which means that the variance of errors is the same across all levels of independent variables.

Normality of variables distribution:

Multiple OLS regression assumes the variables are normally distributed. Non-normally distributed variables are highly skewed, kurtotic or have substantial outliers. Non-normally distributed variables can distort relationships between variables and affects significance tests. The two complementary approaches in assessing normality of variables distributions are visual inspection and statistical tests. Normality can be assessed by visual inspection of data plots, histograms and frequency distribution, or tested by Kolmogorov-Smirnov or Shapiro-Wilk tests, which provide inferential statistics on normality (Field, 2009). The aim of testing for normality is not to determine whether the data is perfectly normal but that the variables are approximately normally distributed. The current research tested the normality of its variables distribution using the Shapiro-Wilk test. This is because literature suggests the test has more power to detect deviation from normality than the Kolmogorov-Smirnov test (Field, 2009). Shapiro-Wilk test was performed and the outcome is reported in Chapter 7.

Linearity assumption:

As the name of the regression method suggests, multiple OLS regression assumes a linear relationship between the estimated dependent variable and independent variables. Therefore, it is essential to determine the extent to which the relationship between a dependent variable and independent variables in a research are linear. Two commonly used approaches in assessing linearity are the use of existing theoretical and empirical literature to support the choice of a regression method and the examination of residual plots (Field, 2009). In the current research, the adoption of multiple OLS regression was based on both existing literature and the examination

of residual plots. For example, theoretical and empirical papers use MOLR to estimate the relationship between tax compliance and compliance factors as measured in this research. In addition, the scatter plots of standardised residuals against predicted values using SPSS indicated a systematic relationship, which can significantly approximate a linear relationship between the VAT compliance measures and independent variables included in the regression models (see Chapter 7)

Homoscedasticity assumption:

According to Field (2009, p. 876) homoscedasticity is '*an assumption in regression analysis that the residuals at each level of the predictor variable(s) have similar variances ... or ... at each point along any predictor variable, the spread of residuals should be fairly constant*'. When the variance of residuals differs at different values of the predictor variable(s), heteroscedasticity is indicated. Although slight heteroscedasticity has little effect on significance tests, serious heteroscedasticity can seriously weaken the analysis and lead to serious distortion of findings (Tabachnick and Fidell, 2007). This is because heteroscedasticity creates bias and inconsistency in estimating standard errors associated with predictor variables estimates in a regression model (Field, 2009).

As in the linearity assumption, the two main approaches in assessing/testing heteroscedasticity are visualisation and statistical tests. The current research employed the Breusch-Pagan test to assess the seriousness of heteroscedasticity. The results of the test for the relevant models are presented in Chapter 7, sections 7.4.3. In the event of significant heteroscedasticity the literature suggests the use of White's adjusted standard error estimates to interpret the results (White, 1980).

5.4.3 Summary and conclusion

In light of the above discussion, binary and ordinal logistic regression models were used to analyse the relationship between several independent variables and binary and ordinal dependent variables, respectively, in explaining VAT compliance behaviour. As discussed subsequently, factor analysis identified two dependent variables (see section 6.3.2). Multiple OLS regression models were fitted to analyse the relationship between the dependent and independent variables extracted from factor analysis. Chapter 7 discusses the regression results.

Chapter Six

Results and findings-qualitative

6.1 Content analysis results – introduction

This section presents the results of the directed content analysis of qualitative data collected using semi-structured interviews. The semi-structured interviews covered seven-tax region with 32 tax officials. The collection and analysis of qualitative data aimed at identifying the strategies employed to encourage VAT compliance in Tanzania (sub-section 6.1.1), and extend the interpretation, clarification and description of adopted theories and factors that explain VAT compliance in Tanzania (sub-section 6.1.2 to 6.1.4).

The discussion, all quote extracts and frequency summary tables under this section are extracted from Tables 2A.1 to 2A.8 in appendix 2A. For purpose of clarity, for each theme's frequency table in the following sub-sections, there is a link to the relevant table in appendix 2A.

6.2 Enhancing VAT compliance – Strategies and challenges

The openness in the interview approach and questioning attracted a broad range of quality responses from interviewees as they tried to explain the issues they encountered in administering taxes in Tanzania. This sub-section presents the findings, which indicates four main strategies and issues that TRA dealt with in attempting to encourage VAT compliance in Tanzania. Table 6.1 is a summary of Table 2A.8 in appendix 2A. The table presents a summary of the four main strategies and issues, and the frequency that the interviewees discussed them during interviews. Overall, interviewees indicated the introduction of new technology, general shortage of staff, costs of administration to TRA, and the use of Block Management System (BMS) were a concern for TRA in its effort to encourage VAT compliance in Tanzania.

Table 6.1: VAT compliance – strategies and challenges

General Issue	*F	Indicators	*F			No. of Interviewees
			Benefits	Challenges		
Introduction of new technology	49					
		E-filing	3	4	7	7
		Electronic Fiscal Device (EFD)	16	23	39	29
		Tanzania Interbank Settlement System (TISS)	3	-	3	3
		22	27	49		
General shortage of staff	15		15			11
Costly tax administration to TRA	13	Effect of registration threshold	7			6
		Investigating correct financial records	4			2
		Tracking dormant taxpayers	2			1
			13			
The use of block management system	11		11			11
Total	110					

*F stands for frequency

6.2.1 The Introduction of new technology

The introduction of new technology as a main strategy for improving VAT compliance was the most frequently mentioned or discussed by respondents. Table 6.1 shows introduction of new technology had a frequency of 49 specific issues out of 110 incidences of all issues, i.e. frequency of 49/110. This included electronic fiscal devices (EFD) (39/110), e-filing (7/110) and Tanzania Interbank Settlement System (TISS) (3/110). This relatively high frequency in discussing the introduction of new technology is not surprising. This is because the introduction of E-filing, EFD and TISS is a recent and new development in the Tanzanian government's efforts to increase VAT compliance and hence VAT revenues. Interviewees indicated that the introduction of new technology had both benefits (22/49) and challenges/limitations (27/49) as specifically discussed in the following paragraphs.

The introduction of EFD replaced the use of Electronic Cash Registers (ECR). An EFD is a machine used in business to issue tax invoices/receipts. The purpose of introducing EFDs was to improve efficiency in VAT administration, and to improve

VAT compliance. Interviewees cited some of the positive aspects of EFD as being the increased ability of TRA to closely monitor taxpayers' business activities and control their cash transactions [interviewee: Regional manager 4]. EFD also helped in assessing VAT returns [interviewee: Manager compliance 5]. However, as indicated in Table 6.1 (challenges indicators – frequency 23/39), the introduction of EFDs brought more controversies in the tax paying community and became more challenging for TRA to administer than the other electronic technologies. The following quote indicates the nature of some of the controversies.

'...The introduction of EFD has been negatively perceived by taxpayers ... taxpayers suggest that TRA should buy the EFD machines and distribute to taxpayers and not force taxpayers to buy the machines using their money... they don't want to buy the machine because they are very expensive ... if they don't acquire the machine we punish them... this is unfair to them ... even if TRA offsets the payments from VAT returns submissions...' [Interviewee: Manager Compliance 5]

Other issue that TRA encountered because of introducing EFD included the increase in VAT deregistration [Interviewee: Principal tax officer 4] and sheer resistance to changes or resistance because of the difficulties experienced in effectively operating the machines, for example, because of unreliable electricity supply [Interviewee: Principal tax officer 7]. The other difficulty cited by the interviewees was that most taxpayers struggled in using these machines, as they did not have the required usage skills or because of general lack of education. This resulted into added compliance costs to taxpayers, as they had to hire people with the skill to use the EFDs [Interviewee: Principal tax officer 4]

Interviewees indicated various ways in which taxpayers resisted the use of EFD. For example, one respondent commented.

'...taxpayers will give you an EFD generated tax invoice/receipt if only you wear a tie (for men) because they presume that you are likely to be a TRA employee, but for others, they just issue the old-manually written tax invoices if the consumer/buyer requests a receipt...' [Interviewee: Manager Compliance 4]

The other resistance mechanisms cited by the interviewees included keying-in incorrect sales amount in the EFDs. This means that TRA was able to verify the issuance of tax invoices but the sales amount indicated were incorrect.

E filing is a modernised requirement for the filing of VAT returns electronically. The initial introduction was in 2011 where taxpayers were required to use their own emails to submit electronically completed VAT. One problem of email-based submissions was that some of the VAT returns did not have an electronic signature. In 2012, TRA introduced a web-based return e-filing system, which enabled taxpayers to file signed VAT returns. In explaining the operation of the e-filing system, interviewees indicated that the system had the effect of improving compliance in several ways: for example, through reducing compliance costs in terms of timely submission, convenience to taxpayers and TRA and easiness of tracking errors in VAT returns. However, the general view from interviewees was that the limitations and problems in administering the system seemed to jeopardise the realisation of the e-filing system benefits as indicated in the following quote:

‘...E-filing has generally improved tax compliance. For taxpayers using this system, they usually submit their returns on time ...but, many VAT returns are submitted manually, because our taxpayers are reluctant, and they are very slow in changing towards new technology ... this makes our job more difficult...’ [Interviewee: Regional manager 3]

The quote above indicates that taxpayers were reluctant to adapt to the new system. During data collection, interviewees indicated that very few taxpayers were using the system, resulting into continuing manual submissions of many VAT returns. According to interviewees, the reluctance in changing to e-filing was possibly because of taxpayers’ resistance to changes or a genuine lack of computer knowledge for some taxpayers.

In the effort to modernise its operations by automating its processes, TRA has also introduced the use of on-line payment of taxes through a system called Tanzania Inter-bank Settlement System (TISS). TISS is an on-line system that facilitates real time and gross settlement of payment instructions between banks implemented by the Bank of Tanzania (BoT). Under this system, taxpayers are required to complete an online TISS order form. The online order form creates convenience to taxpayers through easy access, filing and printing the form at their offices and ensuring that all information filed by taxpayers reaches the TRA office for accurate record keeping. In addition, taxpayers are able to get instant online status of their payments and they can confirm the receipt of their money by TRA offices (TRA, 2011, BoT, 2010).

Overall, interviewees indicated that TISS had so far helped to improve VAT compliance in terms of taxpayers paying VAT on time, hence improving VAT revenue collection as indicated in the following quote.

‘...Our taxpayers use the TISS ...the system helps them to make VAT payment securely, conveniently and in a timely manner... this has improved VAT revenue collection’ [Interviewee: Regional manager 4].

6.2.2 General shortage of staff

The number, experience and the qualification profiles of TRA staff were together constituted another strategic issue in improving VAT compliance in Tanzania. However, the overall shortage of staff appeared to be a major concern to TRA, and it was one of the challenges in the effort to improve VAT compliance in Tanzania. This is because, according to interviewees, uncompliant behaviour among taxpayers was common and constant scrutiny by tax officials was important in order to improve VAT compliance. The following quote indicates this challenge to TRA:

‘... in general, we have a problem of staff shortage within TRA ...most qualifying taxpayers are out of the tax-net ... identifying and registering them is next to impossible ... and the problem is even made worse because most of our taxpayers don’t pay tax if there is no close follow-up...’ [Interviewee: Manager Compliance 4]

According to the interviewees, most taxpayers knew the relatively large size of the tax administration area compared to the number of TRA staff. Therefore, taxpayers played a ‘game of putting their houses in order’ if they knew that they were about to be visited with TRA officials. Taxpayers knew about TRA officials’ visits in formal or informal ways. In some instances, TRA officially informed taxpayers of the visits. On other occasions, however, taxpayers were informally alerted either by people inside TRA who had some connections with the taxpayers or other neighbouring taxpayers who had recently been visited or in one way or another knew they were about to be visited. The challenge for TRA was that these visits were not frequent enough and from prior experience with TRA visits, taxpayers knew of this fact.

Therefore, immediately after the visits, taxpayers normally continued with their non-compliant behaviour because they knew that the next round of TRA officials visits were more likely to take place very far in the future [Interviewee: Manager Compliance

7]. Related to the ‘game of putting their houses in order’, was the practice where some taxpayers closed their businesses or sometimes left their businesses open but without any responsible person being around to talk with TRA officials when they arrived for physical verification [Interviewee: Tax auditor, 2].

6.2.3 Costly tax administration to TRA

Another issue the interviewees indicated was the high costs of tax administration in terms of registering taxpayers, investigating taxpayers’ financial records and tracking dormant taxpayers.

In terms of VAT registration, interviewees explained that the old VAT registration threshold, which was a turnover of Tshs. 20 million (approximate: £7,800), was very costly to TRA. This was because most businesses at this level of turnover were very small e.g. street hawkers and small women-owned food vendors’ business who could not keep proper records of their business activities and financial transactions. Furthermore, business owners’ limited education was another problem. The solution for this problem was to change the threshold to a turnover of Tshs. 40 million (approximate: £15,600) as indicated in the following quote:

‘...the VAT threshold has changed from Tshs. 20 million (£7,800) to Tshs. 40 million (£15,600) ... it was very expensive for TRA to manage small traders who were eligible for VAT registration under the old threshold ... high administration costs hindered operation in terms of registering and general management of these taxpayers’ [Interviewee: Tax auditor 1]

Even at a Tshs. 40 million threshold, TRA still encountered problems of taxpayers not opting to register voluntarily. In order to avoid being registered, these taxpayers tended to provide false information to TRA. This necessitated the TRA to incur costs to investigate and verify the truthfulness of financial records declared by taxpayers. Sometimes TRA officials had to force taxpayers to register for VAT even when their financial records did not show that they had met the threshold of Tshs. 40 million. This decision was based on other sources of information related to the nature of their business as indicated in the following quote:

‘...for example, mini-supermarket nearby petrol stations, hardware stores ... most of these traders have many transactions...through interviews, we can identify those who possess personal cars, renting their business places, the type of schools their kids

attend, how much do they spend at home... or if a person owns house...' [Interviewee: Manager Compliance 7]

The other challenge that added TRA's tax administration costs was the difficulties in tracking dormant taxpayers. This was because these taxpayers had provided false personal or business details during registrations in order to get, for example, government tenders for supplying goods and services. Registering for VAT only to achieve a one-off transaction caused the VAT registers to contain many dormant taxpayers as indicated in the following quote:

'...in our tax region, 1,201 are VAT registered taxpayers. However, one-third of them are dormant taxpayers, because they do not submit their VAT returns and we cannot trace them because they gave us wrong details of their physical addresses and contacts. These taxpayers only register for VAT because they want to apply for government tenders ... if you are dealing with the government... it is mandatory to be a VAT registered taxpayer [Interviewee: Manager Compliance 7]

6.2.4 The use of block management system

Block Management System (BMS) aims to provide a sustainable method and strategy of monitoring business activities of SMEs taxpayers with a view to making them pay taxes in a cost effective way. Furthermore, BMS was designed to help tax administrators to manage the tax affairs of individuals and SMEs by demarcating the geographical areas in which taxpayers conduct business into sizeable and manageable 'blocks'.

BMS is a system used by TRA to expand the tax base and optimize tax revenue collections. BMS is a driver to ensuring that all reachable taxpayers, both formal and informal, are identified, registered and made to pay tax. Overall, BMS appeared to be a good mechanism in raising VAT compliance level in most of the tax regions visited as indicated in the following quote:

'...BMS helps us to provide one shopping centre to our taxpayers, we provide all services in our centres, such as: tax education, auditing and banks are located in each of these centres for easy of tax payment...' [Interviewee: Tax auditor, 4]

One of the ways implemented under BMS was that TRA officials visited taxpayers' businesses door-by-door to check if taxpayers kept proper records, issued tax

invoices and if they paid proper taxes. If taxpayers kept paying smaller amounts of taxes than expected for long periods, they would normally be subjected to tax audit. TRA officials also sometimes did surprise visits to taxpayers' business premises [Interviewee: Manager Compliance 7].

6.3 Content analysis based on theoretical framework

As already discussed in section 5.2.3, this research adopted a hypothesised coding framework of VAT compliance factors to guide the determination of sub-themes from interviewees' responses. For example, the hypothesis that VAT compliance is associated with perceived detection likelihood (H_{1a}) was the basis for "detection likelihood" as a theme. In addition, interview question no. 3e in the interview guide (see Appendix 1b) asked interviewees for their perception on the strengths or weaknesses/limitations of tax audit as a tool used to increase VAT compliance. The interviewees' responses to the interview questions provided the qualitative data subjected to directed content analysis.

The following sub-sections present the content analysis results based on economic theory of tax evasion by Allingham and Sandmo (1972) (sub-section 6.3.1) and the theory of planned behaviour by Ajzen (1991) (sub-section 6.3.2).

6.3.1 Content analysis based on economic theory

The results of the directed content analysis have provided some indications of the important factors affecting VAT compliance in Tanzania. This sub-section discusses factors relating to economic theory of tax evasion by Allingham and Sandmo (1972). Table 6.2 summarises the hypothesised themes based on the economic theory and related interview questions posed to interviewees.

Table 6.2: Thematic coding – VAT compliance factors in economic theory

Economic Theory Of Tax Evasion – Allingham and Sandmo (1972)				
Hypotheses VAT compliance is associated with:		Themes	Qn. No.	Related Interview questions
H _{1a}	Perceived detection likelihood	Detection likelihood	3e	Do you think tax audits increase individual compliance?
H _{1b}	Perceived level of VAT sanction	Level of VAT sanction	4c	To what extent do you think sanctions influence VAT compliance?
		Costs and benefits of non-compliance		Qn. No. 3e and 4c
H _{1c}	Perceived effect of VAT rate	Effect of VAT rate	1d	What factors influence compliance levels (positively or negatively)?

a) VAT compliance and perceived detection likelihood

Table 6.3 is a summarised presentation of Table 2A.1 in appendix 2A, and shows a summary of indicators, sub-themes and their respective frequencies, which explain detection likelihood as a VAT compliance factor. Additionally, Table 6.3 shows the number of interviewees, who responded to the interview question relating to this theme. The frequency and the number of interviewees discussing a theme in their responses indicate the relative importance that theme has in the question of VAT compliance in Tanzania.

Table 6.3: Detection likelihood as a VAT compliance factor

Theme	*F	Sub-themes	F	Indicators	F	No. of Interviewees
Detection likelihood	33	Probability of being audited	19	Staff limitations	16	11
				Tax audit costs	3	3
		Probability of being detected	14	Lack of comprehensive audit	4	4
				Failure to conduct effective tax audit	9	4
				Taxpayers' fraudulent practices	1	1

*F stands for frequency

According to literature, detection likelihood is a function of probability of being audited and the probability of being detected (for example, see Andreoni, Erard and Feinstein, 1998; Pommerehne and Frey, 1992; Robben *et al.*, 1990; Alm, Jackson and

Mckee, 1992a; Snow and Warren Jr, 2005). Table 6.3 shows that the probability of auditing a taxpayer was a slightly more important concern for TRA (19/33) than the probability of being detected (14/33). Overall, interviewees showed that the main reason for the problem of low detection likelihood was the relatively low probability of auditing a particular taxpayer. This was mainly because of staff shortage and quality, and tax audit costs. Furthermore, even those tax audits, which the TRA conducted, the probability of detecting VAT non-compliance was low because the staff shortage negatively affected the quality of tax audits as indicated in the following quote:

‘...undertaking tax audit is very expensive for TRA in terms of financing the visits and time constraints. In terms of time, the limited number of existing tax auditors means that the few available tax auditors have to rush through the audits in order to cover as many taxpayers as possible. As a result the quality of tax audits is jeopardised...’
[Interviewee: Regional manager 1]

Table 6.3 shows that staff limitations had the highest frequency (16/33) of all indicators in this theme – detection likelihood. Staff limitations was also the most discussed indicator in terms of the number of interviewees responding to interview question number 3e (*Do you think tax audits increase individual compliance?*).¹⁹ In responding to interview question 3e, most interviewees agreed that tax audit had the potential of enhancing compliant behaviour among taxpayers. For example, one respondent [Interviewee: Regional manager 5] indicated that TRA assesses the risk of taxpayers not complying by conducting annual tax audits for high risk taxpayers (normally large taxpayers) and once every 3 years for low risk taxpayers (normally medium and small taxpayers). The main selection criterion for a taxpayer to be included in any tax audit was the taxpayer’s VAT contribution per year [Interviewee: Tax auditor 4].

However, interviewees also shared their practical experience and indicated that because of staff limitations TRA was not conducting tax audits at the desired frequency and quality. This implied that the probability of auditing a taxpayer was low, causing low VAT compliance in Tanzania as indicated by the following quote:

¹⁹ See section 6.3.1, Table 6.2

'...we lose a "big piece of cake" as we are not able to conduct effective tax audit to all taxpayers because of the limited number of tax auditors in our region ...' [Interviewee: Tax auditor 7]

Interviewees also indicated that tax audit costs somehow contributed to low likelihood of detecting taxpayers' uncompliant behaviour (3/33). One interviewee supports the audit costs implication on VAT revenue collection in the following quote:

'...after conducting tax audit we usually manage to achieve our VAT revenue collection targets ... however, conducting tax audits is a very expensive task for TRA ...' [Interviewee: Manager Compliance 7]

According to interviewees, three factors affected the probability of auditing a taxpayer. First, interviewees indicated that failure to conduct effective tax audits (9/33), second, the lack of comprehensive audits (4/33) and taxpayers' fraudulent practices (1/33) were a significant concern for the ability of TRA to detect uncompliant taxpayers. As in the probability of auditing a taxpayer, interviewees showed that the low probability of detecting an uncompliant taxpayer caused by the above three factors contributed to low VAT compliance in Tanzania as suggested in the following quote:

'... yes, tax audits increase taxpayers' compliance behaviour, but it very much depends on effectiveness of tax audit ... if TRA is able to conduct effective tax audit once a year, taxpayers are more likely to change their compliance behaviour ...' [Interviewee: Tax auditor 7].

Effectiveness of tax audit signified the ability of TRA tax auditors to complete their audit tasks and procedures according to an annual audit plan and on a timely basis. Failure to achieve this 'effectiveness' gave uncompliant taxpayers the opportunity to continue with their uncompliant behaviour undetected. However, effectiveness of audit may lead taxpayers to develop strategies to escape tax liability (for example, see Kastlunger *et al.*, 2009). The current results indicate that, taxpayers found other ways of not complying with the VAT law. For example, one respondent indicated that, taxpayers established new businesses in rural areas where the probability of detecting an uncompliant taxpayer was very low, as indicated in the following quote.

'... some taxpayers may decide to establish their businesses in rural areas (they call 'safe zones'), knowing that it is very difficult for tax officials to frequently visit their businesses. ...a taxpayer may say, "why should I pay tax ... while I can run my business

in a safe zone” ...Most taxpayers who decide to move their businesses into these “safe zones” have good tax knowledge...’ [Interviewee: Head of VAT refund, 7]

Comprehensive auditing referred to the broadness of coverage of a particular tax audit assignment. Comprehensive auditing encompassed all taxpayers’ matters and information, which were relevant to all taxes not only VAT. The broader the coverage of tax audit, the higher the probability of detecting a taxpayer’s uncompliant behaviour. Because of cost implications as indicated above, TRA conducted comprehensive audit mainly to larger taxpayers as indicated in the following quote:

‘... we usually conduct comprehensive tax audits to large taxpayers once every year because they keep proper records and they pay substantial amount of tax ... We don’t spend much time in auditing small taxpayers with turnover, for example, of Tshs. 40 million (equivalent £14,340) ...’ [Interviewee: Regional manager 2]

Furthermore, interviewees indicate that, taxpayers failed to provide proper records to support their claims and other taxpayers colluded with their tax consultant in fraudulent practices and made the work of tax auditors more difficult. The following quote indicates these fraudulent practices:

‘...taxpayers and their tax consultants colluding in fraudulent practices, and this very much affect our performance and make our job more difficult ...’ [Interviewee: Manager Compliance 1]

The above discussion has shown that the interviewees’ responses concurred with the hypothesised association between VAT compliance and perceived detection likelihood. Interviewees’ perception of what they were experiencing in practice as they tried to achieve TRAs objective of enhancing VAT compliance is supported by theoretical and empirical evidence in the extant literature. For example, Fischer, Wartick and Mark (1992) as reported in Kirchler (2007), found in their review of studies on the relationship between probability of detection and compliance behaviour that increased detection probability increases compliance. It agrees with the prediction of Allingham and Sandmo (1972, p. 330), and concludes that ‘... an increase in the probability of detection will always lead to a larger income being declared’. In the Tanzanian context, interviewees showed that solving the problem of staff limitations and conducting effective tax audits would more likely lead to increased likelihood of detecting non-compliant behaviour and ultimately enhancing VAT compliance.

Furthermore, the literature shows the importance of both probability of being audited and probability of being detected being high for detection likelihood to have significant influence on tax compliance behaviour (for example, see Andreoni, Erard and Feinstein, 1998; Pommerehne and Frey, 1992; Robben *et al.*, 1990; Snow and Warren Jr, 2005; Alm, Jackson and Mckee, 1992b). In contrast to Andreoni, Erard and Feinstein (1998) and Pommerehne and Frey (1992) the probability of being audited does not have significant positive influence on compliance. In addition, if probability of being audited has to have significant influence on compliance, there should be an increase in the perceived uncertainty of whether a taxpayer will be detected if audit is undertaken (Robben *et al.*, 1990; Snow and Warren Jr, 2005; Alm, Jackson and Mckee, 1992b). In the current research, results show a general agreement that firstly, tax audit was a good mechanism of enhancing VAT compliance. Secondly, the probability of auditing a taxpayer influenced their VAT compliance behaviour provided tax audits were effective and comprehensive. The above extant literature corroborates these findings.

It is interesting to note that the current results supports Andreoni, Erard and Feinstein, (1998) suggestion that perceived detection likelihood influences VAT compliance in a positive way. However, literature also indicates that other variables mediate the association between perceived detection likelihood and tax compliance. For example, negative attitude towards government and the perception that other taxpayers are not honest in their dealings with tax authorities (Sheffrin and Triest, 1991; Andreoni, Erard and Feinstein, 1998). In the current research, taxpayers showed some dissatisfaction with the tax system, which might have affected the strength of detection likelihood influencing VAT compliance in Tanzania. Furthermore, interviewees believed that increased detection likelihood had a positive association with VAT compliance but with little effect because of limited number of tax auditors and a relatively ineffective tax audit process.

b) VAT Compliance and perceived influence of VAT sanctions

Table 6.4 is a summarised presentation of Table 2A.2 in appendix 2A, and shows a summary of indicators, sub-themes and their respective frequencies, which explain perceived level of sanctions as a VAT compliance factor. Moreover, Table 6.4 shows

the number of interviewees who responded to the interview question relating to this theme.

According to the theoretical framework of Allingham and Sandmo (1972), tax compliance can be increased by increasing the penalties associated with non-compliance. Furthermore, the literatures also suggest that sanctions have direct deterrence effect and tend to enhance tax compliance (for example, see Snow and Warren Jr, 2005; Kirchler, 2007; Alm, Jackson and Mckee, 1992a).

Table 6.4: Perceived influence of sanctions as a VAT compliance factor

Theme	F	Sub-theme	F	Indicators	F	No. of Interviewees
Perceived level of sanctions	65	Enforcing sanctions	65	Effectiveness of sanctions	36	17
				Taxpayers do not fear sanctions	11	9
				Severe penalties	12	9
				Related observations	6	5

*F stands for frequency

Table 6.4 shows the effectiveness of sanctions (36/65) was the most discussed and important indicator under perceived level of sanctions. Responses for this theme came from interviewees responding to interview question number 4c (*To what extent do you think sanctions influence VAT compliance?*).²⁰ In general, interviewees showed that the level of sanctions influenced taxpayers' compliance decisions, in particular small taxpayers.²¹ As already defined in section 2.2.1, sanction level was defined as the range of penalty rates, interest rates, fines and publication of offenders' names as were administered by TRA, and the imprisonment of convicted offenders. Overall, interviewees suggested that if these sanctions were properly administered, taxpayers were more likely to comply with VAT law. The downside, however, was that sanctions were differently perceived by most small taxpayers (mainly negatively perceived) and most large taxpayers (mainly not affected) as indicated in the following quote:

²⁰ See section 6.3.1, Table 6.2

²¹ This study is on SMEs. The categorisation mentioned here as 'small taxpayers' refers to the way the Domestic Revenue Department of the TRA has grouped SMEs taxpayers as 'large', 'medium' and 'small' taxpayers according to their turnover.

'...it is true that sanctions positively influence VAT compliance ... they i.e. sanctions help us to collect tax and meet our tax collection targets... but it is negatively perceived by most small taxpayers ...because they perceive it as an unfair reduction from their business profit ... I think our ability to collect tax is strengthened by the existence of penalties ... however existing penalties are not adequate for most large taxpayers... we need severe penalties because they will discourage large taxpayers becoming non-compliant...' [Interviewee: Regional manager, 5]

The above quote raises some issues worth exploring further. The positive association between sanctions and compliance was obvious. However, interviewees showed that the influence on VAT compliance was much dependent upon whether a taxpayer was small or large. Sanctions in terms of penalties, for example, had the effect of unfairly reducing small taxpayers' business profit compared to large taxpayers. Hence, sanctions tended to increase small taxpayers' compliance, but minimal influence on VAT compliance, if any, on the sanctioned large taxpayers [Interviewee: Regional manager, 6]. This can explain the noted small taxpayers' resentment with existing sanctions for VAT non-compliance as suggested in the quote above.

Interviewees pointed out that the existing penalties were 'inadequate'. The inadequacy of penalties was in terms of their inability to fairly or sanctions differently small and large taxpayers. For example, interviewees called for penalties not to be fixed rates or the same amount charged to all taxpayers. Charging the same penalty rates or the same amount had the effect of penalising small-taxpayers more than large taxpayers. The discussion on sanctions enforcement was linked with a high frequency in mentioning 'effectiveness of sanctions' and the need for 'more severe penalties' as key components in discouraging VAT non-compliance. This was evidence of the existing association between perceived level of sanctions and the level of VAT compliance in the Tanzanian context.

The discussion in the preceding paragraphs is consistent with Alm, Jackson and Mckee, (1992a). Alm, Jackson and Mckee, (1992a) point out that the deterrent effect for penalties can either be negative or positive depending on the penalties structure. They suggest that if sanctions are not set in realistic levels the non-compliance deterrent effect is likely to be very small, particularly in dealing with large taxpayers. This means that the effect of unrealistic levels of sanctions will tend to produce more non-compliance. Snow and Warren Jr (2005) also support this observation. They found that only 'severe' penalties tended to have a direct deterrence effect on non-

compliance and that they significantly improved tax policies formulated to foster effectiveness in non-compliance detection (Snow and Warren Jr, 2005). In addition, Hasseldine *et al.*, (2007) argues that the harshness of sanctions has significant effects on tax compliance behaviour.

While harshness of sanctions may have a positive effect on taxpayers' compliant behaviour, interviewees showed that harsh sanctions had a demoralising effect for SMEs in the current study. As a result, VAT non-compliance increased as supported by the following quote:

'...harsh measures are needed to increase government revenue... but for SMEs it decreases their tax morale, it is also time consumption; sometimes they i.e. SMEs end up seeking loans from their bankers to pay the required tax...they feel as a loss to their business...recovering this kind of loans take time... this reduces their tax morale and as a result non-compliance increase...' [Interviewee: Manager Compliance, 7]

The other issue in relation to sanctions that the literature suggests and is relevant in the current study is the negotiation of penalties between taxpayers and tax authorities (for example, see Braithwaite, 2003). Braithwaite (2003) suggests that tax authorities negotiate penalties with a good intention so that a taxpayer who was wrong today might be encouraged to be more compliant tomorrow without using extreme sanction measures. In other words, tax authorities may achieve higher compliance through un-confrontational interactions, based on a trusting relationship between taxpayers and tax authorities (Kirchler, Hoelzl and Wahl, 2008). In the current study, negotiation between taxpayers and TRA was also mentioned in the interview responses. Interviewees showed that it is important to build a good and trustworthy relationship with taxpayers to increase future VAT compliance. In some cases TRA had to negotiate penalties and agree with taxpayers to pay affordable amounts of penalties within a specified period [Interviewee: Tax auditor, 1]; the following quote also supports this observation:

'...taxpayers are a part of our society; we cannot send them to prison because their families depend on them. We are generally lenient towards taxpayers, allowing them more time to learn and become more compliant. My experience is that, with time they usually pay their taxes and fine or penalties where applicable...' [Interviewee: Regional manager, 3]

As already indicated above, the literature suggests that taxpayers will be more likely to comply if non-compliance may result in an equivalent level of severity in penalties. In this regard, governments need to set severe sanctions that match the extent of non-compliance to ensure deterrent effect on taxpayers is realised (Slemrod, 2007; Chau and Leung, 2009). In the same way Sandmo (2005, p. 26) argues that '*penalties should be socially acceptable; they probably must be set so that in the eyes of the general public, they "fit the crime"*'. Interviewees also indicated that, the government needed to increase penalty rates, as the existing ones were less severe compared to the tax evaded. The following quote is an example of this view from interviewees:

'...severe penalties are needed to discourage VAT non-compliance ...the existing penalties are not adequate; the government needs to increase penalties rates so as to discourage VAT non-compliance...' [Interviewee: Regional manager, 1]

Another indicator of the sub-theme enforcing sanctions included the perception that taxpayers did not fear sanctions (frequency of 11/65). According to interviewees, this perception related to the group of large taxpayers. For large taxpayers, the proportion of penalties they paid to the amount of tax evaded was significantly small. According to the interviewees, large taxpayers were generally aware of this situation and for that reason, existing sanctions did not significantly influence VAT compliance for this group of taxpayers in Tanzania. This is indicated in the following quote:

'...sanctions do not help at all... the majority of large taxpayers know that penalties are very low compared to the tax they can evade ... so they i.e. taxpayers are prepared to be penalised because the penalties do not affect their businesses...' [Interviewee: Manager Compliance, 3]

The above finding is supported by Alm, Jackson and Mckee (1992a) who suggested that large taxpayers do not fear penalties when sanctions are perceived as 'not severe enough' to affect taxpayers' businesses.

Table 6.4 also reports other related observations (frequency of 6/65) as another indicator under this sub-theme of enforcing sanctions. Interviewees indicated that TRA was losing VAT revenue because penalties appeared to discourage small taxpayers to remain in business. Sometimes taxpayers with accumulated tax debts decided to close down their businesses and transfer their assets to a newly registered business name [Interviewee Regional Manager 4]. Highlighting this problem one respondent said that '...sanctions discourage small taxpayers to do business, and at

the end of the day we (i.e. TRA) will lose even the little amount we are able to collect...’ [Interviewee: Manager Compliance 1].

c) VAT compliance and perceived costs and benefits of non-compliance

Table 6.5 is a summarised presentation of Table 2A.3, and shows a summary of sub-themes and their respective frequencies, which explain perceived cost and benefit of non-compliance as a VAT compliance factor. Moreover, Table 6.5 shows the number of interviewees in this theme. There were no direct questions relating to this theme. However, in responding to interview questions number 5b and 5c (see section 6.3.1, Table 6.2) interviewees indicated that they were also concerned with costs and benefits of VAT compliance.

Table 6.5: Perceived costs and benefits of VAT compliance

Theme	F	Sub-theme	F	No. of Interviewees
Perceived costs and Benefits of VAT compliance	40	Perceived costs and benefits of non-compliance	8	7
		Taxpayers poor record keeping	21	15
		Compliance costs	6	4
		SMEs competitiveness	5	4

*F stands for frequency

Table 6.5 shows that taxpayers’ poor record keeping (21/40) was one of major concerns for VAT compliance in Tanzania. Interviewees indicated that the majority of taxpayers did not have the culture of keeping proper records of their business activities. Poor record keeping resulted in difficulties for TRA assessing VAT compliance, frequent submission of late and erroneous VAT returns, and a tendency of taxpayers trying to pay what they wanted to pay, not the true amount of VAT due. Interviewees also indicated that for most taxpayers who did not keep proper records, it was intentional as indicated in the following quote:

‘...VAT compliance level is affected because most taxpayers do not keep proper books of accounts...’ [Interviewee: Principal tax officer, 4]

Intentionally poor or a lack of record keeping aimed at disguising the true amount of taxpayers’ annual turnover occurred so they can remain outside the tax net

[Interviewee-Regional manager 3]. The implication to TRA of this taxpayers' poor-record-keeping behaviour was increased VAT administration costs.

It is worth noting that the taxpayers' poor record keeping behaviour indicated above was as much a VAT administration costs issue for TRA as it was a VAT compliance costs concern for taxpayers. On one hand, as the interviewees were tax officials, the view that taxpayers' non-compliant behaviour was causing increased VAT administration costs was not very surprising. However, on the other hand, these interviewees also indicated that increasing VAT compliance costs incurred by taxpayers were one of the main causes for taxpayers' non-compliant behaviour (6/40).

VAT compliance costs can be defined as the value of all resources that taxpayers employ in complying with VAT laws and regulations (Tran-Nam *et al.*, 2000). According to Hansford, Hasseldine and Howorth, (2003) total compliance costs can be divided into compulsory and voluntary components. The compulsory component made up of core costs like employee costs, paying for advice for core VAT administration activities, preparing and receiving visits from, and communicating with tax authorities on routine VAT matters, and learning VAT laws and regulations. The voluntary component is made up of optional costs like VAT planning and one-off advice costs aimed at, for example, reducing VAT liability (Hasseldine and Hite, 2003, p. 485).

According to the literature, high VAT compliance costs may result from complexity in the tax system including high frequency of legislative changes, which affects SMEs more than larger businesses (for example, see Hansford, Hasseldine and Howorth, 2003; Evans, 2003). For example, as a result of tax system complexity and frequent changes in tax legislation SMEs may increase the use of tax advisors to provide advice in areas where SMEs lack knowledge, expertise and confidence (Hansford, Hasseldine and Howorth, 2003).

In the current research, interviewees indicated that core VAT compliance costs were significantly higher for SMEs than for larger businesses in Tanzania. As a result, taxpayers had to incur extra costs in paying tax advisors to help them with VAT matters. Furthermore, as already discussed in sub-section 6.2, the introduction of new technology (for example, e-filing and EFD) had further increased VAT compliance costs. The following quote is one example of interviewees' perception on VAT

compliance costs and their influence on taxpayers' VAT compliance behaviour in Tanzania.

'...taxpayers don't like VAT because it is very demanding, for example, it is very time consuming to administer, and it increases compliance costs if a taxpayer is not careful... recently most taxpayers have decided to incur extra costs to hire tax consultants ... may be because we have threatened them that we will close down their businesses... I sometimes think some taxpayers will go bankrupt because of high compliance cost in our VAT system' [Interviewee: Regional manager, 2]

Table 6.5 also shows that 'perceived costs and benefits of non-compliance' (frequency of 8/40) was one of sub-themes that explained the perceived costs and benefits of VAT compliance in Tanzania. The literature on economic theory of tax evasion suggests that taxpayers will usually assess the trade-offs between expected benefits of not complying with tax law with the risk of detection and cost of sanctions (for example, see James and Alley, 2002; Sandmo, 2005). The overall interviewees' perception was that taxpayers in Tanzania were not complying with VAT law because the benefits of not complying exceeded the costs of non-compliance in the form of sanctions. This perception was indicated in the following quote:

'... for taxpayers the act of complying or not comply with tax laws depends very much on which act will result into paying more or less money ... taxpayers will normally assess the benefits of complying or not complying and will decide to act on the option which will benefit them more...' [Interviewee: Head of VAT refund, 7]

According to Bernasconi (1998, p. 123) '...evading tax is like gambling, there are gains to be made if the evasion is successful and costs in terms of penalties if it is not'. The current study supports Bernasconi (1998) as indicated in the following quote:

'...our taxpayers compare the seriousness of sanctions and the amount they will pay in VAT. If they find sanctions are less than VAT payments, taxpayers will normally chose to avoid paying VAT and be willing to pay penalties. They will tell you, "I will pay VAT with penalties, it is not a problem ...' [Interviewee: Manager Compliance 4]

Table 6.5 also shows that 'perceived costs and benefits of VAT compliance' was associated with SMEs' competitiveness (frequency of 5/40). SME competitiveness pertains to the ability and performance of the SME in selling and supplying goods and services to its customers in relation to the ability and performance of other SMEs. For

VAT registered SMEs, VAT forms part of the price charged to their customers. The effect is a pricing competitive disadvantage to VAT registered SMEs compared to VAT non-registered SMEs. The literature suggests that taxpayers engage in the practice of not charging VAT inclusive prices to their consumers so as to compete with VAT non-registered taxpayers (Adams and Webley, 2001). The interviewees indicated that this practice existed in VAT registered taxpayers in Tanzania. VAT registered taxpayers charge prices without VAT to remain competitive with similar type of businesses who were not VAT registered. The following quote indicates this practice:

‘...taxpayers avoid issuing tax invoices ... they know if they issue tax invoices, they will have to charge VAT inclusive prices to their customers. VAT inclusive prices mean that their good and services will be more expensive than their competitors who are in a similar type of business but are not VAT registered...’ [Interviewee: Manager Compliance 7]

d) VAT compliance and perceived effect of VAT rate

The discussion and all quotes under this section are based on Table 2A.4 in appendix 2A. In responding to the interview question 1d ‘*what factors influence compliance levels (positively or negatively)*’, interviewees listed a number of factors including VAT rate.²² As indicated in Table 2A.4 in appendix 2A, VAT rate as a VAT compliance factor was mentioned/discussed 8 times by seven interviewees. In quantitative terms, i.e. theme frequency, this theme may seem insignificant compared to the other themes in responding to interview question 3d. However, the significance of the effect of VAT rate on VAT compliance was indicated in the way these few interviewees perceived the VAT rate. The interviewees personally perceived that the VAT rate was a heavy burden to taxpayers, instead of describing that it was taxpayers’ perception that the VAT rate was very high. The following quote indicates this perceived significance of VAT rate in influencing VAT compliance:

‘...VAT compliance is negatively affected with high VAT rate. For example, selling at a VAT-inclusive price increases the price of goods and services... as a result SMEs takes the risk of not complying by giving final consumers the option of paying either VAT-inclusive prices or prices without VAT; But then, it is possible if the VAT rate was

²² The other factors dealt under sub-section 6.2 as strategies and challenges in enhancing VAT compliance were the introduction of new technology, general staff shortage, costly tax administration to TRA and the use of Block Management System.

relatively lower than the existing rate, final consumer would not have seen a big increase in prices and would more likely agreed to pay the VAT-inclusive prices...’ [Interviewee: Tax auditor, 4]

Interviewees indicated that the government had recognised the effect of VAT rate on VAT compliance and had taken the step of reducing it from 20% to 18%. In addition, even at the VAT rate of 18%, some interviewees were of the opinion that the rate was still very high and for the government to further encourage voluntary compliance the VAT rate should further be reduced.

The effect of VAT rate on VAT compliance is a theme supported in the existing literature. Most research findings indicate that higher tax rates lead to less compliance (Kirchler, 2007).

6.3.2 Content analysis based on behavioural theories

This sub-section continues the discussion of the results of directed content analysis, which provided some indications of the important factors affecting VAT compliance in Tanzania. It discusses VAT compliance factors relating to the Theory of Planned Behaviour (TPB) (Ajzen, 1991)²³. According to Ajzen (1991), a taxpayer’s intention to perform a particular behaviour is a function of three factors – attitude towards behaviour, subjective norms and perceived behavioural control. Table 6.6 summarises the hypothesised themes based on the TPB, and related interview questions posed to interviewees.

²³ Sub-section 2.3.2 covered the literature review on the TPB.

Table 6.6: Thematic coding – VAT compliance factors in the TPB

Theory of Planned Behaviour (TPB) – Ajzen (1991)				
Hypotheses VAT compliance is associated with:		Themes	Qn. No.	Related Interview questions
H _{2a}	Attitude towards behavioural outcome	Attitude towards behavioural outcome	2e	Does the perception of fairness enhance voluntarily compliance with VAT law?
			2f	Do you think traders consider fairness with provision of public goods and services?
			5b	Do the majority of traders register voluntarily for VAT purposes?
H _{2b}	Subjective norms	Subjective norms	5e	What is your opinion on the extent to which traders submit their VAT returns on time?
H _{2c}	Perceived behavioural control	Behavioural control	5i	Do you think traders make intentional/deliberate mistakes/errors?
			7e	Do you think traders are involved with cash transactions?

This sub-section is organised as follows: part (a) discuss the results of content analysis based on attitude towards behaviour outcome; parts (b) and (c) discusses the results of content analysis based on subjective norms and perceived behavioural control respectively.

a) VAT Compliance and attitude towards behaviour outcome

The discussion and all quotes under this section are based on Table 2A.5 in appendix 2A. Table 6.7 presents a theme termed *attitude towards behavioural outcome*, and is a summarised presentation of Table 2A.5. It shows a summary of sub-themes, their respective frequencies, and the number of interviewees, who responded to the interview question relating to this theme.

Table 6.7: Attitude towards behavioural outcome as a VAT compliance factor

Theme	F	Sub-theme	F	No. of Interviewees
Attitude towards behavioural outcome	88	Taxpayers registration is mostly through law enforcement	37	17
		Perceived fairness in the provision of public goods and services	33	17
		Perceived fairness of VAT system	15	11
		Governance issues	3	2

*F stands for frequency

Attitude towards behavioural outcome is described as a taxpayer's assessment of the outcome of his/her expected behaviour (Ajzen, 1991). The Theory of Planned Behaviour predicts that in deciding whether to perform a given behaviour, a taxpayer will try to answer the question – is the outcome after performing the intended behaviour favourable or unfavourable? In the current study, attitude towards behavioural outcome as a VAT compliance factor was indicated in four sub-themes – voluntary registration (37/87), perceived fairness in public goods and services provision (33/87) and in the VAT system (15/87) and governance issues as related to VAT non-compliance (3/87). The four sub-themes were noted from interviewees answering interview questions 5b, 2e and 2f (see Table 6.2, section 6.6.1).

The first sub-theme with the highest frequency was that most taxpayers did not register voluntarily. There was a sense of disbelief among interviewees that the behaviour of many taxpayers registering for VAT following investigation was because the taxpayers believed that doing the same, i.e. registering for VAT following investigation was acceptable behaviour. On the contrary, interviewees believed that taxpayers knew that voluntary registration was an expected and acceptable behaviour but taxpayers choose not to. This is indicated by the following quote:

‘...I have never met a taxpayer who comes to TRA voluntarily in order to register for VAT purposes ... we believe that taxpayers know that this is not acceptable; but we always have to visit their business premises and involuntarily register them...’ [Interviewee: Regional manager, 6]

As also evidenced by the following quote:

'...taxpayers register for VAT involuntarily ... We visit their business premises conduct interviews, audit, and examine their business status... most taxpayers registered for VAT following investigation through physical visit or tax audits...' [Interviewee: Principal tax officer, 7]

Given the difficulties or limitations that the TRA was experiencing in administering the VAT law because of, for example, costs and shortage of resources, interviewees indicated that the majority of taxpayers were able to 'avoid' being involved in VAT collection by not registering voluntarily. Choosing not to register voluntarily did not cost taxpayers (even if they were subsequently 'forced' to register following TRA costly investigations), but the outcome (in the period between meeting the registration threshold and before being 'forced' to register) was rewarding, i.e. avoiding the taxpayers' perceived burden of VAT collection. Interviewees who pointed this out indicated that some taxpayers might choose to register for VAT purpose voluntarily only if it was 'favourable' to them. For example, taxpayers may register voluntarily only because they wanted to be eligible for VAT refund, as indicated in the following quote:

'...taxpayers voluntarily register for VAT purpose only if they expect to benefit from being VAT registered...for example, a taxpayer may register for VAT because he/she wants to import some goods and be eligible to claim VAT refund...' [Interviewee: Principal tax officer, 3]

Generally, interviewees indicated that taxpayers register for VAT purpose involuntarily. For example, some taxpayers were willing to avoid VAT registration by paying substantial amount of money to corrupt TRA officials as indicated in the following quote:

'...compulsory registration is the main approach we use to register business for VAT purposes ... for example, recently one large taxpayer who owns a three storey building, which accommodates a hotel and a bar, reported a total sales figure of Tshs. 150,000 a day while in fact the actual amount was Tshs. 1.5 million a day ... it is very surprising that taxpayers are prepared to pay corrupt TRA officials a lot of money in order to evade paying VAT...' [Interviewee: Manager Compliance, 5]

Indicating the seriousness of VAT non-registration as an attitude towards behavioural outcome, some interviewees compared the willingness of foreigner-owned

businesses to register for VAT compared with that of Tanzanian-owned businesses, as indicated in the following quote:

‘... Just imagine, foreigners voluntarily register for VAT purpose even if they have turnover below the threshold ... this is not the case for Tanzanian citizens ...’

[Interviewee: Manager Compliance, 1]

There might be several reasons for the different attitude towards paying taxes. In the case of Tanzania, the difference in attitude towards paying tax as shown by foreign-owned business as compared to that of Tanzanian owned SMEs is well explained by a lack of perceived civic duty and law abiding behaviour. Orviska and Hudson (2003) found that a sense of civic and law-abiding duty among taxpayers is very important in determining tax compliance behaviour.

The other sub-theme that supported the attitude towards the behaviour outcome factor for VAT compliance was ‘fairness’. As indicated by interviewees, the issue of perceived fairness influenced taxpayers’ assessment of their behavioural outcome in terms of provision of public goods and services (33/87) and VAT system (14/87). Interviewees’ perception was that taxpayers might be more willing to comply if they perceived that there was fairness in both the VAT system and the governments’ provision of public goods and services. Overall, interviewees indicated that taxpayers perceived there was no fairness either in the tax system or in the provision of public goods. The following quote indicated that:

‘...taxpayers consider themselves as being in exchange relationship with the government ... they expect to get public goods and services from the revenue collected from taxes ... Taxpayers always blame TRA and the government ... they always question ... “where does the VAT money go?”... I think the government is not clear on how it spends the tax revenue it collects ... How tax is used is also an issue ... taxpayers do not see a quid-pro-quo in tax payment and tax revenue usage... Tanzanians are not happy in paying taxes because they do not see how the tax is spent by the government ... for example, there have been big corruption scandals in the government in recent years that have definitely contributed in discouraging our taxpayers in paying taxes voluntarily...’ [Interviewee: Manager Compliance, 1]

According to Saad (2011) taxpayers with positive fairness perceptions of the tax system are more likely to have positive attitudes toward the tax system, consequently encouraging them to comply. Interviewees agreed with Saad (2011) that the effect of

a positive perception of taxpayers towards VAT system, tax officials and the government at large will enhance voluntary compliance [Interviewee RM4]. However, in Tanzania generally, interviewees indicated that taxpayers had negative perception toward VAT system. For example, taxpayers consider VAT system unfair in terms of general VAT law, TRA officials and government at large. Hence, taxpayers, for example, did not voluntarily submit VAT monies to TRA. The following quote indicate general perception of taxpayers.

‘...generally, taxpayers have negative perception towards VAT system ... therefore they do not voluntarily comply with VAT law ... they only submit VAT monies involuntarily ... one of our i.e. TRA mission is to provide good services that exceed taxpayers’ expectations ... but as we, i.e. TRA are perceived to be unfair hence administering and collecting VAT become our major problem...’ [Interviewee: Principal tax officer, 6].

Existing literature shows that the publics’ perceived fairness of the VAT system, and how a government spends the collected tax revenue was a critical matter. If a government is to succeed in significantly increasing the degree of voluntary compliance (for example, see Feld and Frey, 2007; Eriksen and Fallan, 1996). Furthermore, the perceived fairness of exchange between the public and a government has emerged as an important consideration (for example, see Feld and Frey, 2007; Wenzel, 2002b; Richardson and Sawyer, 2001).

Feld and Frey (2007) suggest that taxpayers’ satisfaction with what they get from the tax authority and the government greatly influence their compliance behaviour. Feld and Frey (2007) describe taxpayers’ satisfaction in a much broader sense than simply the exchange of goods and services. In addition to the provision of public goods and services by the government, taxpayers’ perception of fairness appears to be based on how the tax system treats taxpayers and willingness of the politicians legislate tax laws, which are fair. Fairness in the political process is a key determinant of governments’ credibility which affects the way taxpayers perceive their relationship with the government and the purpose of taxation as a whole (Feld and Frey, 2007). In the same way, Ahmed and Braithwaite (2004) study shows that non-compliant behaviour is significantly higher among taxpayers who perceive low trustworthiness in their government. Therefore, as found in this study and supported by other studies, perceived fairness in the functions of tax authorities and governments influences the attitude towards behavioural outcome. This has the implication that tax authorities

and governments' efforts to enhance VAT compliance has to consider the question of how fairly they treat taxpayers in terms of VAT revenue collection and spending.

'Governance issues' is another sub-theme under attitude towards behavioural outcome with the lowest frequency. According to interviewees, politicians and government officials using their power to demand financial assistance sometimes burdened taxpayers. For example during elections and fund-raising for schools and hospitals, politicians may require businesses to contribute in return for favours from government institutions like TRA. Indicating the doubt in how certain businesses were able to continue doing business while paying such big sums of money to political courses, an interviewee commented in the following quote:

'...But in my view, we sometimes burden our businesses, i.e. taxpayers with very heavy loads ... when our leaders need assistance (mostly financially) like individual politicians' expenses and communal based contributions like constructing schools, politicians and government officials sometimes ask businesses to help ... you may ask yourself, where do these businesses get all this money? [Interviewee: Regional manager, 2]

Sometimes, even when these businesses have not directly promised any favours, the fact that someone politically powerful asked taxpayers, they would give their money because of fear. In order to compensate for the money that they lose because of fear of political influence, taxpayers sometimes resorted to non-compliant behaviour. As indicated in the following quote.

'...in this way, you can be excused to say that businesses get very small profit by giving away a lot of money in order to appease big-shots in the government, it should be expected that they (businesses) will also find ways to compensate by either avoiding or evading paying tax ...' [Interviewee: Head of VAT refund, 2]

b) VAT compliance and subjective norms

The discussion and all quotes under this section are based on Table 2A.6 in appendix 2A. Table 6.7 presents a summary of Table 2A.6, which contains a theme termed *subjective norms*. It shows a summary of sub-themes, their respective frequencies, and the number of interviewees, who responded to the interview question relating to this theme.

Table 6.8: Subjective Norms as a VAT compliance factor

Theme	F	Sub-theme	F	No. of Interviewees
Subjective norms	58	The culture of not issuing tax receipts/invoice	25	20
		Perceptions of VAT money	24	14
		Taxpayers' patriotism	9	6

*F stands for frequency

Subjective norms are beliefs that an individual holds with regard to what would be the expected acceptability of the individual's intended behaviour and the extent to which this individual is willing to align his or her intended behaviour according to a referent individual or group's behaviour (Ajzen, 1991). According to the theory of planned behaviour, subjective norms predict that a taxpayer who believes that others around him or her are behaving in a way that is socially "appropriate" will attempt to align his or her intentions to achieve this socially "appropriate" behaviour. This means that under subjective norms a taxpayer has initial beliefs about the expected acceptability of his/her intended behaviour. Secondly, he or she has to have a certain level of willingness to align the intended behaviour with the expected acceptable behaviour from a referent individual or group (in other words belief in "what others do" and the willingness to 'copy' them).

In this study, subjective norms as a VAT compliance factor was indicated in three sub-themes; the culture of not issuing tax receipts/invoice (25/58), perceptions of VAT money (24/58), and taxpayers' patriotism (9/58). The three sub-themes were noted from interviewees answering interview question 5e (see Table 6.2, section 6.6.1).

As indicated in Table 6.8, the culture of not issuing tax receipts/invoices was the sub-theme with the highest frequency, but almost the same as the perceptions on VAT money sub-theme. According to interviewees, taxpayers perceived the culture of not issuing tax receipts/invoice as socially "appropriate" and acceptable behaviour. Furthermore, the interviewees indicated that the culture was somehow supported by final consumers' culture of not demanding tax receipts/invoice for their purchases. This culture is evidence of subjective norms as a factor of VAT compliance. The culture was a challenge to TRA's VAT collection efforts and intervened in both dealings between taxpayers (as sellers) and their consumers and between taxpayers (as buyers) and their suppliers (e.g. wholesalers). This culture was indicated in the following quote:

‘...our taxpayers, mainly retail SMEs, buy their goods from wholesalers without being issued tax invoices or issued with under-valued tax invoices ... as a result recovering VAT from taxpayers becomes very difficult for TRA because taxpayers realise that they have to pay VAT, which they did not collect and the money they pay to TRA is then part of their business profit...’ [Interviewee: Manager Compliance, 7]

One of the main reasons that the culture of not issuing tax invoices may have flourished was the monetary benefit, which both taxpayers and consumers gained from it. In the theme, ‘perceived costs and benefits of VAT compliance’ (see section 6.1.1 (c)), taxpayers are shown to be price competitive by avoiding charging VAT inclusive prices. Avoiding charging VAT inclusive prices was beneficial to consumers and who were therefore, willing not to demand tax invoices, which was the condition for not paying VAT inclusive prices.

The other sub-theme that supported the subjective norms as a factor for VAT compliance was perceptions of VAT money. In general, interviewees indicated that there were several taxpayers’ perceptions towards VAT money paid to, or refunded by TRA. For example, taxpayers perceived VAT money paid to TRA as business loss, additional tax, and addition business cost. They also perceived that it was not their responsibility or it was simply an added burden to their businesses to collect VAT. Taxpayers did not want to accept the fact that they collect VAT on behalf of TRA. In case of VAT refund, they taxpayers perceived it as additional money and they were willing, for example, to forge documents in order to claim VAT refund. According to interviewees, these taxpayers’ perceptions appeared to form a major part of taxpayers’ beliefs in dealing with TRA and the majority of them appeared to be willing to align their intended behaviour along these beliefs. The following quote indicates this perception:

‘...the major problem is that taxpayers perceive VAT as additional tax and burdensome to their businesses ... for VAT registered taxpayer when they hold VAT money in their hands they consider it as their own money...’ [Interviewee: Regional manager, 6]

One interviewee was surprised by these taxpayers’ perceptions and excuses they offered for their non-compliant behaviour as indicated in the following quote:

‘...their excuses are very surprising, they will say, “I used the VAT money to pay fees for my kids...or to pay medical expenses for my wife, etc.” [Interviewee: Tax auditor, 1]

Taxpayers' patriotism was the third and last sub-theme that supported subjective norms as a factor for VAT compliance. Patriotism can be defined as 'an individual's sense of loyalty to his or her country. It is a love of your country and willingness to defend it'.²⁴ Overall, interviewees indicated that the lack of patriotic behaviour among taxpayers formed part of subjective norms that explained taxpayers' behavioural intentions as they were dealing with TRA. Interviewees indicated that non-compliant behaviour that led to the non-compliant taxpayers gaining financially was considered prestigious. This is indicated in the following quote:

'...we Tanzanians are not patriotic when it comes to paying taxes to our country ... in our society someone who is truthful in paying taxes will mostly be perceived as a fool ... and a person evading paying taxes is considered by the society as very clever and can even be admired ...people will "point to him/her" as an exemplar in successfully exploiting the weaknesses in the government system ... people will say "do you see that man/woman, ... that person is exceptional, he/she has a very big business but he/she does not pay taxes!" ...people do not see the importance of paying taxes ...' [Interviewee: Manager Compliance, 7]

Taxpayers' patriotism and in particular the perception that non-compliant behaviour is prestigious is not an isolated phenomenon in Tanzania. For example, it is related to the lenient behaviour in fighting corruption in the Tanzanian society as found by Lawson and Rakner (2005). They found that:

'... A Tanzanian leader who acts as a patriarch, providing material benefits to the community, may enjoy a great deal of legitimacy, even if the benefits he or she distributes were corruptly acquired. Conversely, leaders who struggle to uphold the ideals of transparency and good governance, but do not materially provide, may be rejected by their community and regarded as unaccountable...' (Lawson and Rakner, 2005, p. 19).

Subjective norms as a VAT compliance factor is related to 'tax morale', which is the 'intrinsic motivation for individuals to pay tax' (Alm and Torgler, 2006, p. 225). Literature shows a person's tax morale is a function of their values, which influenced their social norms (Alm, Sanchez and De Juan, 1995; Alm and McClellan, 2012;

²⁴ Extracted from an online Oxford Learner's Dictionary, available at <http://www.oxfordlearnersdictionaries.com/definition/english/patriotism>. Accessed on 19th July 2014.

Wenzel, 2004a). In the current study, the three sub-themes of subjective norms – the culture of not issuing tax invoices, the incorrect perceptions about VAT money and the lack of taxpayers’ patriotism were the outcome of the influence of social norms regarding VAT compliance in Tanzania. This finding is consistent with the literature that supports the proposition that the most influential non-economic factor on tax compliance is the one, which includes both personal norms and subjective norms (Bobek, Roberts and Sweeney, 2007; Wenzel, 2004b; Wenzel, 2005).

c) VAT compliance and perceived behaviour control

The discussion and all quotes under this section are based on Table 2A.7 in appendix 2A. Table 6.8 presents a theme termed *perceived behaviour control*, and is a summarised presentation of Table 2A.7. It shows a summary of sub-themes, their respective frequencies, and the number of interviewees, who responded to the interview question relating to this theme.

Table 6.9: Perceived behaviour control as a VAT compliance factor

Theme	F	Sub-theme	F	Indicators	F	No. of Interviewees
Perceived behaviour control	62	Tax knowledge as a resource	39	Limited acquired tax knowledge	27	19
				Use of own tax knowledge	7	5
				Accessing tax consultancy	5	5
		Other evasion opportunities	12		6	
		Acceptability of cash economy	11		11	

*F stands for frequency

Perceived behavioural control can be defined as an individual’s beliefs regarding the presence or absence of resources and opportunities, as well as the obstacles and impediments to perform a specific behaviour (Ajzen, 1991). It is the perceived incentives or disincentives to behaviour that determines the level of confidence that a taxpayer’s intention can be realised by performing a particular behaviour.

In this study, perceived behavioural control as a VAT compliance factor was indicated in three sub-themes, tax knowledge as a resource (39/62), in other evasion

opportunities (12/62) and in the acceptability of cash economy (11/62). The three sub-themes were noted from interviewees answering interview questions 5i and 7e (see Table 6.2, section 6.6.1).

Interviewees noted that the tax knowledge as a resource to taxpayers appeared to strengthen or weaken the confidence of taxpayers' behaviour in dealing with TRA. Three indicators of this sub-theme were noted in interviewees responses; limited acquired tax knowledge, the use of own tax knowledge and accessing tax consultancy.

'Limited acquired tax knowledge' had the highest frequency (27/39) as an indicator of tax knowledge as a resource. It represents the extent to which tax knowledge could be used by taxpayers as a resource in complying or not complying with VAT law. According to interviewees, the level of most small taxpayers' tax knowledge and the overall understanding of all tax laws were very low. Interviewees indicated that the general illiteracy of the majority of taxpayers was one of the major causes of VAT compliance problems. Interviewees also indicated that the provision of tax education and its acceptability to the taxpayers was a challenge to TRA. The limited acquired tax knowledge and the problem it caused in VAT compliance was indicated in the following quote:

'...most of our small taxpayers have very low levels of education ... 95% of our small taxpayers does not have any knowledge in book-keeping... and our job becomes like that of police officers ... The main factor is the ignorance of our taxpayers ...but they send un-qualified people to attend the tax seminars that we organise. For example, they send their housemaids who do not know anything about business. We end up educating wrong people ...' [Interviewee: Manager Compliance, 5]

Another indicator of tax knowledge as a resource was the use of taxpayers' own tax knowledge or access to knowledge. Interviewees indicated that most large taxpayers had good knowledge of tax matters and they were able to use this resource to their advantage. The use of knowledge included employing their own tax accountants, and using the expertise of these tax accountants to minimise their VAT liabilities as indicated in the following quote:

'...yes, most large taxpayers make intentional or deliberate mistakes in order to reduce their VAT liabilities. This is because most of them have good tax knowledge, or they are

able to employ tax accountants to deal with their VAT issues...' [Interviewee: Regional manager, 5]

Indicating the difference between small taxpayers and large taxpayers in terms of using tax knowledge as a resource in VAT compliance, one interviewee commented in the following quote:

'...for those who have good tax knowledge, especially large taxpayers, they make intentional mistakes. For small taxpayers, most of the time they don't intend to be non-compliant but it is because of very limited VAT knowledge and poor record keeping...' [Interviewee: Manager Compliance, 7]

The other indicator of tax knowledge as a resource was taxpayers' ability to access tax consultants. Logically, the use of tax consultants by taxpayers would be expected to improve tax compliance. However, evidence from interviewees' responses indicates that the ability to access tax consultancy had an overall negative effect on VAT compliance in Tanzania. Interviewees indicated that for taxpayers who were able to acquire tax consultancy services, they appeared to be intentionally non-compliant. As acquiring tax consultancy services was expensive, large taxpayers were using this service to reduce their VAT liabilities as indicated in the following quote:

'...but larger taxpayers make intentional mistakes to reduce their tax due ... most of them use tax consultants [Interviewee: Tax auditor, 1]

The other sub-theme of the perceived behavioural control was the acceptability of cash economy in Tanzania. In this study, interviewees indicated that the presence of the 'option' that traders can deal or transact with cash was an opportunity to taxpayers in two ways: first, opportunity to avoid, for example, the details of their transactions appearing in bank records i.e. transaction trail if they used cheques. This helped taxpayers easily avoid non-compliance because it was difficult for TRA to capture these cash transactions, and the second opportunity was to avoid bank charges and other expenses related with business banking. Overall, banking services expenses are relatively high in Tanzania.

Therefore, as long as dealing in cash transactions and related 'gains' were perceived to be in 'their control', taxpayers appeared to be 'confident' that dealing in cash transaction was beneficial to them as indicated in the following quote:

'...the majority of our traders are involved in cash transactions in particular small and medium business ... they usually do not want to deal in cheques because of bank charges and they are trying to avoid any additional charges...' [Interviewee: Manager Compliance, 3].

In addition to tax knowledge as a resource and the acceptability of cash economy (discussed in the preceding paragraphs), there were other evasion opportunities indicated in interviewees responses. These opportunities created a context, which enhanced taxpayers' confidence in their non-compliant behaviour. According to interviewees, other evasion opportunities included the lack of honesty among some tax officials, corruption, and the lack of proper training, causing staff incompetence. This is indicated in the following quote:

'...our staff need to do their job and to be faithful in tax collection because corruption is the main problem.... we also have a staff problem... training 'total taxable person'²⁵ needs more than 3 months, you cannot change a person within this very short period ... "How do you walk in a forest unarmed?" because some of our staff are not competent enough ...' [Interviewee: Regional manager, 5]

Others factors included TRA's ineffectiveness and inefficiency in timely tracking false VAT refund claims, TRA's failure to deal with counterfeit EFD machines and 'fake' companies or 'brief-case' companies. The following quote very well indicates these other evasion opportunities:

'...Our taxpayers have a saying that the introduction of EFD machines is not about "technology" but they call these machines "TechKnowHow"... taxpayers are very clever, they are always ahead of us ... they install genuine EFD machines alongside counterfeit EFD machines... final consumers will be asked the type of tax invoice they need. Either the tax invoice for purpose of showing to TRA officers (generated by the counterfeit machines) or the genuine tax invoices ... and the genuine tax invoices means that the consumer will pay more (i.e. including VAT), but for the counterfeit tax invoice, a consumer will pay less ... as a result VAT revenue is not collected ...[Interviewee: Manager Compliance, 7]

²⁵ According to interviewees, a total taxable person is a tax official who is academically and professionally trained to have the ability to administer all types of taxes. For example, TRA combining VAT and income tax under domestic revenue department necessitated the training of tax officials who were able to administer both VAT and income tax.

The literature identifies opportunities on tax evasion as an important factor in non-compliance (for example, see Robben *et al.*, 1990; Antonides and Robben, 1995; Maciejovsky, Kirchler and Schwarzenberger, 2007). In an experimental study conducted by Robert et al. (1990), they found that ‘greater opportunity to evade taxes will lead to increased evasion’ (p. 353). In the current study, three conditions²⁶ that were opportunities or resources for non-compliant behaviour were identified in interviewees’ responses. The literature also indicates that the existence of incentives/disincentives to perform a particular behaviour will determine the level of taxpayers’ behavioural confidence. For example, the higher the detection likelihood the less a taxpayer will feel confident to engage in a non-compliant behaviour (Klepper and Nagin, 1989c; Fischer, Wartick and Mark, 1992).

6.3.3 Content analysis based on business size

This sub-section continues the discussion of the results of directed content analysis. It discusses VAT compliance factors relating to business size. The literature review on business size was covered in sub-section 3.3.3.

Table 6.10: Business Size as a VAT Compliance Factor

Theme	F	Sub-theme	F	No. of Interviewees
Business characteristics	32	Business size	26	10
		Type of business (industry)	6	4

*F stands for frequency

The nature of the business, which taxpayers were conducting, appeared to have some influence in how taxpayers were complying with VAT law. According to interviewees, taxpayers’ business characteristics (32) that influenced VAT compliance were business size (26/32) and type of business (industry) (6/32) (Table 6.1). Interviewees’ responses that generated ‘taxpayers’ business characteristics’ as a general issue came from answering interview question 1c - are there any patterns in level of

²⁶ The conditions were the acceptability of cash economy, tax knowledge as a resource and other evasion opportunities like lack of honesty among some tax officials, corruption and limitations in TRA staff quality and quantity.

compliance between traders' segmentation (small, medium, and large)? (See Appendix 1b).

The general issue that arose with regard to business size was that large taxpayers were more manageable when it came to TRA enforcing VAT compliance than was the case in dealing with small taxpayers. For example, it was easy to manage large taxpayers because majority of them kept proper books of accounts and they were quick, for example, in acquiring current tax knowledge and in adapting to new technology like the use of e-filing and electronic transfer of VAT payments i.e. the use of TISS. Interestingly, because of this easy manageability of large taxpayers some interviewees suggested that large taxpayers were more compliant than small taxpayers were. The manageability of large taxpayers was indicated in the following quote:

'...Yes, we have large, medium and small taxpayers. Large taxpayers always comply more than small taxpayers do. Large taxpayers are easy to manage as they keep proper books of account, either by themselves or using tax consultants...' [Interviewee: Regional manager, 3]

In relation to small taxpayers, interviewees indicated that TRA was having trouble in managing VAT compliance for these small taxpayers. For example, most small taxpayers were struggling to pay VAT on time and poor record keeping meant that tracking transactions to enforce compliance was very difficult for TRA.

'...yes, we do have segmentation... the level of VAT compliance between large taxpayers and small taxpayer is quite different. Large taxpayers always comply more with VAT than small taxpayers... we normally have problems with small taxpayers... we don't have much problem with large taxpayers; they always submit their VAT return electronically and on time...we have major problems monitoring medium and small taxpayers [Interviewee: Principal tax officer, 2]

6.3.4 Summary and conclusion

This section has presented the results of content analysis of the qualitative data, which was collected through semi-interviews. The overall findings indicate that the evidence extracted from interviewees' responses significantly supported economic and behavioural theories, which provided a conceptual framework for this analysis. Furthermore, the results of this content analysis appear to be significantly consistent

with the results from regression. Generally, qualitative content analysis provides corroboration for quantitative result in hypothesis testing as further discussed in chapter 8.

Chapter Seven

Results and findings-quantitative

7.1 Introduction

This chapter reports the results of the survey of SMEs taxpayers. The chapter starts with descriptive statistics, followed by factor analysis. In addition, the chapter presents diagnostic tests, and proceeds with regression analysis and results. The results discussion is in reference to a particular survey question and indicated by the use of squared brackets. For example, [1] refers to question “1” or [a] refer to question “a” of the relevant question.

7.2 Descriptive statistics

This section presents the descriptive statistics for this study, which includes number of distributed questionnaires, response rate, respondents’ profile, and descriptive statistics of dependent and independent variables.

7.2.1 Distributed Questionnaire and Response Rate

Table 7.1 summarise the survey sample and response rates for each tax region. The researcher distributed 350 questionnaires, 50 questionnaires to each of the seven tax-regions. At the end of data collection, 205 questionnaires were returned representing 59% of the total sample. The highest response rate is 74% (Ilala tax region) and the lowest is 38% (Singida tax region), which represents the highest and the lowest regional taxpayers populations respectively.

Table 7.1: Summary of Distributed Questionnaires and Response Rate

No.	Tax region	No. of Distributed Questionnaires	No. of respondents	Response Rate
1	Ilala	50	37	74%
2	Kinondoni	50	34	68%
3	Arusha	50	31	62%
4	Temeke	50	29	58%
5	Mwanza	50	32	64%
6	Dodoma	50	23	46%
7	Singida	50	19	38%
Total		350	205	59%

Source: Survey data and own computation

7.2.2 Respondents' profile

Table 7.2 reports the descriptive statistics for respondents' profile and general business related information. Respondents were predominantly male (N = 157, 77%) and aged 31- 40 years (M = 3.33, SD = 1.032). The SMEs are dominated by wholesale and retail trade sector industry (N = 77, 38%). The largest group of the respondents have been in business for a period less than 11 years (M = 1.32, SD = .652), and employed less than 21 people (M = 1.47, SD = 1.946). They have been VAT registered taxpayers for the period less than 11 years (M = 1.12, SD = 337). The majority of the respondents indicated that, they were not entitled to receive VAT refund (N =140, 68%).

Table 7.2: Respondents' Profile

No.	Biographical variables:	N	Freq.	%	Mean	Mode	Std. Dev.	Min	Max
1	Gender [1]:	205							
	Male		157	77					
	Female		48	23					
2	Industry-Sector [3]								
	Wholesaler and Retailer		77	38					
	Hotels, Tourism and Restaurants		36	18					
	Building Construction and Hardware		39	19					
	Education and Consultancy		8	4					
	Real Estate and Renting Business		11	5					
	Health and Beauty		8	4					
	Agriculture Livestock and Forestry		2	1					
	Transportation storage and Communication		17	8					
	Manufacturing		7	3					
3	Entitled for VAT refund [15]:								
	Yes		65	32					
	No	140	68						
4	Age [2]				3.33	3	1.032	1	6
5	Years of Business [4]				1.32	1	.652	1	4
6	Number of Employees [5]				1.47	1	1.946	1	6
7	Years of VAT registration [6]				1.12	1	.337	1	3

Note: Reference to a particular survey question are indicated by the use of squared brackets, example [1] refer to question "1"

7.2.3 Dependent variables-measures of VAT compliance

To measure VAT compliance respondents were asked seven questions (see Table 7.3, next page). The first question aimed to understand taxpayers' type of VAT registration decision. The question asked, "How did you register for VAT purpose?" ('voluntarily registration = 0, enforced registration=1'), (T_VAT_REG) [7]²⁷. To measure timely submission of VAT returns, the question asked, "Do you submit your VAT returns on time?" ('Yes = 0', 'No = 1'), (VAT_RTN_ON_TM) [8]. The third question intends to understand if taxpayers notify an error of their VAT returns to TRA, so the question asked. "If it comes to your attention that there is an over/under payment in the VAT returns submitted, would you notify the TRA?" ('Yes = 0', 'No = 1'), (ERR_VAT_RTN) [14].

The fourth question intends to understand the frequency of taxpayers submitting their VAT returns on time. The question asked, "How often are your VAT returns made on time?" ('Very Often = 1', 'Often = 2', 'Sometimes = 3', 'Rarely = 4', 'Never = 5'), (N_TM_SUB) [9]. To measure if respondents were involved in cash transaction, the question asked, "How often have you been involved in cash transaction so as to reduce VAT payments?" ('Very Often = 1', 'Often = 2', 'Sometimes = 3', 'Rarely = 4', 'Never = 5'), (INV_CASH_TRS) [19]. Further questions comprised hypothetical statements about attitudinal behaviour, "If there was absolutely no chance of being caught I would have paid less VAT than I should" [LES_VAT_PAID [22(c)], and "I sometimes make intentional mistake to reduce my VAT liabilities" [INTMSK_REDC_VAT) [22(e)]. For both questions respondents were asked to indicate the extent to which they agree or disagree with the statements ('Strong disagree = 1', 'Disagree = 2', 'Neutral = 3', 'Agree = 4', 'Strong agree = 5').

²⁷ The bracketed (...) terms are abbreviations of the questions; for example, 'T_VAT_REG' stand for 'Types of VAT Registration decision'. In addition, the reference to a particular survey question is indicated by the use of squared [...] brackets; for example [7] refers to question "7".

Table 7.3: Dependent Variables

No.	Dependent variables-measure of tax compliance	N	Freq.	%	Mean	Mode	Std. Dev.	Min	Max
1	Types of VAT Registration decision (T_VAT_REG)[7]								
	Voluntarily registration	205	116	57					
	Enforced registration		87	43					
2	Timely submission of VAT Returns (VAT_RTN_ON_TM) [8]								
	Yes	205	181	88					
	No		24	13					
3	Notifying error to TRA (ERR_VAT_RTN) [14]								
	Yes	205	151	75					
	No		49	25					
4	Frequency of timely submission (N_TML_SUB) [9] ("Very often = 1" "Often = 2" "Sometimes = 3" "Rarely = 4" "Never = 5")	204			1.68	1	.878	1	5
5	Involvement in cash transaction (INV_CASH_TRS) [19] ("Very often = 1" "Often = 2" "Sometimes = 3" "Rarely = 4" "Never = 5")	204			3.25	5	.1446	1	5
6	Theoretical evasion (LES_VAT_PAID) [22(c)] ("Strong disagree = 1" "Disagree = 2" "Neutral = 3" "Agree = 4" "Strong agree = 5")	204			3.19	4	1.488	1	5
7	Intentional mistakes (INTMSK_REDC_VAT) [22(e)] ("Strong disagree = 1" "Disagree = 2" "Neutral = 3" "Agree = 4" "Strong agree = 5")	203			2.45	2	1.335	1	5

Note: Reference to a particular survey question are indicated by the use of squared brackets, example [1] refer to question "1"

From these questions seven dependent variables were developed: First, Type of VAT registration decision (T_VAT_REG), [voluntarily registration=0, enforced registration=1]. Second, timely submission of VAT returns (VAT_RTN_ON_TM), [yes=0, no=1]. Third, notifying error to TRA (ERR_VAT_RTN), [yes=0, no=1]. Fourth, frequency of timely submission of VAT returns (N_TML_SUB_VAT), [very often = 1, often = 2, sometimes = 3, rarely = 4, never = 5]. Fifth, Involvement in cash transactions (INV_CASH_TRS), [very often = 1, often = 2, sometimes = 3, rarely = 4, never = 5]. Sixth, theoretical evasion, i.e. paying less VAT if there zero risk of being detected (LES_VAT_PAID), and seventh, intentional mistake (INTMSK_REDC_VAT) [strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5].

As indicated in Table 7.3 above, the majority of the respondents indicated that they voluntarily registered for VAT purpose ($N = 116$, 57%), and ($N = 87$, 43%) were enforced registered. Although the question allowed respondents to indicate any other ways of how they registered, there was no response [7]. Respondents also agreed that they made timely submission of VAT return ($N = 181$, 88%), while ($N = 24$, 13%) said they did not submit their VAT returns on time [8]. To further understand respondents' compliance behaviour, they were asked to indicate whether or not they would notify TRA if they noticed an error in their VAT returns after submission ($N = 151$, 75%) answered YES and ($N = 49$, 25%) answered NO [14].

The results also indicate that respondents very often submitted their VAT returns on time [9] ($M = 1.68$, $SD = 0.878$), but there was agreement that they would pay less VAT if there was absolutely no chance of being caught [22(c)] ($M = 3.19$, $SD = 1.488$). However, they indicated that have never been involve in cash transactions [19] ($M = 3.25$, $SD = 0.145$) and disagreed to the fact that they sometimes made intentional mistakes to reduce their VAT liabilities [22(e)] ($M = 2.45$, $SD = 1.335$).

7.2.4 Independent explanatory variables

These variables are derived from the economic and behaviour theories discussed previously. Table 7.4 report descriptive statistics for the independent variables: use-of-Tax Advisers, non-user-of Tax Advisers, source of advice and information, attitude and norms of taxpayers towards VAT compliance, perception of fairness, relationship between tax officials and taxpayers, VAT audit probability and VAT sanctions.

To assess the extent of, and reasons for businesses using or not using tax advisers in preparing VAT returns and other VAT related issues, respondents were asked to indicate whether they agreed or disagree with pre-set usage statements. Two questions were asked, one for user-respondents [10] and one for non-user-respondents [11]. In general, users of Tax Advisers respondents indicated disagreement that they used tax advisers either to reduce their VAT liability [b] ($M = 2.41$, $SD = .931$), or that it hinders their business's ability to generate knowledge in complying with VAT legislation [j] ($M = 2.44$, $SD = 1.292$). However, they indicated that they used tax advisers to increase effectiveness in dealing with VAT matters [k] ($M = 3.18$, $SD = 1.272$). While non-users of tax advisers respondents disagreed they were not using a tax adviser in order to avoid acquisition of business's VAT knowledge [e] ($M = 2.91$, $SD = 1.146$). However, they agreed to the fact that they did not use tax advisers because they have no intention to reduce VAT liabilities ($M = 2.80$, $SD = 0.1.247$), and they used other assistance form: relatives ($M = 2.89$, $SD = 1.098$), and friends ($M = 2.96$, $SD = 1.098$).

Respondents were required to indicate the source of advice and information that helped them to comply with VAT legislations [12]. The respondents generally did not use the Taxpayers Association of Tanzania (TATA) [g] ($M = 1.79$, $SD = 1.026$). However, many agreed to using TRA website and newsletters [a] ($M = 3.14$, $SD = 1.344$), and accounting firms' training [e] ($M = 3.15$, $SD = 1.266$). The relatively strong disagreement of the TATA as a source of advice and information to taxpayers is an indication of the questionable nature of the role played by TATA. Portraying itself as representing the taxpayers, one would have normally expected the association to receive positive perception from taxpayers.

Respondents were also required to indicate their attitudes and norms towards VAT compliance [22]. In addition, respondents agreed that under declaring of VAT liabilities contributes to their business profit [b] ($M = 2.99$, $SD = 1.421$), and that VAT compliance was very common in their line of business [f] ($M = 2.99$, $SD = 1.314$). However, respondents took a neutral stand on the statement indicating fulfilment of their personal, moral and ethical obligations as a consequence of complying with VAT legislation was low [i] ($M = 2.62$, $SD = 1.027$).

Table 7.4: Independent Variables

No	Independent variables	N	Freq.	%	Mean	Mode	Std. Dev.	Min	Max
1	Use-of-Tax Adviser [10] ("Strong disagree = 1" "Disagree = 2" "Neutral = 3" "Agree = 4" "Strong agree = 5")								
	a) VAT complexity	108			3.58	4	1.312	1	5
	b) Reduce VAT liability	107			2.41	2	1.189	1	5
	c) Reduce TRA audit visit	107			3.07	4	1.341	1	5
	d) Ensure VAT compliance	108			3.87	4	1.051	1	5
	e) Learn VAT matters	107			3.87	4	1.082	1	5
	f) Save time	108			3.44	4	1.320	1	5
	g) VAT returns assessment	108			3.91	4	1.028	1	5
	h) Knowledge of VAT legislation	108			4.05	4	.931	1	5
	i) VAT practical experience	108			3.61	4	1.274	1	5
	j) Limit acquisition of organisation's VAT knowledge	108			2.44	2	1.292	1	5
	k) Increases effectiveness in dealing with VAT matters	107			3.18	4	1.272	1	5
2	Non-user-Tax Adviser [11] ("Strong disagree = 1" "Disagree = 2" "Neutral = 3" "Agree = 4" "Strong agree = 5")								
	a) Expensive	97			3.49	5	1.415	1	5
	b) Sufficient VAT knowledge				3.36	4	1.192	1	5
	c) Practical experience of VAT legislations				3.11	4	1.154	1	5
	d) Develop own awareness of changes in VAT legislations				3.14	3	1.041	1	5
	e) Limit acquisition of organization's VAT knowledge				2.91	2	1.146	1	5
	f) Others' assistance: friends				2.96	4	1.098	1	5

No	Independent variables	N	Freq.	%	Mean	Mode	Std. Dev.	Min	Max
	g) Others' assistance: relatives				2.89	4	1.098	1	5
	h) Enough time to deal with VAT matters				3.16	4	1.124	1	5
	i) No intention to reduce VAT liabilities				2.80	4	1.247	1	5
	j) Business confidentiality				3.12	4	1.409	1	5
3	Source of advice and information [12] ("Strong disagree = 1" "Disagree = 2" "Neutral = 3" "Agree = 4" "Strong agree = 5")								
	a)TRA website and newsletter	196			3.14	4	1.344	1	5
	b)Accounting firms newsletters and tax bulletins	195			3.20	4	1.212	1	5
	c)Law firms newsletters and tax bulletins	195			2.94	2	1.208	1	5
	d)TRA training	198			3.47	4	1.169	1	5
	e)Accounting firms training	199			3.15	4	1.266	1	5
	f)Uses of law firms training	193			2.83	2	1.253	1	5
	g)Uses of TATA training	193			1.79	1	1.026	1	5
4	Attitude and Norms of taxpayers towards VAT Compliance [22] ("Strong disagree = 1" "Disagree = 2" "Neutral = 3" "Agree = 4" "Strong agree = 5")								
	a)VAT monies perceived as business funds	204			3.13	4	1.453	1	5
	b)Under declaring VAT liabilities contribute to business profit	204			2.99	4	1.421	1	5
	d)Unknowingly I sometimes make unintentional mistake to VAT returns	202			3.29	4	1.237	1	5
	f)VAT compliance is very common in my line of business	203			2.99	4	1.314	1	5
	g)Feeling moral obligation to honestly declare correct VAT liabilities	204			3.34	4	1.195	1	5
	h)Complying with VAT law will result in fulfilment of my personal, moral and ethical obligations	204			3.37	4	1.177	1	5

No	Independent variables	N	Freq.	%	Mean	Mode	Std. Dev.	Min	Max
	i)Fulfilment of my personal, moral and ethical obligations as a consequence of my complying with VAT legislation is low	204			2.62	3	1.027	1	5
5	Perception of Fairness [23] (“Strong disagree = 1” “Disagree = 2” “Neutral = 3” “Agree = 4” “Strong agree = 5”)								
	a)Fairness of the VAT system is important to its acceptability	204			3.984	4	.830	1	5
	b)Fairness of the VAT system is important to achieve smooth functioning of the TRA				4.11	4	.780	1	5
	c)Compared to the VAT I pay, I receive too few public services				4.04	5	1.127	1	5
	d)It’s unfair that some business pay less while in the same line of business				3.99	5	1.092	1	5
	e)TRA should make sure that everyone pays the fair share of VAT liability				4.32	5	.826	1	5
6	Relationship between tax officials and taxpayers [24] (“Strong disagree = 1” “Disagree = 2” “Neutral = 3” “Agree = 4” “Strong agree = 5”)								
	a)Good relationship with all VAT officers	204			3.16	4	1.352	1	5
	b)Get on well with a minority of VAT officers				3.24	4	1.264	1	5
	c)TRA official's attitudes is helpful in discussion VAT matters				3.16	4	1.190	1	5
	d)We tend to be less friendly with VAT officers				2.60	2	1.226	1	5
7	Business been audited in the past five years [20]								
	Never	205	60	29.6					
	One Audit		44	21.7					
	Two audit		28	13.8					
	Three Audits		17	8.3					
	More than three audits		54	26.3					
8	VAT Audit Probability [21] (“Very low = 1” “Low = 2” “Neutral = 3” “High = 4” “Very High = 5”)								

No	Independent variables	N	Freq.	%	Mean	Mode	Std. Dev.	Min	Max
	a)Probability that TRA finds out business receive cash payments	203			2.63	1	1.269	1	5
	b)Probability that TRA finds out business do not issue tax invoices	204			2.85	4	1.295	1	5
	c)Probability of being caught by TRA if under-declare VAT liability	203			2.98	4	1.286	1	5
	d)Probability of audited taxpayer changing their tax compliance behaviour	202			3.26	4	1.076	1	5
	e)Probability of un-audited taxpayers changing their tax compliance behaviour	202			2.94	4	1.204	1	5
9	VAT Sanctions [26] (“Very high = 1” “High = 2” “Normal = 3” “Low = 4” “Very low = 5”)								
	a)Relative influence of fines	205			2.82	1	1.456	1	5
	b)Relative influence of close of business				3.02	5	1.575	1	5
	c)Relative influence of interest				3.28	5	1.395	1	5
	d)Relative influence of publication of names of tax evaders				3.49	5	1.533	1	5
	e)Relative influence of imprisonment				3.53	5	1.708	1	5

Note: Reference to a particular survey question are indicated by the use of squared brackets, example [1] refer to question “1”

Furthermore, respondents were required to indicate their fairness perception towards VAT system [23]. Respondents agreed that fairness was important to its acceptability [a] ($M = 3.984$, $SD = 0.830$) and it was unfair that some businesses paid less while they operated in the same line of business [d] ($M = 3.99$, $SD = 1.092$). Further, they perceived that they paid more than they received in terms of public goods [c] ($M = 4.04$, $SD = 1.127$).

In addition, respondents were asked how they perceive their relationship with tax officials [24]. Respondents disagreed that they 'tended to be less friendly with VAT officers' [d] ($M = 2.60$, $SD = 1.226$). However, they agreed that they either had 'good relationship with VAT officers' [a] ($M = 3.16$, $SD = 1.352$), 'TRA official's attitude was helpful' [c] ($M = 3.16$, $SD = 1.190$) or 'got on well with minority of VAT officers' [b] ($M = 3.24$, $SD = 1.264$).

Furthermore, respondents were required to indicate their perception toward VAT auditing; firstly, by indicating if their businesses have been audited in the past five years [20] and how audit probability could change their compliance behaviour [21]. The majority respondents indicated that they had not been audited in the past five years ($N = 60$, 29%), followed by ($N = 44$, 22%) being audited once in five years. Furthermore, they strongly disagreed that the probability that TRA finds out business received cash payments [a] ($M = 2.63$, $SD = 1.269$) as compared to the probability that TRA finds out business did not issue tax invoices [b] ($M = 2.85$, $SD = 1.295$).

Finally, respondents were required to indicate their knowledge of the existing sanctions [25] and the extent to which sanctions would change taxpayers' future compliance behaviour [26]. The majority of respondents knew of the existence of fines ($N = 180$, 88%). In addition, respondents indicated that compared to other VAT sanctions fines [a] had very high influence on their compliance decision ($M = 3.53$, $SD = 1.456$).

7.3 Factor analysis

This section reports exploratory factor analysis (EFA) results for both independent variables and VAT compliance measures (see Tables 2B under Appendix 2B).

7.3.1 Factor extracted and interpretation

a) Source of advice and information

Table 2B.1 shows EFA results of variables measuring source of VAT advice [12]. This question consists of seven questions, and was represented by statements with response rated on a five point Likert-scales from 'strong agree' to 'strong disagree'. Principal axis factoring was conducted on 188 completed list wise cases with direct Oblimin rotation. The final result obtained after deleting all insignificant values was MSA value .830 which is above .5 and significant Bartlett's test result, [X^2 (DF=15) =603.76, $p < .001$]. This result indicates that, the correlation between variables is sufficiently large for factor analyses to be appropriate.

EFA results shows that six of seven the items loaded clearly and remaining items did not reach the cut-off level of 0.4. Factors were extracted using Kaiser's criteria retaining the factors which had eigenvalues over 1 (Kaiser, 1974). This result indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. The EFA results for variable explaining source of VAT advice yielded two factor solutions (eigenvalues of 3.61 and 1.04, respectively) that explain 64.5% of the total variance. This result indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. Hence, factor 3 comprised of four items representing use of professional firms' information (PRFSN_FRMS_SERV), and factor 4 comprised of two items representing TRA services (TRA_SERV).

b) Attitude and norms of taxpayers towards VAT compliance

Furthermore, Table 2B.1 shows the EFA results for variables measuring attitudes and norms [22] of taxpayers towards VAT compliance. Question 22(c) and 22(e) were not included in factor analysis as this question aims to measure VAT compliance (i.e. dependent variables). The data in this question consist of nine questions, which were developed to assess both taxpayers' attitude and norms towards VAT compliance.

These questions are represented by statements with responses rated on a five point Likert-scales from 'strong agree' to 'strong disagree'. Principal axis factoring was conducted on 203 completed list wise cases with direct Oblimin rotation. The final result obtained after deleting all insignificant values was MSA value .695 which is above .5 and significant Bartlett's test of Sphericity, [X^2 (DF=15) =530.06, $p < .001$]. This result indicates that the correlation between variables is sufficiently larger for factor analyses to be appropriate.

The results indicate that six of nine items loaded clearly, and the other items did not reach cut-off level of 0.4. Factors extracted using Kaiser's criteria retaining the factor which had eigenvalues over 1 (Kaiser, 1974). The EFA results for attitudes and norms of taxpayers towards VAT compliance yielded a two-factor solution (eigenvalues of 2.94 and 1.35, respectively) that explain 59.4% of the total variance. This result indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. Hence, factors five comprised four items, representing societal moral obligations (SOCTY_MORL_OBLG), and factor 6 comprised two items representing perception that collected VAT is a business asset (PERCP_VAT_ASET_BUSS). All social norm items loaded on one factor, i.e. societal moral obligations (SOCTY_MORL_OBLG), and all personal norm items loaded on the other factor, i.e. collected VAT is a business asset (PERCP_VAT_ASET_BUSS).

c) Fairness and relationship between tax officials and taxpayers

Table 2B.1 shows EFA result of both fairness perception [23] and relationship between tax officials and taxpayers [24]. Nine questions were developed to assess taxpayers' perceived fairness of VAT system and relationship between tax officials and taxpayers. All questions were represented by statements with response rated on a five point Likert-scales from 'strong agree' to 'strong disagree'. Principal axis factoring was conducted on 203 completed list wise cases with direct Oblimin rotation. The final result obtained after deleting all insignificant values was MSA value .726 which is above .5 and significant Bartlett's test of Sphericity, [X^2 (DF=10) = 371.69, $p < .001$]. This result shows that, the correlation between variables is sufficiently larger for factor analyses.

In these questions, five of nine items loaded clearly, other items did not reach cut-off level of 0.4. The EFA results for perception of fairness yielded a two-factor solution (eigenvalues of 2.14 and 1.11, respectively) that explain 64.6% of the total variance.

This result indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. Hence, factor 7 comprised two items, representing perceived attitude and helpfulness of TRA officials (ATTD_HELP_TRA_OFFC) and factor 8 comprised two items representing perceived fairness in the VAT system (PERC_FARNES_VAT-SYTM).

d) Tax audit probability and VAT sanctions

Lastly, Table 2B.1 also report the results of both tax audit probability [21] and influence of VAT sanctions [26]. Nine questions were analysed by EFA, statements represent questions with response rated five point Likert-scales. In VAT, audit probability question response rated from 'very low' to 'very high' and influence of sanction from 'very high' to 'very low'. Principal axis factoring was conducted on 202 completed list wise cases with direct Oblimin rotation. The final result obtained after deleting all insignificant values was MSA value .688 which is above .5 and significant Bartlett's test of Sphericity $[X^2 (DF=10) = 350.99, p < .001]$. This result indicates that, the correlation between variables is sufficiently larger for factor analyses to be appropriate.

In these questions, five of nine items loaded clearly and the other items did not reach cut-off level of 0.4. The EFA results tax audit probability and influence of VAT sanctions yielded a two-factor solution (eigenvalues of 2.47 and 1.38, respectively) that explain 62.4% of the total variance. This result indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. Hence, factor 9 comprised three items, representing perceived detection likelihood (PERC_DECT_LKHOOD), and factor 10 comprised two items representing influence of VAT sanctions (VAT_SANC).

7.3.2 Dependent variables extracted from factor analysis

Table 2B.2 dependent variables shows the EFA results, seven variables relevant to VAT compliance were measured. These are, first, type of VAT registration decision (T_VAT_REG) [7]; second, timely submission of VAT returns (VAT_RTN_ON_TM) [9]; third, notifying TRA errors of VAT returns (ERR_VAT_RTN) [14]; fourth, frequency of timely submission of VAT returns (N_TML_SUB_VAT) [9]; fifth, involvement in cash transactions (INV_CASH_TRS) [19]. Sixth, theoretical evasion, i.e. paying less VAT if

there is no chance of being caught (LES_VAT_PAID) [22(c)]; and seventh, intentional mistake (INTMSK_REDC_VAT) [22(e)].

Table 2B.2 reports the measure of sampling adequacy (MSA) and Bartlett test of Sphericity tests for all VAT compliance measure variables. Principal axis factoring was conducted on 197 items list wise cases with direct Oblimin rotation. The result obtained after deleting insignificant values was: MSA value .614, which is above 0.5 and Bartlett's test, was significant, [X^2 (DF=6) =167.762, $p < .001$]. This result indicates that the correlation between variables is sufficiently large for factor analyses to be appropriate.

The EFA results for VAT compliance measure yielded two factor solutions (eigenvalues of 2.06 and 1.04, respectively) that explain 55.2% of the total variance. This result indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. In this question, four of seven items loaded clearly, and other items did not reach the cut-off level of 0.4. Hence, factor 1 comprised of two items, representing positive attitude towards VAT declaration (ATT_DECL), and factor 2 comprised of two items, representing timeliness of VAT returns (TMNESS_VAT).

7.3.3 Summary and conclusion

After removing all insignificant variables, the EFA resulted with eight explanatory variables. These are: (1) use of professional firms' information (PRFSN_FRMS_SERV); (2) use of TRA services (TRA_SERV); (3) societal moral obligations (SOCTY_MORL_OBLG); (4) perception that collected VAT is a business asset (PERCP_VAT_ASET_BUSS); (5) perceived attitude and helpfulness of TRA officials (ATTD_HELP_TRA_OFFC); (6) perceived fairness of the VAT system (PERC_FARNES_VAT-SYTM); (7) perceived detection likelihood, (PERC_DECT_LKHOOD); and (8) influence of VAT sanctions (VAT_SANC). Therefore, these independent variables were used in regression analysis (see section 7.5) to analyse their relationship with VAT compliance. Furthermore, the EFA resulted in two explanatory dependent variables. These are positive attitude towards VAT declaration (ATT_DECL) and timeliness of VAT returns (TMNESS_VAT). Therefore, these dependent variables were used in multiple OLS regression analysis (see section 7.5.3).

7.4 Diagnostic tests

7.4.1 Normality test

Table 7.5 indicates that the normality test result for independent variable age [2], years of business [4], number of employee in business [5], and years of VAT registration [6]. The null hypothesis for the Shapiro-Wilk test is that the sample data is normally distributed. The Shapiro-Wilk test rejects the null hypotheses of age [(0.901, 205), $p < .05$], years of business [(0.549, 205), $p < .05$], number of employees [(0.512, 205), $p < .05$] and years of VAT registration [(0.372, 205), $p < .05$].

Table 7.5: Test of Normality for Independent and Dependent Variables

Independent/Dependent variables	Shapiro-Wilk		
	Statistic	df	Sig.
Independent Variables			
AGE [2]	.901	205	.000
YRS_BUSN [4]	.549	205	.000
NO_OF_EMYEES [5]	.512	205	.000
YRS_VAREG [6]	.372	205	.000
Dependent Variables			
N_TML_SUB [9]	.7424	202	.000
INV_CASH_TRS [19]	.872	202	.000
LES_VAT_PAID [22(c)]	.856	202	.000
INTMSK_REDC_VAT [22(e)]	.852	202	.000

All independent variables were significantly not normally distributed. However, under the Central Limits Theorem (CLT) as a sample size approaches 30 observations the approximation to normality is “good” (Gujarati and Porter, 2010). As the sample sizes used in this research are far bigger than 30 the CLT holds allowing parametric estimations to be used. Table 7.5 also indicated the normality test result for dependent variables: number of timely submission of VAT returns (N_TM_SUB) [9], involvement in cash transactions (INV_CASH_TRS) [19], Less VAT paid (LES_VAT_PAID) [22(c)] and intentional mistakes to reduce VAT liabilities (INTMSK_REDC_VAT) [22(e)]. The null hypothesis for the Shapiro-Wilk test is that the sample data is normally

distributed. The Shapiro-Wilk test rejects the null hypothesis for N_TM_SUB [(0.742, 202), $p < .05$.] The tests also reject the null hypothesis for INV_CASH_TRS [(0.872, 202), $p < .05$], LES_VAT_PAID [(0.856, 202), $p < .05$] and INTMSK_REDC_VAT [(0.852, 202), $p < .05$]. Therefore, the test rejected the null hypotheses for each dependent variable. This meant that non-parametric tests were appropriate.

7.4.2 Multicollinearity

Multicollinearity is the condition when two or more independent variables correlate with each other (Hair *et al.*, 2010). If multicollinearity exists, it can provide spurious estimates of the relationship between dependent and independent variables. Therefore it is important to detect any multicollinearity so as to strongly determine the relationship between dependent and independent variables (Hair *et al.*, 2010). Variance inflation factors (VIF) and tolerance value measure normally used to measure the existence of multicollinearity, and the current study used these measures. These measures are simply the reciprocal of each other where VIF measures multicollinearity by inverting the tolerance value. Tolerance value is a value that measures the variability of an independent variable that is not explained by other independent variables (Hair *et al.*, 2010)²⁸. Therefore, a “large” value of VIF indicates “high” degree of multicollinearity. As a rule of thumb suggests, the VIF values above 3 most probably indicates multicollinearity, and if it is above 5, then it is very likely to indicate multicollinearity and if it is above 10, definitely there are multicollinearity problems (Hair *et al.*, 2010).

The VIF of all 10 independent variables obtained after factor analysis are presented in Table 7.6 The summary of the analysis indicates there is no significant multicollinearity between all independent variables, since all the VIF values are low than 3.

²⁸ Tolerance is calculated by $1.0 - R^2$ of the regression that is analysed without the selected independent variable. The VIF is the reciprocal tolerance: $1/1-R^2$

Table 7.6: Variance Inflation Factor (VIF) for the 10 Independent Variables

Factors	ALT_SRCE_TAX_AD VUSER	SUFF_ABLT_TMS	PRFSN_FRMS_SERV	TRA_SERV	SOCTY_INDV_MORL _OBLG	PERCP_VAT_ASET_ BUSS	ATTD_HELP_TRA_S TAF	PERC_FARNES_VAT- SYTM	PERC_PROB_DECT_ LKHOOD	VAT_SANC
ALT_SRCE_TAX_ADVUSER	-	1.222	1.129	1.246	1.256	1.198	1.254	1.256	1.249	1.233
SUFF_ABLT_TMS	1.591	-	1.585	1.580	1.480	1.632	1.623	1.579	1.626	1.590
PRFSN_FRMS_SERV	1.628	1.756	-	1.783	1.560	1.806	1.693	1.709	1.761	1.760
TRA_SERV	1.264	1.231	1.254	-	1.274	1.269	1.151	1.271	1.267	1.240
SOCTY_INDV_MORL_OBLG	1.809	1.163	1.559	1.811	-	1.800	1.782	1.714	1.770	1.754
PERCP_VAT_ASET_BUSS	1.111	1.163	1.162	1.161	1.158	-	1.165	1.085	1.164	1.117
ATTD_HELP_TRA_STAF	1.559	1.551	1.461	1.412	1.538	1.562	-	1.562	1.516	1.526
PERC_FARNES_VAT-SYTM	1.288	1.243	1.215	1.284	1.219	1.199	1.287	-	1.267	1.233
PERC_PROB_DECT_LKHOOD	1.263	1.262	1.235	1.263	1.242	1.269	1.233	1.249	-	1.119
VAT_SANC	1.343	1.330	1.330	1.332	1.326	1.312	1.337	1.310	1.206	-

7.4.3 Cronbach Alpha Scores

According to Hair *et al.* (2010, p. 125) ‘reliability is an assessment of the degree of consistency between multiple measurements of a variable’. A common measure is Cronbach’s Alpha score, which is a measure for assessing the internal consistency of a multiple-item scale (Collis and Hussey, 2013; Field, 2009; Cronbach, 1951; Peter, 1979). It indicates the extent of the relationship between each of the multiple-item scales in a questionnaire. Internal reliability of a scale is important because it is associated with the validity of a rating scale used to measure an abstract concept that is not directly observable, (for example, ‘professional firms’ information’ and ‘TRA services’). In this study, factor analysis generated 10 variables (i.e. ‘abstract concepts’); two dependent variables and eight independent variables (see section 7.3 and Table 7.7).

Table 7.7: Factor scales and related Cronbach alpha scores

No.	Factor	No. of Scales loaded from factor analysis	Cronbach's Alpha score
	Dependent variables		
1.	Positive attitudes declaration (ATT_DECL)	2	0.73
2.	Timeliness of VAT returns (TMNESS_VAT)	2	0.49
	Independent variables		
3.	Professional firms’ information (PRFSN_FRMS_SERV)	4	0.91
4.	TRA services (TRA_SERV)	2	0.65
5.	Societal and individual moral obligations (SOCTY_MORL_OBLG)	4	0.78
6.	Perception that collected VAT is a business asset (PERCP_VAT_ASET_BUSS)	2	0.88
7.	Perceived attitudes and helpfulness TRA officials (ATTD_HELP_TRA_OFFC)	3	0.82
8.	Perceived fairness in the VAT system (PERC_FARNES_VAT-SYTM)	2	0.81
9.	Perceived detection likelihood (PERC_DECT_LKHOOD)	3	0.85
10.	Influence of VAT sanctions (VAT_SANC)	2	0.70

The Cronbach's Alpha score shows the percentage of variations in a multiple-item scale considered as 'true scores' (reliable) variations. The higher the percentage, the more reliable the multiple-item scales. Generally, the acceptable criterion (level) has not been resolved, but some researchers or research methodology textbook writers have suggested that for a multiple-item scale to be considered reliable, a Cronbach's Alpha score of at least 0.7 is preferable (Collis and Hussey, 2013; Field, 2009). Furthermore, George and Mallery (2003, p. 231) provide the following rule of thumb: ' $\alpha > .9$ - Excellent, $\alpha > .8$ - Good, $\alpha > .7$ - Acceptable, $\alpha > .6$ - Questionable, $\alpha > .5$ - Poor, and $\alpha < .5$ - Unacceptable'.

Table 7.7 presents the Cronbach's Alpha scores for the multiple-item scales of the 10 factors. The table indicates 8 of the 10 multiple-item scales as having 'acceptable', 'good' or 'excellent' internal reliability (George and Mallery, 2003). One scale on 'TRA services' has a Cronbach's Alpha score of 0.65. While some authors suggest a lower limit for Cronbach's alpha score should be 0.70, a 0.60 criterion can be used for explanatory research (Robinson, Shaver and Wrightsman, 1991; F *et al.*, 2010). Only one scale on 'Timeliness of VAT returns' has a Cronbach's Alpha score of less than 0.6 with a value of 0.49. According to George and Mallery (2003) this one score is 'unacceptable'.

The way the two scales for this factor were measured could explain the low score. One scale was ordinal (1 = Very often, 2 = Often, 3 = Sometimes, 4 = Rarely, and 5 = Never) and the other was nominal with binary response (0 = Yes and 1 = No). Therefore, while four responses (1, 2, 3 and 4) of the ordinal scale are consistent with one response of the nominal scale (0 = Yes), only one response of the ordinal scale (5 = Never) is consistent with the other response of the nominal scale (1 = No). Therefore, the low value of Cronbach's Alpha could be more about this inconsistency in the measurement of the scale than the consistency of the items in defining the factor.

Overall, with the exception of 'Timeliness of VAT returns' with the cautious score as explained above, it can be stated that the scales are internally reliable (consistent or valid) in measuring the factor used in this study.

7.5 Regression analysis results

The regression analysis has three subsections, each using different VAT compliance measures with different statistical characteristics:

- 1) Subsection 7.5.1 presents the result of three binary logistic regression models using in turn the variables: (a) type of VAT registration decision, (b) timely submission of VAT returns and (c) notifying TRA of error in VAT returns.
- 2) Subsection 7.5.2 presents the results of four ordinal regression models using in turn the variables: (a) frequency of timely submission of VAT returns, (b) involvement in cash transactions, (c) theoretical evasion and (d) intentional mistake.
- 3) Subsection 7.5.3 provides the multiple OLS regression results for the two dependent variables from factor analysis (see section 7.3.2); these are (a) negative attitude towards declaration and (b) untimeliness of VAT returns.

The models are summarised in Table 7.8 and equations 1 to 9 below. In order to avoid perfect multicollinearity, industrial sector dummy 1 (IND1=Wholesale and Retail Trade) was made a reference category. Therefore, the estimation of the dependent variable T_VAT_REG (model 1) used 22 independent variables. In addition, T_VAT_REG was included as a control variable because the decision not to register voluntarily may be associated with future levels of VAT compliance. Hence, the estimation of other dependent variables used 23 independent variables. The independent variables included 13 general factors from literature review (see Table 7.8, independent variables number (1) to (5) and (14) to (21)), and 8 factors extracted from factor analysis²⁹ (see Table 7.8, independent variables number (6) to (13)). There were three samples for each model based on: i) full sample of respondents with inclusion of use of Tax adviser (TA) as a control variable³⁰, ii) the sub-sample of respondents who did not use tax advisers (Users of TA=0) and iii) the sub-sample of respondents who used tax advisers (Non-Users of TA = 1).³¹

²⁹ See section 7.3.1

³⁰ Literature indicates that the use of tax advisers can influence tax compliance (for example see Murphy and Sakurai, 2001; Klepper, Mazur and Nagin, 1991), hence, the need to control for this variable. In addition, in order to determine the differences, in explanatory power of independent variables, between users and non-users of tax advisers the models used two sub-samples of 'user of TA' and 'non-users of TA'.

³¹ These samples are hereafter referred to as Sample 1, Sample 2 and Sample 3 respectively.

Table 7.8: Summary of models and equations

	Data Analysis	Variables/Symbols	Descriptions	Quantification/Measurement
1)	Binary logistic regression	Dependent variables		
		(a) T_VAT_REG (Eq. 1)	[7] ³² Type of VAT registration decision	Voluntary registration=0, Enforced registration=1
		(b) VAT_RTN_ON_TM (Eq. 2)	[8] Timely submission of VAT returns	Yes =0, No =1
		(c) ERR_VAT_RTN (Eq. 3)	[14] Notifying TRA of errors in VAT returns	Yes =0, No =1
		Independent variables		
		(1) GENDER	[1] Taxpayer's gender	Male=0, Female=1
		(2) AGE	[2] Taxpayer's age	'Under 21'=1, '21-30'=2, '31-40'=3, '41-50'=4, '51-60'=5, '61 or over'=6
		(3) Use_of_TA	[10] Use of Tax Adviser	User of TA=0, taxpayers do not use Tax advise; User of TA=1, taxpayers use Tax adviser
		(4) YRS_BUSSN	[4] Number of years of business	'Under 11'=1, '11-20'=2, '21-30'=3, '31-40'=4)
		(5) BUSSN_SIZE	[5] Number of employees	'Under 21'=1, '21-40'=2, '41-60'=3, '61-80'=4, '81-100'=5, '101 above'=6)
		(6) PRFSN_FRMS_SERV	[12] Use of professional firms' information	
		(7) TRA_SERV	[12] Use of TRA services	
		(8) SOCTY_MORL_OBLG	[22] Societal moral obligation	
		(9) PERCP_VAT_ASET_BUSS	[22] Collected VAT is a business asset	
		(10) ATTD_HELP_TRA_OFFC	[24] Attitude and helpfulness of TRA officials	
(11) PERC_FARNES_VAT-SYTM	[23] Fairness in the VAT system			
(12) PERC_DETC_LKHOOD	[21] Detection likelihood			
(13) VAT_SANC	[26] Influence of VAT sanctions			
	IND_SEC dummies:	[3] The taxpayer's business is in:		
	(14) IND2 ³³	Hotels, Tourism and Restaurants		

³² Survey questions are indicated by the use of squared brackets, for example [7] refers to question 7 in the survey instrument in Appendix 1A

³³ IND1 is included in the model, via the constant, in order to avoid perfect multicollinearity.

	Data Analysis	Variables/Symbols	Descriptions	Quantification/Measurement
		(15) IND3	Construction and Hardware	
		(16) IND4	Education and Consultancy industry	
		(17) IND5	Real Estate and Renting Business	
		(18) IND6	Health and Beauty	
		(19) IND7	Agriculture, Livestock and Forestry	
		(20) IND8	Transportation, Storage and Communication industry	
		(21) IND9	Manufacturing	
		Dependent variables		
	2)	(a) N_TML_SUB_VAT (Eq. 4)	[9] Frequency timely submission of VAT returns	“Very often = 1, often = 2, sometimes = 3, rarely = 4, never = 5”
		(b) INV_CASH_TRS (Eq. 5)	[19] Involvement in cash transactions	“very often = 1, often = 2, sometimes = 3, rarely = 4, never = 5”
		(c) LES_VAT_PAID (Eq. 6)	[22(c)] Theoretical evasion	“strong disagree = 1, disagree = 2, neutral = 3, agree = 4, strong agree = 5”
		(d) INTMSK_REDC_VAT (Eq. 7)	[22(e)] Intentional mistakes	“strong disagree = 1, disagree = 2, neutral = 3, agree = 4, strong agree = 5”
		Independent variables	<i>All 24 independent variables above</i>	
		Dependent variables		
	3)	(a) ATT_DECL (Eq. 8)	Positive attitude towards VAT declaration ³⁴	Factor Scores Extracted from factor analysis (see section 7.3.2) and the results are presented in Appendix 2B, Table 2B.2.
		(b) TMNESS_VAT (Eq. 9)	Timeliness of VAT returns ³⁵	
		Independent variables	<i>All 24 independent variables above</i>	

³⁴ Refer to Table 2B.2 the factor loaded in dependent variable ATT_DECL was INTMSK_REDC_VAT [22(e)] and LES_VAT_PAID [22(c)].

³⁵ Refer to Table 2B.2 the factor loaded in dependent variable TMNESS_VAT was VAT_RTN_ON_TM) [8] and N_TML_SUB_VAT [9].

7.5.1 Binary logistic regression

This section reports the binary logistic regression estimates of respondents' compliance behaviour in terms of type of VAT registration decision, timely submission of VAT returns, and notifying TRA of errors in VAT returns. Samples 1 and sub-sample 2 and 3³⁶ were used in three binary logistic regression models to test the various hypotheses concerning VAT compliance in Tanzania. The three models are presented and the results of the analysis are discussed in the following three parts (a), (b) and (c).

a) Type of VAT registration decision

The dependent variable type of VAT registration decision (T_VAT_REG) is binary (voluntarily registration=0, enforced registration=1), and the reference category is 'enforced registration'. Type of VAT registration decision was estimated using model 1 as indicated below.

Binary logistic regression model 1:

$$\begin{aligned}
 T_VAT_REG = & \beta_0 + \beta_1 GENDER + \beta_2 AGE + \beta_3 Use_of_TA + \beta_4 YRS_BUSSN + \beta_5 BUSSN_SIZE \\
 & + \beta_6 PRFSN_FRMS_SERV + \beta_7 TRA_SERV + \beta_8 SOCTY_MORL_OBLG \\
 & + \beta_9 PERCP_VAT_ASET_BUSS + \beta_{10} PERC_FARNES_VAT_SYTM \\
 & + \beta_{11} ATTD_HELP_TRA_STAF + \beta_{12} PERC_DECT_LKHOOD + \beta_{13} VAT_SANC \\
 & + \beta_{14} IND2 + \beta_{15} IND3 + \beta_{16} IND4 + \beta_{17} IND5 + \beta_{18} IND6 + \beta_{19} IND7 \\
 & + \beta_{20} IND8 + \beta_{21} IND9 \\
 & + \varepsilon. \dots\dots\dots \text{Equation 1}
 \end{aligned}$$

Model 1 used Sample 1, Sample 2 and Sample 3, and the results are reported in Table 7.9 as Model 1(a), Model 1(b) and Model 1(c) respectively. In testing the model-fit using chi-square, the null model is hypothesised to be a good fit. The difference between -2LL for the best-fitting model and -2LL for the null model is the model chi-square, and it is this difference that is tested to determine its significance (Field, 2009). Furthermore, Table 7.9 indicates β estimates and corresponding $\text{Exp}(\beta)$. $\text{Exp}(\beta)$ is the odds ratio, which is given by e^β , and it

³⁶ See last paragraph, last sentence in section 7.5 – regression analysis results

estimates the extent to which changing the corresponding independent variable by one unit influences the odds ratio (Field, 2009).

Table 7.9: Summary result of Binary Logistic Regression for Model 1

Independent Variables	Dependent Variable: T_VAT_REG					
	1(a) Full sample		1(b) Users of TA		1(c) Non-Users of TA	
	B	Exp(B)^	B	Exp(B)^	B	Exp(B)^
Constant	1.717	5.568	0.482	1.620	3.354	28.604
GENDER	-1.335***	0.263	-0.897	0.408	-3.014***	0.049
AGE	-0.147	0.863	-0.004	0.996	-0.735*	0.480
Use_of_TA	-0.702*	0.496	-	-	-	-
YRS_BUSN	0.099	1.104	0.078	1.081	0.918	2.505
BUSSN_SIZE	-0.160	0.852	-0.163	0.850	-0.173	0.841
PRFSN_FRMS_SERV	-0.190	0.827	-0.339	0.713	0.372	1.450
TRA_SERV	-0.262	0.769	-0.145	0.865	-1.482*	0.227
SOCTY_MORL_OBLG	0.223	1.249	0.266	1.305	0.117	1.125
PERCP_VAT_ASET_BUSS	1.028***	2.796	0.819*	2.268	1.597***	4.940
ATTD_HELP_TRA_OFFC	0.219	1.244	0.200	1.221	0.541	1.717
PERC_FARNES_VAT_SYTM	-.650**	0.522	-0.671	0.511	-0.918*	0.399
PERC_DECT_LKHOOD	0.120	1.127	-0.264	0.768	1.769**	5.864
VAT_SANC	0.655**	1.925	0.377	1.459	1.406**	4.081
IND2	-0.878	0.416	-0.858	0.424	-0.831	0.436
IND3	-0.650	0.522	-0.157	0.855	-1.454	0.234
IND4	-2.534**	0.079	-1.513	0.220	-22.923	0.000
IND5	-22.623	0.000	-22.064	0.000	-22.654	0.000
IND6	1.361	3.902	0.768	2.156	21.724	2720139093
IND7	-0.358	0.699	0 ^a	0 ^a	-0.275	0.760
IND8	-2.704***	0.067	-22.220	0.000	-2.511*	0.081
IND9	-21.004	0.000	-21.133	0.000	-19.425	0.000
Model significance:						
N	184		97		87	
X ² df p-values	83.82 21 0.000		39.39 19 0.004		59.62 20 0.000	
-2 Log likelihood (null model)	253.31		128.97		120.32	
-2 Log likelihood (full model)	169.49		89.58		60.70	
Negelkerke Pseudo R ²	0.489		0.454		0.662	
Prediction accuracy Null/Full model	54.9%/73.4%		61.9%/77.3%		52.9%/83.9%	
Variables significance:	Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10					

Notes:

a: IND7 is excluded because there were no observations for the sample of users of tax advisers.

Table 7.9 shows that Model 1(a) was statistically significant [X^2 (DF=21, N=184) = 83.82, $p=.000$], compared to the null model. This means that, the null hypothesis is rejected and that the independent variables had a significant effect and essentially created a different model. Hence, Model 1(a) was a good fit. In addition, the Nagelkerke R^2 indicates that the full model explained almost 49% of the total variations in the type of VAT registration decision. The overall classification accuracy also went up to 73.4%, 18.5 percentage points higher than the null model, which indicates model improvement. This means, 73.4% of taxpayers were accurately classified as either registering for VAT voluntarily or were forced to register.

Model 1(a) shows seven factors were significant (at varying levels) in classifying taxpayers' type of VAT registration decision. These were gender, collected VAT is a business asset and transportation, storage and communication industry (IND8) (at 1% level of significance), fairness in the VAT system, influence of VAT sanctions and education and consultancy industry (IND4) (at 5% level of significance), and use of tax advisers (Use_of_TA) (at 10% level of significance)³⁷.

The results for Model 1(a) significantly predicts that the increase in perceptions that the collected VAT is a business asset ($\beta = 1.028$, $\text{Exp}(\beta) = 2.796$, $p < 0.01$) and that VAT sanctions influenced VAT compliance ($\beta = 0.655$, $\text{Exp}(\beta) = 1.925$, $p < 0.05$) were associated with an increase in the odds of a taxpayers' enforced VAT registration. This indicates an association with VAT non-compliant behaviour. However, five factors were negatively associated with taxpayers' enforced VAT registration. These were transportation, storage and communication industry [$(\beta = -2.704$, $\text{Exp}(\beta) = 0.067$, $p < 0.01$)], gender [$(\beta = -1.335$, $\text{Exp}(\beta) = 0.263$, $p < 0.01$)], education and consultancy industry [$(\beta = -2.534$, $\text{Exp}(\beta) = 0.079$, $p < 0.05$)], fairness in the VAT system [$(\beta = -0.650$, $\text{Exp}(\beta) = 0.522$, $p < 0.05$)] and the use of tax advisers [$(\beta = -0.702$, $\text{Exp}(\beta) = 0.496$, $p < 0.10$)]. For example, if a taxpayer was in transportation, storage and communication industry (IND8), the odds of the taxpayer being classified as an enforced VAT

³⁷ A 1% (5% or 10%) level of significance means that there was at least a 99% (95% or 90%) chance that these factors were significant in classifying taxpayers' type of VAT registration decision. This interpretation also applies to Model 1(b).

registration decreases by a factor of 0.067 ($p < 0.01$), compared to wholesale and retail trade industry (IND1).

Model 1(b) examined the sub-sample of respondents who used tax advisers. The model was statistically significant [X^2 (DF=19, N=97) = 39.39, $p = .004$] compared to the null model, which means the model was a good fit. The Nagelkerke R^2 indicates that the full model explained 45% of the total variations in the type of VAT registration decision. The overall classification accuracy of was 77.3%, 15.4 percentage points higher than the full model which indicates model improvement. Only one factor was statistically significant in classifying taxpayers' type of VAT registration decision, which was collected VAT is a business asset (at 10% level of significance).

In addition, the results for Model 1(b) significantly predicts that the increase in perceptions that the collected VAT is a business asset [$(\beta = .819, \text{Exp}(\beta) = 2.268, p < 0.10)$] were associated with an increase in the odds of a taxpayer's enforced VAT registration. This indicates an association with VAT non-compliant behaviour.

Model 1(c) examined the sub-sample of respondents who did not use tax advisers. The model was also statistically significant [X^2 (DF=23, N=87) = 59.62, $p = .000$] compared to the null model, which means the model was a good fit. The Nagelkerke R^2 indicates that the full model explained 66% of the total variations in the type of VAT registration decision. The overall classification accuracy was 83.9%, 31 percentage points higher than the full model which indicates model improvement. In Model 1(c), eight factors were statistically significant (at varying levels) in classifying taxpayers' type of VAT registration decision. These were gender and collected VAT is a business asset (at 1% level of significance), detection likelihood and influence of VAT sanctions (at 5% level of significance) and age, TRA services, fairness in the VAT system and transportation, storage and communication industry (IND8) (at 10% level of significance).

Furthermore, the results for Model 1(c) significantly predict that the increase in perceptions that collected VAT is a business asset [$(\beta = 1.597, \text{Exp}(\beta) = 4.940, p < 0.01)$], detection likelihood [$(\beta = 1.406, \text{Exp}(\beta) = 5.864, p < 0.05)$] and influence of VAT sanctions [$(\beta = 1.406, \text{Exp}(\beta) = 4.081, p < 0.05)$], were associated with an

increase in the odds of a taxpayer's enforced VAT registration. This indicates an association with VAT non-compliant behaviour. Moreover, gender [$\beta = -3.014$, $\text{Exp}(\beta) = 0.049$, $p < 0.01$], transport, storage and communication industry [$\beta = -2.511$, $\text{Exp}(\beta) = 0.081$, $p < 0.10$], TRA services [$\beta = -1.482$, $\text{Exp}(\beta) = 0.227$, $p < 0.10$], fairness in the VAT system [$\beta = -0.918$, $\text{Exp}(\beta) = 0.399$, $p < 0.10$] and age [$\beta = -0.735$, $\text{Exp}(\beta) = 0.480$, $p < 0.10$] were negatively associated with taxpayers' enforced VAT registration. For example, a one-unit increase in a taxpayer's perception that collected VAT is a business asset increases the odds of classifying the taxpayer as an enforced VAT registration by a factor of 4.94.

Generally, the results for Model 1(a) and Model 1(c), indicates that gender, perception that collected VAT is a business asset, and influence of VAT sanctions were the most significant, in a statistical sense, in classifying taxpayers' type of VAT registration decision in Tanzania. These results indicate that female compared to male taxpayers, were more likely to be classified as registering voluntarily. Additionally, results indicate that the perceptions that collected VAT is a business asset and influence of VAT sanctions were negatively associated with taxpayers' registering voluntarily. It is also shown in Table 7.9 that Model 1(c) with non-users of tax advisers as a sample had more significant factors (8 factors) than Model 1(b) with users of tax advisers as a sample (1 factor). This appears to be consistent with literature, which shows that tax advisers can influence compliance behaviour (Klepper, Mazur and Nagin, 1991; Klepper and Nagin, 1989a).

b) Timely submission of VAT returns

The second compliance measure is the dependent variable timely submission of VAT returns (VAT_RTN_ON_TM), which is binary (yes =0, no =1). The reference category is 'no', which is 'untimely submission of VAT returns'. Untimely submission of VAT returns was estimated using Model 2 as indicated below.

Binary logistic regression Model 2:

VAT_RTN_ON_TM

$$\begin{aligned}
 &= \beta_0 + \beta_1 GENDER + \beta_2 AGE + \beta_3 \text{Use_of_TA} + \beta_4 YRS_BUSSN + \beta_5 BUSSN_SIZE \\
 &+ \beta_6 PRFSN_FRMS_SERV + \beta_7 TRA_SERV + \beta_8 SOCTY_MORL_OBLG \\
 &+ \beta_9 PERCP_VAT_ASET_BUSS + \beta_{10} PERC_FARNES_VAT_SYTM \\
 &+ \beta_{11} ATTD_HELP_TRA_STAF + \beta_{12} PERC_DECT_LKHOOD + \beta_{13} VAT_SANC \\
 &+ \beta_{14} IND2 + \beta_{15} IND3 + \beta_{16} IND4 + \beta_{17} IND5 + \beta_{18} IND6 + \beta_{19} IND7 \\
 &+ \beta_{20} IND8 + \beta_{21} IND9 + \beta_{22} T_VAT_REG \\
 &+ \varepsilon. \dots\dots\dots \text{Equation 2}
 \end{aligned}$$

As in part (a), Model 2 used Sample 1, Sample 2 and Sample 3, and the results are reported in Table 7.10 as Model 2(a), Model 2(b) and Model 2(c) respectively. Table 7.10 show that the full Model 2(a) was statistically significant [X^2 (DF=22, N=184) = 47.36, $p=.001$] compared to the null model. Hence, the estimates fit the data at an acceptable level. The Nagelkerke R^2 indicates that the full model predicted almost 43% of the total variations in timely submission of VAT return. Moreover, the overall classification accuracy was improved to 90.2%, which is 2.7 percentage points higher than the null model. This means by including independent variables in model 2(a), 90.2% of taxpayers were accurately classified as either agreeing or not agreeing to have submitted VAT returns on time. Five factors were significant (at varying levels) in classifying taxpayers' VAT returns submission behaviour in terms of time. These factors were perception that collected VAT is a business asset (at 1% level of significance), societal moral obligation and detection likelihood (at 5% level of significance), and real estate and renting business industry (IND5) and agriculture, livestock and forest industry (IND7) (at 10% level of significance).

Table 7.10: Summary result of binary logistic regression for Model 2

Independent Variables	Dependent Variable: VAT_RTN_ON_TM					
	2(a) Full sample		2(b) User of TA		2(c) Non-User of TA	
	B	Exp(B)^	B	Exp(B)^	B	Exp(B)
Constant	-3.696	0.025	-3.928	0.020	-5.491	0.004
GENDER	0.370	1.448	-0.521	0.594	2.219	9.202
AGE	0.431	1.539	-0.458	0.594	1.658**	5.251
Use_of_TA	-0.503	0.605	-	-	-	-
YRS_BUSN	-0.347	0.707	0.878	2.406	-2.126*	0.119
BUSSN_SIZE	-0.158	0.854	0.020	1.020	-0.747	0.474
PRFSN_FRMS_SERV	0.260	1.297	0.538	1.712	0.100	1.105
TRA_SERV	-0.777	0.460	-1.083	0.338	-0.136	0.873
SOCTY_MORL_OBLG	0.905**	2.473	1.327*	3.769	0.834	2.301
PERCP_VAT_ASET_BUSS	1.654***	5.230	1.903*	6.709	1.593	4.921
ATTD_HELP_TRA_OFFC	0.059	1.061	0.718	2.051	-0.215	0.806
PERC_FARNES_VAT_SYTM	-0.021	0.979	0.342	1.408	0.451	1.570
PERC_DECT_LKHOOD	-0.920**	0.398	-0.680	0.507	-2.209**	0.110
VAT_SANC	0.042	1.043	-0.674	0.510	0.295	1.343
IND2	0.169	1.184	-0.937	0.604	0.691	1.995
IND3	0.697	2.009	1.275	3.579	0.026	1.027
IND4	1.386	3.998	2.337	10.346	-16.725	0.000
IND5	2.228*	9.282	3.242	25.596	1.812	6.124
IND6	-19.373	0.000	-16.374	0.000	-21.978	0.000
IND7	4.362*	78.400	0 ^a	0 ^a	5.767	319.451
IND8	-0.086	0.917	0.826	2.283	-19.215	0.000
IND9	-18.118	0.000	-17.284	0.000	-18.014	0.000
T_VAT_REG	-0.396	0.673	0.772	2.165	-0.647	0.523
Model significance:						
N	184		97		87	
χ^2 df p-values	47.36 22 0.001		26.08 20 0.163		34.87 21 0.029	
-2 Log likelihood (null model)	138.65		64.38		73.38	
-2 Log likelihood (full model)	91.29		38.30		38.51	
Nagelkerke Pseudo R ²	0.429		0.486		0.580	
Prediction accuracy Null/Full model	87.5%/90.2%		89.7%/92.8%		85.1%/87.4%	
Variables significance:	Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10					

Notes:

a: IND7 is excluded because there were no observations for the sample of users of tax advisers.

Statistically, the results for Model 2(a) shows that, an increase in perceptions that the collected VAT is a business asset [$\beta = 1.654$, $\text{Exp}(\beta) = 5.23$, $p < 0.01$], societal moral obligation [$\beta = 0.905$, $\text{Exp}(\beta) = 2.473$, $p < 0.05$], agriculture, livestock and forestry industry [$\beta = 4.362$, $\text{Exp}(\beta) = 78.400$, $p < 0.10$], and real estate and renting business industry [$\beta = 2.228$, $\text{Exp}(\beta) = 9.282$, $p < 0.10$] were associated with an increase in the odds of taxpayers' untimely submission of VAT returns. This indicates an association with VAT non-compliant behaviour. Furthermore, only detection likelihood [$\beta = -0.920$, $\text{Exp}(\beta) = 0.398$, $p < 0.05$] was negatively associated with taxpayers' untimely submission of VAT returns. The results show, for example, if a taxpayer is in agriculture, livestock and forestry industry, the odds of the taxpayer being classified as untimely submitting VAT return increases by a factor of 78.4 ($p < 0.10$), compared to wholesale and retail trade industry.

Additionally, Model 2(b) used the sub-sample of respondents who used tax advisers and was not statistically significant [X^2 (DF=20, N=97) = 26.08, $p = .163$], which means a poor model fit. However, the Nagelkerke R^2 indicates that the model with independent variables explained almost 49% of the total variations in timely submission of VAT returns. Though the model overall lacked significance its overall classification accuracy was improved to 92.8%, 3.1 percentage points higher than the null model. This means 92.8% of taxpayers were accurately classified. Two factors were statistically significant in classifying taxpayers' VAT returns submission behaviour in terms of time. These factors were societal moral obligation and perception that collected VAT is a business asset, both at 10% level of significance.

The results for Model 2(b) significantly shows societal moral obligation [$B = 1.327$, $\text{Exp}(B) = 3.769$, $p < 0.10$] was significantly positively associated with taxpayers' untimely submission of VAT returns. The result also significantly shows increase in perceptions that the collected VAT is a business asset [$B = 1.903$, $\text{Exp}(B) = 6.709$, $p < 0.10$] were associated with an increase in the odds of taxpayers' untimely submission of VAT returns.

Model 2(c) used the sub-sample of respondents who did not use tax advisers and was statistically significant [X^2 (DF=21, N=87) = 34.87, $p = .029$] compared to

the null model. Therefore, it was a statistically good fit. The Nagelkerke R^2 indicates the full Model 2(b) accurately explained 58% of the total variations in timely submission of VAT returns. Moreover, the overall classification accuracy for model 2(c) was improved to 87.4%, 2.3 percentage points higher than the null model. This means 87.4% of taxpayers were accurately classified. Three factors were statistically significant (at varying levels) in classifying taxpayers' timely submission of VAT returns. These factors were detection likelihood and age (at 5% level of significance), and number of years of business (at 10% level of significance).

The results for Model 2(c) significantly shows that taxpayer's age category [$\beta = 1.658$, $\text{Exp}(\beta) = 5.251$, $p < 0.05$] was positively associated with taxpayers' untimely submission of VAT returns. This indicates that increase in a taxpayer's age category by one unit will increase the odds (by a factor of 5.251) of the taxpayer being classified as an untimely submitter of VAT returns. This means taking timely submission of VAT returns as a measure of VAT compliance age category was positively associated with VAT compliance. Furthermore, detection likelihood [$\beta = -2.209$, $\text{Exp}(\beta) = 0.110$, $p < 0.05$] was negatively associated with taxpayers' untimely submission of VAT returns. The last significant factor was the number of years of a taxpayer's business. Statistically, number of business years was significantly negatively associated with taxpayers' untimely submission of VAT returns. This means increasing business years by one unit will decrease the odds (by a factor of 0.119) of the taxpayer being classified as an untimely submitter of VAT returns. This indicates that business year category was positively associated with VAT compliance.

Overall, Model 2 was tested to determine the significance of independent variables in classifying taxpayers' behaviour in submitting VAT returns on time. The results reported in Table 7.10 show that five factors were significant in Model 2(a), two factors in Model 2(b) and three factors in Model 2(b). In this model, only detection likelihood appeared to be significant at 5% level in Models 2(a) and 2(c). In addition, the only factor at 1% level of significance is the perception that collected VAT is a business asset in Model 2(a). However, unlike in Model 1 where the perception that collected VAT is a business asset was

statistically significant in both Models 1(a) and 1(c), it was not the case in Model 2.

c) Notifying TRA of errors in VAT returns

The third compliance measure is the dependent variable notifying TRA of errors in VAT returns (ERR_VAT_RTN), which is binary (yes =0, no =1). The reference category is ‘no’, which is ‘not notifying TRA of errors in VAT returns’. Notifying TRA of errors in VAT returns was estimated using Model 3 as indicated below.

Binary logistic regression model 3:

$$\begin{aligned}
 \text{ERR_VAT_RTN} = & \beta_0 + \beta_1 \text{GENDER} + \beta_2 \text{AGE} + \beta_3 \text{Use_of_TA} + \beta_4 \text{YRS_BUSSN} + \beta_5 \text{BUSSN_SIZE} \\
 & + \beta_6 \text{PRFSN_FRMS_SERV} + \beta_7 \text{TRA_SERV} + \beta_8 \text{SOCTY_MORL_OBLG} \\
 & + \beta_9 \text{PERCP_VAT_ASET_BUSS} + \beta_{10} \text{PERC_FARNES_VAT_SYTM} \\
 & + \beta_{11} \text{ATTD_HELP_TRA_STAF} + \beta_{12} \text{PERC_DECT_LKHOOD} + \beta_{13} \text{VAT_SANC} \\
 & + \beta_{14} \text{IND2} + \beta_{15} \text{IND3} + \beta_{16} \text{IND4} + \beta_{17} \text{IND5} + \beta_{18} \text{IND6} + \beta_{19} \text{IND7} \\
 & + \beta_{20} \text{IND8} + \beta_{21} \text{IND9} + \beta_{22} \text{T_VAT_REG} \\
 & + \varepsilon. \dots\dots\dots \text{Equation 3}
 \end{aligned}$$

As in parts (a) and (b), Model 3 also used Sample 1, Sample 2 and Sample 3, and the results are reported in Table 7.11 as Model 3(a), Model 3(b) and Model 3(c) respectively. The results in Table 7.11 reports that Model 3(a) was statistically significant [X^2 (DF=22, N=181) = 45.08, p=.003] compared to the null model, which means the model was a good fit. The Nagelkerke R^2 indicates that the model with independent variables explained almost 33% of the total variations in notifying TRA of errors in VAT returns. Moreover, the overall classification accuracy was improved to 78.5%, which is 3.4 percentage points higher than the null model. With the full model, 78.5% of taxpayers were accurately classified as either willing or not willing to notify the TRA if it came to their attention that a VAT return they submitted had an error. Statistically, four factors were significant in model 3(a). These were societal moral obligation and perception that collected VAT is a business asset (at 5% level of significance), business size (BUSSN_SIZE) and transportation, storage and communication industry (IND8) (at 10% level of significance).

Table 7.11: Summary result of binary logistic regression for Model 3

Independent Variables	Dependent Variable: ERR_VAT_RTN					
	3(a) Full sample		3(b) Use_of_TA =1		3(b) Use_of_TA =0	
	B	Exp(B)^	B	Exp(B)^	B	Exp(B)^
Constant	-1.246	0.288	-3.719	0.024	1.728	5.628
GENDER	0.402	1.495	0.394	1.483	0.147	1.158
AGE	-0.081	0.922	0.165	1.179	-0.380	0.684
Use_of_TA	0.036	1.037	-	-	-	-
YRS_BUSN	0.012	1.012	0.703	2.020	-1.291	0.275
BUSSN_SIZE	-0.357*	0.700	-0.421	0.657	-0.040	0.960
PRFSN_FRMS_SERV	-0.004	0.996	0.066	1.068	-0.426	0.653
TRA_SERV	-0.406	0.666	-0.560	0.571	0.121	1.129
SOCTY_MORL_OBLG	-0.661**	0.516	-1.132**	0.322	0.011	1.011
PERCP_VAT_ASET_BUSS	0.555**	1.742	0.333	0.373	0.661	1.937
ATTD_HELP_TRA_OFFC	-0.476	0.621	-0.534	2.46	-0.931	0.394
PERC_FARNES_VAT_SYTM	0.198	1.220	0.044	1.045	0.407	1.502
PERC_DECT_LKHOOD	0.033	1.033	0.192	1.212	-0.537	0.584
VAT_SANC	-0.357	0.700	-0.663	0.515	-0.237	0.789
IND2	0.710	2.034	1.499*	4.478	-0.696	0.498
IND3	0.544	1.723	1.092	2.980	-0.982	0.375
IND4	-0.061	0.941	0.648	1.912	-19.306	0.000
IND5	0.015	1.015	1.540	4.663	-20.138	0.000
IND6	-1.733	0.177	19.178	0.000	-2.917	0.054
IND7	1.785	5.962			0.711	2.035
IND8	1.581*	4.860	2.670*	14.447	0.100	1.105
IND9	-18.333	0.000	-16.991	0.000	-19.943	0.000
T_VAT_REG	0.213	1.238	0.475	1.608	0.137	1.147
Model significance:						
N	181		97		84	
χ^2 df p-values	45.08 22 0.003		32.54 20 0.038		31.09 21 0.072	
-2 Log likelihood (null model)	203.01		106.26		96.61	
-2 Log likelihood (full model)	157.93		73.72		65.52	
Negelkerke Pseudo R ²	0.327		0.366		0.453	
Prediction accuracy Null/Full model	75.1%/78.5%		76.3%/81.4%		73.8%/81.0%	
Variables significance:	Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10					

Notes: Significance levels:

- a: IND7 is excluded because there were no observation when the sample was defined at Use_of_TA =1.

The results for Model 3(a) show that an increase in perception that collected VAT is a business asset [$\beta=0.555$, $\text{Exp}(\beta) = 1.742$, $p<0.05$] and transportation, storage and communication industries (IND8) [$\beta=1.581$, $\text{Exp}(\beta) = 4.860$, $p<0.10$] were significantly positively associated with taxpayers not notifying TRA of errors in submitted VAT returns. Furthermore, societal moral obligation [$\beta=-0.661$, $\text{Exp}(\beta) = 0.516$, $p<0.05$] and business size [$\beta=-0.357$, $\text{Exp}(\beta) = 0.700$, $p<0.10$] were negatively associated with taxpayers not notifying TRA of errors in submitted VAT returns. This means, for example, an increase in a taxpayer's perception that collected VAT is a business asset would increase the odds (by a factor of 1.724) of classifying the taxpayer as not willing to notify TRA if they became aware that the submitted VAT return contained an error.

Furthermore, Model 3(b) was statistically significant [X^2 (DF=20, N=97) = 32.54, $p=.038$], compared to the null model, which means the model was a good fit. The Nagelkerke R^2 indicates that the model with independent variables explained almost 37% of the total variations in notifying TRA of errors in VAT returns. Additionally, the model's overall classification accuracy was slightly improved to 81.4%, which is 5.1 percentage points higher than the null model. The overall model is significant and the result for Model 3(b) shows three factors were significant in explaining the factor 'notifying TRA of errors in VAT returns'.

Societal moral obligation [$\beta=-1.132$, $\text{Exp}(\beta) = .322$, $p<0.05$] was negatively associated with taxpayers not notifying TRA of errors in submitted VAT returns. While, hotels, tourism and restaurants industry (IND2) [$\beta=1.499$, $\text{Exp}(\beta) = 4.478$, $p<0.10$] and transportation, storage and communication [$\beta=2.670$, $\text{Exp}(\beta) = 14.447$, $p<0.10$] were positively associated with taxpayers not notifying TRA of errors in submitted VAT returns. This means, for example, increasing a taxpayer's societal moral obligation would decrease the odds (by a factor of .322) of classifying the taxpayer as not willing to notify TRA if they became aware that the submitted VAT return contained an error.

Additionally, Model 3(c) was statistically significant [X^2 (DF=21, N=84) = 31.09, $p=.072$], at the 10% level which means a weaker model fit. However, the Nagelkerke R^2 indicated that the full model explained 45% of the total variations in notifying TRA of errors in VAT returns. Moreover, the model's overall classification accuracy was improved to 81%, which is 7.2 percentage points

higher than the null model. This means by including independent variables, 81% of taxpayers were accurately classified as either willing or not willing to notify the TRA if it came to their attention that a VAT return they submitted to TRA had an error. However, the individual results for Model 3(c) indicate that no one factor significantly explain either a taxpayer will or will not notify TRA of errors in VAT returns.

7.5.2 Ordinal logistic regression

This section examines four other measures of VAT compliance. It presents VAT compliance measures, which have a wider range of ‘ordered’ responses scaled from 1 to 5. Therefore, ordinal logistic regression was appropriate in modelling each of the four dependent variables: frequency of timely submission of VAT returns, involvement in cash transactions, theoretical VAT evasion and intentional mistakes to reduce VAT liability. Each of the four models used the three samples introduced in section 7.4, and the results of the analysis are discussed in the following four parts (a), (b), (c) and (d).

a) Frequency timely submission of VAT returns

The dependent variable frequency of timely submission of VAT returns (*N_TML_SUB_VAT*) is ordinal (very often = 1, often = 2, sometimes = 3, rarely = 4, never = 5). Based on ordinal regression, the reference category for frequency of timely submission of VAT returns is ‘never’.³⁸ Frequency of timely submission of VAT returns was estimated using Model 4 as indicated below:

Ordinal logistic regression Model 4:

$$\begin{aligned} N_TML_SUB_VAT &= \beta_0 + \beta_1 GENDER + \beta_2 AGE + \beta_3 Use_of_TA + \beta_4 YRS_BUSSN + \beta_5 BUSSN_SIZE \\ &+ \beta_6 PRFSN_FRMS_SERV + \beta_7 TRA_SERV + \beta_8 SOCTY_MORL_OBLG \\ &+ \beta_9 PERCP_VAT_ASET_BUSS + \beta_{10} PERC_FARNES_VAT_SYTM \\ &+ \beta_{11} ATTD_HELP_TRA_STAF + \beta_{12} PERC_DECT_LKHOOD + \beta_{13} VAT_SANC \\ &+ \beta_{14} IND2 + \beta_{15} IND3 + \beta_{16} IND4 + \beta_{17} IND5 + \beta_{18} IND6 + \beta_{19} IND7 \\ &+ \beta_{20} IND8 + \beta_{21} IND9 + \beta_{22} T_VAT_REG + \beta_{23} YRS_VAT_REG \\ &+ \varepsilon. \dots \text{Equation 4} \end{aligned}$$

³⁸ The researcher has the option of specifying the reference category – the last or the first category in ordinal regression. The last category is automatically taken as the reference category (Field, 2009). Therefore, the same procedure of selecting a reference category is applied in subsequent parts (b), (c) and (d) of this sub-section.

Table 7.12: Summary result of Ordinal logistic regression for Model 4

Independent Variables (Factors)	Dependent Variable: N_TML_SUB_VAT		
	4(a) Full sample	4(b) Use_of_TA =1	4(c) Use_of_TA = 0
	Estimate	Estimate	Estimate
AGE	0.057	0.239	0.000
YRS_BUSN	-0.450	0.624	-1.674***
BUSSN_SIZE	-0.038	-.050	0.163
PRFSN_FRMS_SERV	0.277	0.104	0.542
TRA_SERV	-0.879***	-0.973**	-1.078*
SOCTY_MORL_OBLG	0.163	0.433	0.083
PERCP_VAT_ASET_BUSS	1.532***	1.881***	1.934***
ATTD_HELP_TRA_OFFC	0.320	-0.119	0.848*
PERC_FARNES_VAT_SYTM	-0.500**	-0.181	-0.927**
PERC_DECT_LKHOOD	-0.032	-0.495	0.038
VAT_SANC	0.326	0.169	0.603
IND2	0.320	0.121	-0.015
IND3	0.250	1.179	-0.881
IND4	1.863**	2.067	1.536
IND5	0.291	0.098	-0.554
IND6	-0.534	2.010	-1.426
IND7	3.823***	0 ^a	4.240***
IND8	-0.805	-1.486	-1.259
IND9	-0.266	-17.943	0.537
[GENDER=1]	0.143	0.247	-0.174
[Use_of_TA=1.00]	1.119***	-	-
[YRS_VAT_REG =1]	17.130***	0.314	16.332***
[YRS_VAT_REG =2]	17.803	-	18.355
[T_VAT_REG=1]	-0.043	0.272	-0.103
Model significance:			
N	183	97	86
-2 Log Likelihood: χ^2 df p-value	91.90 24 0.000	48.80 21 0.000	57.26 23 0.000
Goodness-of-fit: χ^2 p-value	796.10 0.007	281.85 0.255	375.67 0.009
Nagelkerke Pseudo R ²	0.443	0.461	0.543
Variables significance:	Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10		

Notes:

- a: IND7 is excluded because there were no observation when the sample was defined at Use_of_TA =1.

Table 7.12 reports the results of Models 4(a), 4(b) and 4(c). Model 4(a) was statistically significant [χ^2 (N=183) = 91.90, DF=24, p=.000], which was an improvement over the null model. In terms of the Goodness-of-fit test, the null hypothesis is that the fit is good, and a p-value of .007 is significant indicating that the null hypothesis is rejected. Therefore, the model appears not to be a good fit.³⁹ In addition, the Nagelkerke R² indicates that the model with factors explained 44% of the total variation in the frequency of timely submission of VAT returns.

Overall, regardless of the sample used, Model 4 was statistically significant. Furthermore, as it was for Model 4(a), the Goodness-of-fit test for Models 4 4(c) indicated that the data and model predictions were not similar and therefore the model appears not to be a good fit (the test statistic for Model 4(B) is not significant and therefore indicates a good fit). Nagelkerke R² indicates that full Models 4(b) and 4(c) explained 46% and 54%, respectively, of the total variation in the dependent variable. Table 7.12 shows Model 4(a) has five factors, which were statistically significant at 1% level and two factors at 5%. Model 4(b) shows one factor was statistically significant at 1% level and one factor at 5% level. For Model 4(c), four factors were statistically significant at 1% level, one factor at 5% level, and two factors at 10% level.

Table 7.12 shows that taxpayers who perceived that collected VAT is a business asset were more likely to say they never submitted VAT returns on time. This result was relatively the same regardless of the sample used (Model 4(a) - [Exp(1.532) =4.627, p<.01], Model 4(b) - [Exp(1.881) =6.560, p<.01] and Model 4(c) - [Exp(1.934) =6.917, p<.01]). However, as the samples were changed from full sample to non-users-of-tax-advisers sample, the odds of a taxpayer saying they never submitted VAT returns on time increased (i.e. from a factor of 4.627 to a factor of 6.917). This shows that the extent to which non-users-of-tax-advisers (who perceived collected VAT is a business asset) and said they were less VAT compliant in submitting their VAT returns on time was greater than that of users-

³⁹ When a continuous variable is included in a logistic regression, the Pearson (goodness of fit) test may not be effective (Archer and Lemeshow, 2006). Consequently when the Log Likelihood and Pearson's statistics conflict greater reliance will be placed on the former.

of-tax-advisers. Therefore, the results show that there is a statistically significant negative association between perceptions that collected VAT is a business asset and frequency of timely submission of VAT returns. Furthermore, this association appeared to be more pronounced in the non-users of tax advisers than in users of tax advisers.

Furthermore, taxpayers using TRA services were less likely to say they never submitted VAT returns on time [Exp(-.879) =0.415, $p < .01$]. This result was consistent with the results using the sub-samples (i.e. Models 4(b) and 4(c)). However, the extent of the decrease in the odds and the level of significance were decreasing i.e. Model 4(b)-[Exp(-.973) =0.378, $p < .05$] and Model 4(c)-[Exp(-1.078)=0.340, $p < .10$]. This indicates that the use of TRA services was more significant in making taxpayers who use tax-adviser less likely to say they never submitted VAT returns on time than taxpayers who did not use tax advisers. TRA services and the use of tax advisers were related as they all deal with information and knowledge about VAT. For example, TRA service included TRA website, newsletters, bulletin and training. Therefore, the results indicate that taxpayers' access to information and knowledge about VAT was positively associated with frequency of timely submission of VAT returns. This means as taxpayers acquire more information and knowledge about VAT, they were more likely frequently submit their VAT returns on time.

Additionally, controlling other factors, the results of Model 4(a) indicates that, VAT registered taxpayers for less than 11 years, (i.e. YRS_VAT_REG = 1), were more likely to say they never submit their VAT returns on time [Exp(17.130) =27,508,345.97, $p < .01$], as compared to those registered for 21 years or above, (i.e. YRS_VAT_REG = 3). The factor was also significant in Model 4(c) [Exp(16.332) =12,385,041.85, $p < .01$], but was not significant in Model 4(b). This indicates that the number of years a taxpayer is registered was positively associated with VAT compliance behaviour. On one hand, because the factor was not significant for the model with sub-sample of users of tax advisers, it is therefore considered that tax advisers had a positive association with taxpayers' saying they were more VAT compliant. On the other hand, inexperience, being less informed with poor knowledge about VAT compliance may have contributed to the 'less than

11 years of VAT registration' taxpayers to indicate that they were less VAT compliant.

Model 4(a) results also show that taxpayers in agriculture, livestock and forestry industry (IND7) [Exp (3.823) =45.74, $p < .01$] and education and consultancy industry (IND4) [Exp (1.863) =6.44, $p < .05$] were more likely to say that they never submitted VAT returns on time than comparable taxpayers in wholesale and retail trade industry. The result for agriculture, livestock and forestry industry (IND7) was consistent with that in Model 4(c) [Exp (4.240) =69.41, $p < .01$], but agriculture, livestock and forestry industry (IND7) was not significant for Model 4(b) and education and consultancy industry (IND4) was not significant in both Models 4(b) and 4(c). As there were eight industries, which were entered in all Models 4(a), 4(b) and 4(c), and only two industries were significant, the association between industry sector and the frequency of timely submission of VAT returns was less conclusive in the current study.

Furthermore, the results in Table 7.12 show that taxpayers who perceived fairness of VAT system was important in the acceptability of VAT system and the functioning of TRA were less likely to say they never submitted VAT returns on time [Exp (-.500) =0.61, $p < .05$]. The result for this factor in Model 4(a) was consistent with the results using the sub-sample of non-users-of-tax-advisers (Model 4(c)) [Exp (-.927) =0.40, $p < .05$], but was insignificant with the sample of users-of-tax-advisers (Model 4(b)). Therefore, with the exception of the user-of-tax advisers, the results show a statistically significant positive association between taxpayers who perceived fairness of VAT system was important and who responded "very often" in submitting VAT returns on time.

The results in Table 7.12, Model 4(c), show that the non-users-of-tax-advisers who have been in business the longest i.e. 31 years and above were significantly less likely to say they never submitted VAT returns on time [Exp(-1.674) =0.19, $p < .01$]. This result was not statistically significant for Models 4(a) and 4(b), but was consistent with Model 4(a) in terms of the direction of association, i.e. negative between business age and never submitting VAT returns on time. Overall, on one hand, the results indicate that years of business for non-users of tax advisers were positively associated with VAT compliance behaviour as measured by the frequency of timely submission of VAT returns. This means

that as non-users of tax advisers businesses became older, they tended to submit VAT returns on time. On the other hand, for the users-of-tax advisers, the number of years in business did not appear to be significant in explaining their VAT compliant behaviour as measured by the frequency of timely submission of VAT return.

Furthermore, compared to users-of-tax-advisers, non-users-of-tax-advisers were significantly more likely to say they never submitted VAT returns on time, even after controlling for the other factors [$\text{Exp}(-1.119)=3.06$, $p<.01$]. This can be interpreted to mean that the odds of a higher frequency of untimely submission of VAT returns for non-users-of-tax-advisers group of taxpayers is at least 3 times that of users-of-tax-advisers group of taxpayers. Use of tax adviser was significantly positively associated with VAT compliant behaviour as measured by the frequency of timely submission of VAT returns.

The other significant factor was the perceived attitude and helpfulness of TRA officials. Model 4(c) results indicate that the non-user-of-tax-advisers who favourably perceived the attitude and helpfulness of TRA officials were more likely to never to submit VAT returns on time [$\text{Exp} (.848) =2.33$, $p<.10$]. This result was not statistically significant for Models 4(a) and 4(b). This result is somehow contradictory. It supports the argument that a favourable perception towards attitude and helpfulness of TRA official was associated with VAT non-compliant behaviour. Overall, as it will be seen in parts (b), (c) and (d), the strength and direction of association between perceived attitude and helpfulness of TRA official and VAT compliance was not clear.

b) Involvement in cash transactions

The dependent variable Involvement in cash transactions (INV_CASH_TRS), is ordinal (very often = 1, often = 2, sometimes = 3, rarely = 4, never = 5). Therefore, the reference category for this variable is 'never', and the variable was estimated using Model 5 as indicated below:

Ordinal logistic regression Model 5:

$$\begin{aligned}
 \mathbf{INV_CASH_TRS} = & \beta_0 + \beta_1 \mathbf{GENDER} + \beta_2 \mathbf{AGE} + \beta_3 \mathbf{Use_of_TA} + \beta_4 \mathbf{YRS_BUSSN} + \beta_5 \mathbf{BUSSN_SIZE} \\
 & + \beta_6 \mathbf{PRFSN_FRMS_SERV} + \beta_7 \mathbf{TRA_SERV} + \beta_8 \mathbf{SOCTY_MORL_OBLG} \\
 & + \beta_9 \mathbf{PERCP_VAT_ASET_BUSS} + \beta_{10} \mathbf{PERC_FARNES_VAT_SYTM} \\
 & + \beta_{11} \mathbf{ATTD_HELP_TRA_STAF} + \beta_{12} \mathbf{PERC_DECT_LKHOOD} + \beta_{13} \mathbf{VAT_SANC} \\
 & + \beta_{14} \mathbf{IND2} + \beta_{15} \mathbf{IND3} + \beta_{16} \mathbf{IND4} + \beta_{17} \mathbf{IND5} + \beta_{18} \mathbf{IND6} + \beta_{19} \mathbf{IND7} \\
 & + \beta_{20} \mathbf{IND8} + \beta_{21} \mathbf{IND9} + \beta_{22} \mathbf{T_VAT_REG} + \beta_{23} \mathbf{YRS_VAT_REG} \\
 & + \varepsilon. \dots \mathbf{Equation 5}
 \end{aligned}$$

Table 7.13 reports the results of Models 5(a), 5(b) and 5(c). Model 5(a) was statistically significant [X^2 (N=184) = 108.17, DF=24 p=.000], and an improvement over the null model. The Goodness-of-fit test with a p-value of .103 i.e. not significant indicates that the null hypothesis that the data and model prediction were similar was not rejected. Therefore, the model was a good fit. In addition, the Nagelkerke R^2 indicates that the model with factors explained 46% of total variation in involvement in cash transactions.

Table 7.13: Summary result of Ordinal logistic regression for Model 5

Independent Variables (Factors)	Dependent Variable: INV_CASH_TRS		
	5(a) Full sample	5(b) Use_of_TA =1	5(c) Use_of_TA = 0
	Estimate	Estimate	Estimate
AGE	-0.228	-0.246	-0.450*
YRS_BUSN	0.207	0.222	0.184
BUSSN_SIZE	-0.267*	-0.420*	-0.182
PRFSN_FRMS_SERV	-0.317	-0.042	-1.143**
TRA_SERV	0.229	0.129	0.652
SOCTY_MORL_OBLG	0.650***	0.475*	1.261***
PERCP_VAT_ASET_BUSS	-0.833***	-0.880***	-0.978**
ATTD_HELP_TRA_OFFC	0.041	0.233	-0.634
PERC_FARNES_VAT_SYTM	0.073	-0.158	0.404
PERC_DECT_LKHOOD	0.142	0.412*	-0.097
VAT_SANC	-1.063***	-.913***	-1.479***
IND2	-0.268	-0.355	0.102
IND3	0.633	0.389	0.503
IND4	0.239	0.496	-2.077
IND5	0.679	1.673	-0.838
IND6	-1.503	-1.314	-17.033
IND7	-0.119	0 ^a	-0.849
IND8	-0.135	0.507	-0.752
IND9	0.400	-0.062	16.682
[GENDER=1]	-0.308	-0.656	0.856
[Use_of_TA=1.00]	-0.359	-	-
[YRS_VAT_REG =1]	-19.699***	0.174**	-20.456***
[YRS_VAT_REG =2]	-20.209	-	-21.406
[T_VAT_REG=1]	0.711**	-0.139*	2.150***
Model significance:			
N	184	97	87
-2 Log Likelihood: χ^2 df p-value	108.17 24 0.000	44.78 21 0.000	93.34 23 0.000
Goodness-of-fit: χ^2 p-value	751.77 0.103	397.72 0.178	308.62 0.621
Negelkerke Pseudo R ²	0.464	0.386	0.658
Variables significance:	Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10		

Notes:

- a: IND7 is excluded because there were no observation when the sample was defined at Use_of_TA =1.

Overall, regardless of the sample used, Model 5 was statistically significant. In addition, the Goodness-of-fit test for Models 5(b) and 5(c) indicates that the data and model predictions were similar and the models were good fits. Nagelkerke R^2 indicates that full Models 5(b) and 5(c) explained almost 39% and 66%, respectively, of the total variation in involvement in cash transactions. Furthermore, Model 5(a) has four factors, which were statistically significant at 1% level, one factor at 5% level and one factor at 10% level. Model 5(b) shows two factors were statistically significant at 1% level and three factors at 10% level. For Model 5(c), four factors were statistically significant at 1% level, two factors at 5% level, and one factor at 10% level.

Table 7.13 results show that the relative influence of VAT sanctions was negatively associated with the taxpayers' statement that they have never been involved in cash transactions. The negative association was significant in all models (Model 5(a) - [Exp(-1.063)=0.35, $p < .01$], Model 5(b) - [Exp (-.913) =0.40, $p < .01$] and Model 5(c) - [Exp (-1.479) =0.23, $p < .01$]). However, as indicated by the odds, the extent of the negative association was less pronounced in Model 5(b). From factor analysis, the relative influence of VAT sanctions included interest and fines. Overall, therefore, this result indicates that as the perceived relative influence of interest and fines as VAT sanctions increased, taxpayers were less likely to say they were VAT compliant.

The results in Table 7.13 also show that taxpayers who perceived that collected VAT is a business asset were less likely to say they have never been involved in cash transactions. This result was relatively the same regardless of the sample used (Model 5(a) - [Exp (-.833) =0.43, $p < .01$], Model 5(b) - [Exp (-.880) =0.41, $p < .01$] and Model 5(c) - [Exp (-.978) =0.38, $p < .05$]). This result is also consistent with that found in part (a) of this section that perception that collected VAT is a business asset was negatively associated with VAT compliance as measured by the frequency of timely submission and never involvement in cash transactions.

Furthermore, the results in Table 7.13 show those taxpayers who perceived that VAT compliance was a societal moral obligation were more likely to say they have never been involved in cash transactions. This result was the same in terms of direction of association regardless of the sample used (Model 5(a) - [Exp(.650)=1.92, $p < .01$], Model 5(b) - [Exp(.475)=1.61, $p < .10$] and Model 5(c) -

[Exp(1.261)=3.53, $p < .01$]). However, as the sample used in Model 5 changed from non-users-of-tax-advisers to users-of-tax-advisers, two changes in the results were apparent. Firstly, the odds that show the extent of the likelihood of the positive association between the perception that VAT compliance was a societal moral obligation and the frequency of cash transactions involvement decreased (from a factor of 3.53 to a factor of 1.61). Secondly, the level of significance fell from 1% to 10% for the factor to be significant in explaining VAT compliance as measured by the frequency of cash transaction involvement. This shows that for non-users-of-tax-advisers who perceived compliance as a societal moral obligation, these were significantly more likely to say they have never been involved in cash transactions than it was for users-of-tax-advisers with the same perception.

In addition, with the exception of Model 5(b) [Exp(.174)=1.19, $p < .05$], the results for Model 5(a)- [Exp(-19.699)=0.00, $p < .01$] and Model 5(c)- [Exp(-20.456)=0.00, $p < .01$], indicates that, VAT registered taxpayers for a period less than 11 years were less likely to say they have never been involved in cash transactions, as compared to those who have been VAT registered for 21 years or above. Therefore, except for users-of-tax-advisers, the results show that there is a statistically significant negative association between being VAT registered for a period of under 11 years and never been involved in cash transactions. Overall, the results show that non-users-of-tax advisers with businesses that were VAT registered for a period of less than 11 years were less likely to say they were VAT compliant than users-of-tax advisers, as indicated by them saying they were more often being involved in cash transactions.

Additionally, with the exception of Model 5(b) [Exp(-.139)=0.87, $p < .10$], the results show that taxpayers who voluntarily register for VAT purpose, were more likely to say they have never been involved in cash transactions (Model 5(a) - [Exp (.711) =2.04, $p < .05$] and Model 5(c) - [Exp (2.150) =8.58, $p < .01$] than comparable taxpayers who were forced to register for VAT. Therefore, except for users-of-tax-advisers, the results show that there is a statistically significant positive association between taxpayers saying they voluntary registered for VAT and taxpayers saying they have never been involved in cash transactions. Overall, the results show that non-users-of-tax advisers who registered for VAT

voluntarily were more likely to say they were VAT compliant than users-of-tax advisers who registered for VAT voluntarily.

As indicated in Table 7.8, business size was measured by the number of employees in the sampled taxpayers' businesses. Results in Table 7.13 show, with the exception of users-of-tax-advisers (Model 5(c) that business size was significantly negatively associated with taxpayers saying they have never been involved in cash transactions (Model 5(a)-[Exp(-.267)=0.77, $p < .10$] and Model 5(b)-[Exp (-.420) =0.66, $p < .10$]). The results show that a unit increase in the business size category e.g. from 'under 21 employees' category =1 to '21-40 employees' category = 2, was associated by a decrease in odds of a taxpayer saying that they have never been involved in cash transactions by a factor of 0.77 (Model 5(a)) or a factor of 0.66 (Model 5(b)). This indicates that the increase in business size was associated with decrease in VAT compliance as measured by how often taxpayers were involved in cash transactions.

The results also show, for non-users-of-tax-advisers sample of taxpayers (Model 5(c)) only, a unit increase in the use of professional firms' services was associated with a decrease in the odds (by a factor of 0.32) of a taxpayer saying that they have never been involved in cash transactions [Exp (-1.143)=0.32, $p < .05$]. This is an interesting result as it indicates that the use of professional firms' information by non-users-of-tax-advisers was negatively associated with VAT complaint behaviour. This can be interpreted to mean that for non-users-of-tax-advisers, the use of professional firms' information did not help them to become more VAT compliant, but less VAT compliant. In addition, although the factor was not significant in Model 5(a) and 5(b), the direction of association between the use of professional firms' services and taxpayers saying that they have never been involved in cash transactions was also negative as in Model 5(c).

The results show, for non-users-of-tax-advisers (Model 5(c)) a unit increase in a taxpayer's age category e.g. from 'under 21 years' category =1 to '21-30 years' category = 2 was associated with a decrease in the odds (by a factor of 0.64) of a taxpayer saying that they have never been involved in cash transactions [Exp (-.450) =0.64, $p < .10$]. This result indicates that the age of non-users-of-tax-advisers was negatively associated with VAT compliance. This can be interpreted to mean that as the age of non-users-of-tax-advisers increased they were less

likely to be VAT compliant. In addition, although taxpayers' age category was not significant in Model 5(a) and 5(b), the direction of association between taxpayers' age category and taxpayers stating they have never been involved in cash transactions was also negative as in Model 5(c).

The result in Model 5(b) also show that the users-of-tax-advisers who perceived higher detection likelihood were more likely to say they have never been involved in cash transactions [Exp (.412) =1.50, $p < .10$]. However, this result was not statistically significant for Model 5(a) and 5(c).

This result contradicts the literature on economic theory, which indicates that higher detection likelihood is associated with higher tax compliance. This result supports the argument that perceived higher detection likelihood was associated with VAT non-compliance behaviour. Overall, as it can be seen in parts (a), (c) and (d), the strength and direction of association between perceived detection likelihood and VAT compliance was not clear. For model 5, industry sector as a factor was not statistically significant, for all samples, in explaining whether taxpayers were involved in cash transactions. This was consistent with the results for this factor in part (a) and as it will be shown in the following parts (c) and (d) of this section.

c) Theoretical evasion

The dependent variable theoretical evasion (LES_VAT_PAID) is ordinal (strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5). Therefore, the reference category for this variable is 'strongly agree', and was estimated using Model 6 as indicated below:

Ordinal logistic regression Model 6:

$$\begin{aligned}
LES_VAT_PAID = & \beta_0 + \beta_1 GENDER + \beta_2 AGE + \beta_3 Use_of_TA + \beta_4 YRS_BUSSN + \beta_5 BUSSN_SIZE \\
& + \beta_6 PRFSN_FRMS_SERV + \beta_7 TRA_SERV + \beta_8 SOCTY_MORL_OBLG \\
& + \beta_9 PERCP_VAT_ASET_BUSS + \beta_{10} PERC_FARNES_VAT_SYTM \\
& + \beta_{11} ATTD_HELP_TRA_STAF + \beta_{12} PERC_DECT_LKHOOD + \beta_{13} VAT_SANC \\
& + \beta_{14} IND2 + \beta_{15} IND3 + \beta_{16} IND4 + \beta_{17} IND5 + \beta_{18} IND6 + \beta_{19} IND7 \\
& + \beta_{20} IND8 + \beta_{21} IND9 + \beta_{22} T_VAT_REG + \beta_{23} YRS_VAT_REG \\
& + \varepsilon. \dots \text{Equation 6}
\end{aligned}$$

Table 7.14 reports the results of Models 6(a), 6(b) and 6(c). Model 6(a) was statistically significant [X^2 (N=184) = 181.06, DF=24, p=.000], which represents an improvement over the null model. The Goodness-of-fit test with a p-value of .003 indicates that the null hypothesis that the data and model prediction were similar was rejected. Therefore, the model appears not to be a good fit (however, see footnote 35 above). The Nagelkerke R^2 indicates that the full model explained almost 66% of the total variation in theoretical evasion.

Table 7.14: Summary result of Ordinal logistic regression for Model 6

Independent Variables (Factors)	Dependent Variable: LES_VAT_PAID		
	6(a) Full sample	6(b) Use_of_TA =1	6(c) Use_of_TA = 0
	Estimate	Estimate	Estimate
AGE	0.062	0.088	0.098
YRS_BUSN	-0.531 *	-0.260	-0.773
BUSSN_SIZE	-0.336**	-0.184	-0.372
PRFSN_FRMS_SERV	-0.430*	-0.249	-0.534
TRA_SERV	-0.448	-0.065	-1.302
SOCTY_MORL_OBLG	-0.575***	-0.087	-0.948**
PERCP_VAT_ASET_BUSS	2.304***	2.292***	2.892***
ATTD_HELP_TRA_OFFC	-0.261	-0.503*	-0.051
PERC_FARNES_VAT_SYTM	0.344	0.349	0.782*
PERC_DECT_LKHOOD	-0.066	0.016	-0.115
VAT_SANC	0.243	-0.196	0.408
IND2	1.344***	0.535	2.624***
IND3	0.112	0.311	-0.516
IND4	0.617	1.247	-0.374
IND5	1.019	0.645	1.436
IND6	-0.170	-0.689	0.410
IND7	0.601	0 ^a	1.555
IND8	0.586	0.842	0.986
IND9	0.604	1.863*	-20.084
[GENDER=1]	0.312	0.571	0.058
[Use_of_TA=1.00]	-0.245	-	-
[YRS_VAT_REG =1]	0.073	-0.129	0.548
[YRS_VAT_REG =2]	-0.292	-	0.641
[T_VAT_REG=1]	0.482	0.373	0.893
Model significance:			
N	184	97	87
-2 Log Likelihood: X^2 df p-value	181.06 24 0.000	86.12 21 0.000	127.40 23 0.000
Goodness-of-fit: X^2 p-value	811.19 0.003	530.91 0.000	331.67 0.274
Negelkerke Pseudo R ²	0.655	0.616	0.804
Variables significance:	Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10		

Notes:

- a: IND7 is excluded because there were no observation when the sample was defined at Use_of_TA =1.

Overall, regardless of the sample used, Model 6 was statistically significant and the full model was an improvement over the null model. The Nagelkerke R^2 shows Models 6(b) and 6(c) with independent variables explained almost 62% and 80%, respectively, of total variation in theoretical evasion. Furthermore, Table 7.14 shows that Model 6(a) has three factors, which were statistically significant at 1% level, one factor at 5% and two factors at 10%. Model 6(b) show one factor was statistically significant at 1% level and two factors at 10% level. For Model 6(c), two factors were statistically significant at 1% level, one factor at 5% level, and one factor at 10% level.

Table 7.14 shows that taxpayers who perceived that collected VAT is a business asset were more likely to strongly agree that they would engage in risk-free evasion. This result was relatively the same regardless of the sample used (Model 6(a)-[Exp (2.304) =10.01, $p<.01$], Model 6(b)-[Exp (2.292) =9.894, $p<.01$] and Model 6(c)-[Exp (2.892) =18.03, $p<.01$]). The results indicate that a unit increase in the perception that collected VAT is a business asset will increase the odds of a taxpayer strongly agreeing to a theoretical evader. As it was in Model 4 (see part (a) of this section), the magnitude of the association between the factor and the measure of VAT compliance was more pronounced in the non-users-of-tax-advisers sample (odds increase 18 times) than in users-of-tax-advisers (odds increase 10 times). Again, this indicates that there is a statistically significant negative association between perceptions of collected VAT is a business asset and VAT compliance behaviour as measured by theoretical evasion.

Model 6(a) results also show that taxpayers in hotels, tourism and restaurants industry (IND2) [Exp (1.344) =3.83, $p<.01$] were more likely to strongly agree that they would engage in theoretical evasion than comparable taxpayers in wholesale and retail trade industry. The result for hotels, tourism and restaurants industry (IND2), was consistent with that in Model 6(c) [Exp (2.624) =13.79, $p<.01$], but not significant for Model 6(b). In addition, manufacturing industry (IND9) was significant for Model 6(b) [Exp (1.863) =6.44, $p<.10$] (but not for Models 6(a) and 6(c)) in indicating whether taxpayers were more likely to strongly agree that they would engage in theoretical evasion. Again, as indicated in the preceding parts (a) and (b) of this section, the association between

industry sector and VAT compliance behaviour was less conclusive in this research.

In addition, the results show that taxpayers who perceived a societal moral obligation were less likely to strongly agree that they would engage in theoretical evasion (Model 6(a)-[Exp(-.575)=0.56, $p<.01$], Model 6(c)- [Exp (-.948) =0.39, $p<.05$]). The factor's direction of association with the dependent variable was the same for all models but it was not significant in Model 6(b). Therefore, with the exception of Model 6(b), results show there is a significant positive association between taxpayers' perception of societal moral obligation and VAT compliance. The result for perception of societal moral obligation in this paragraph is relatively consistent with the result in part (b) of this section.

Furthermore, only in Model 6(a) was business size as measured by the number of employees significant. Table 7.14 shows that business size was negatively associated with taxpayers strongly agreeing that they would engage in theoretical evasion [Exp (-.336) =0.71, $p<.05$]. While the factor was not statistically significant in Model 6(b) and 6(c), the estimated signs were negative, which was the same as in Model 6(a). For Model 6(a) the result shows that a unit increase in the business size category, e.g. from 'under 21 employees' category =1 to '21-40 employees' category = 2, would decrease the odds (by a factor of 0.71) of a taxpayer strongly agreeing that they engage in theoretical evasion. This indicates that the increase in business size was associated with increases in VAT compliance. It is worth noting that this result is inconsistent with the result for this factor in part (b) of this section, which indicated that business size was significantly negatively associated with VAT compliance as measured by how often taxpayers were involved in cash transactions. This highlights the need to use alternative measures of VAT compliance, i.e. the concept of compliance has several aspects.

Furthermore, results for Model 6(a) show that taxpayers who have been in business the longest, i.e. 31 years and above were significantly less likely to strongly agree that they would engage in theoretical evasion [Exp (-.531) =0.59, $p<.10$]. These results were not statistically significant for Models 6(b) and 6(c), but were consistent with Model 6(a) in terms of the direction of association, i.e. negative between business ages and engaging in theoretical evasion. The

association is not strong, i.e. only significant in one model and at 10% level of significance, but it is relatively the same as that for business years in Model 4 (part (a)). Again, the researcher argues that in the current study the association between business age and VAT compliance is less conclusive.

Finally, the results in Model 6(a) show that taxpayers using professional firms' information were less likely to say they strongly agree that they engage in theoretical evasion [Exp (-430) =0.565, p<.10]. The result was not significant for Models 6(b) and 6(c), but was consistent with Model 6(a) in terms of the direction of association, i.e. negative between taxpayers using professional firms' information and engaging in theoretical evasion. Again, as it was in part (b), the researcher argues that in this part (c) the association between use of professional firms' information and VAT compliance is less conclusive.

d) Intentional mistakes to reduce VAT liability

The dependent variable intentional mistakes to reduce VAT liability (INTMSK_REDC_VAT) is ordinal (strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5). Therefore, the reference category for intentional mistakes to reduce VAT liability is 'strongly agree', and was estimated using Model 7 as indicated below:

Ordinal logistic regression Model 7:

INTMSK_REDC_VAT

$$\begin{aligned}
 &= \beta_0 + \beta_1 GENDER + \beta_2 AGE + \beta_3 Use_of_TA + \beta_4 YRS_BUSSN + \beta_5 BUSSN_SIZE \\
 &+ \beta_6 PRFSN_FRMS_SERV + \beta_7 TRA_SERV + \beta_8 SOCTY_MORL_OBLG \\
 &+ \beta_9 PERCP_VAT_ASET_BUSS + \beta_{10} PERC_FARNES_VAT_SYTM \\
 &+ \beta_{11} ATTD_HELP_TRA_STAF + \beta_{12} PERC_DECT_LKHOOD + \beta_{13} VAT_SANC \\
 &+ \beta_{14} IND2 + \beta_{15} IND3 + \beta_{16} IND4 + \beta_{17} IND5 + \beta_{18} IND6 + \beta_{19} IND7 \\
 &+ \beta_{20} IND8 + \beta_{21} IND9 + \beta_{22} T_VAT_REG + \beta_{23} YRS_VAT_REG \\
 &+ \varepsilon. \dots \textbf{Equation 7}
 \end{aligned}$$

Table 7.15 reports the results of Models 7(a), 7(b) and 7(c). Model 7(a) was statistically significant [X^2 (N=184) = 165.52, DF=24, p=.000], which was an improvement over the null model. The Goodness-of-fit test with a p-value of .999, i.e. not significant indicates that the null hypothesis that the data and model prediction were similar was not rejected. Therefore, the model was a good

fit. Additionally, the Nagelkerke R² indicates that the model with independent variables explained almost 62% of the total variation in intentional mistakes to reduce VAT liability.

Table 7.15: Summary result of Ordinal logistic Regression for model 7

Independent Variables	Dependent Variable: INTMSK_REDC_VAT		
	7(a)Full sample	7(b)Use_of_TA =1	7(c)Use_of_TA = 0
AGE	0.008	0.313	-0.344
YRS_BUSN	0.049	0.559	-0.522
BUSSN_SIZE	0.321	0.477*	0.566**
PRFSN_FRMS_SERV	-.712***	-1.400***	-0.352
TRA_SERV	0.612**	2.024***	-0.353
SOCTY_MORL_OBLG	-0.511**	-0.877***	0.170
PERCP_VAT_ASET_BUSS	1.799***	2.591***	2.251***
ATTD_HELP_TRA_OFFC	-0.315	-0.794**	0.244
PERC_FARNES_VAT_SYTM	0.000	0.072	-0.269
PERC_DECT_LKHOOD	-0.116	0.447	-0.976***
VAT_SANC	-0.686***	-1.080***	-0.688**
IND2	0.398	-0.407	1.572*
IND3	0.174	0.054	-0.348
IND4	2.047***	2.702**	3.356***
IND5	-2.808***	-3.228**	-3.213**
IND6	-1.160	-2.259	-3.036**
IND7	1.648	0 ^a	3.753**
IND8	1.469**	3.304**	2.023*
IND9	-0.493	0.686	-0.142
[GENDER=1]	-0.144	0.946	-1.716*
[Use_of_TA=1.00]	0.097	-	-
[YRS_VAT_REG =1]	2.786	-1.341	2.315
[YRS_VAT_REG =2]	3.440	-	5.237**
[T_VAT_REG=1]	0.402	0.411	-0.325
Model significance:			
N	184	97	87
-2 Log Likelihood: X ² df p-value	165.52 24 0.000	270.96 21 0.000	89.86 23 0.000
Goodness-of-fit: X ² p-value	588.13 0.999	682.127 0.000	295.73 0.799
Negelkerke Pseudo R ²	0.624	0.776	0.674
Variables significance:	Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10		

Notes: a: IND7 is excluded because there were no observation when the sample was defined at Use_of_TA =1.

Overall, regardless of the sample used, Model 7 was statistically significant and the full model was better than the null model. Additionally, the Goodness-of-fit test indicates good fitting models for Models 7(a) and 7(c), but not for 7(b). Nagelkerke R^2 shows Models 6(b) and 6(c) with independent variables explained almost 78% and 67%, respectively, of total variation in intentional mistakes to reduce VAT liability. Furthermore, Table 7.15 shows Model 7(a) has five factors, which were statistically significant at 1% level and four factors at 5%. Model 7(b) shows five factors was statistically significant at 1% level, four factors at 5% and one factor at 10% level. For Model 7(c), three factors were statistically significant at 1% level, six factor at 5% level, and three factors at 10% level.

As was the case in parts (a), (b) and (c) of this section, part (d) shows that perception of collected VAT is a business asset was statistical significant negatively associated with VAT compliance. Specifically, Table 7.15 shows that taxpayers who perceived that collected VAT is a business asset were more likely to strongly agree that they would make intentional mistakes. This result was relatively the same regardless of the sample used (Model 7(a) - [Exp (1.799) =6.04, $p < .01$], Model 7(b) - [Exp (2.591) =13.34, $p < .01$] and Model 7(c) - [Exp (2.251) =9.50, $p < .01$]). The results indicate that a unit increase in the perception that collected VAT is a business asset will increase the odds of a taxpayer strongly agreeing that they would make intentional mistakes by a factor of between 6 (Model 7(a)) and 13 (Model 7(b)). However, it is worth noting that contrary to Models 4, 5 and 6, the magnitude of the association between this factor and measures of VAT compliance was more pronounced in the users-of-tax-advisers (odds increase 13 times) than in non-users-of-tax-advisers (odds increase 10 times). In conclusion, again it is indicated that there is a statistically significant negative association between perceptions that collected VAT is a business asset and VAT compliance measures.

The relative influence of VAT sanctions was statistically significant. Table 7.15 shows the factor was negatively associated with taxpayers strongly agreeing that they sometimes make intentional mistakes. This indicates that the increase in the relative influence of VAT sanctions e.g. interest and fine was associated with taxpayers less likely agreeing to sometimes making intentional mistakes. The negative association was significant in all models (Model 7(a) - [Exp (-.686)

=0.50, $p < .01$], Model 7(b) - [Exp (-1.080) =0.34, $p < .01$] and Model 7(c) - [Exp (- .688) =0.50, $p < .05$]). However, as indicated by the odds, the extent of the negative association was more pronounced in Models 7(b). Overall, as the perceived relative influence of VAT sanctions increased, taxpayers were more likely to say they were VAT compliant. In terms of intentional mistakes, the results suggest VAT sanctions may help to reduce VAT non-compliance in Tanzania.

Furthermore, the results of Model 7(a) show that taxpayers in education and consultancy industry (IND4) [Exp (2.047) =7.74, $p < .01$] and transportation, storage and communication industry (IND8) [Exp (1.469) =4.34, $p < .05$] were more likely to strongly agree that they sometimes made intentional mistakes than comparable taxpayers in wholesale and retail trade industry. Although at different levels of significance, the result for education and consultancy industry (IND4) and transportation, storage and communication industry (IND8) were relatively consistent with that in Models 7(b) and 7(c), and for agriculture, livestock and forestry in Model 7(c). Additionally, Model 7(a) results indicate that taxpayers in real estate and renting business industry [Exp (-2.808) =0.06, $p < .01$] were less likely to strongly agree that they sometimes made intentional mistakes than comparable taxpayers in wholesale and retail trade industry. The result for real estate and renting business industry (IND5) was relatively consistent with that in Models 7(b) and 7(c), and for health and beauty industry (IND6) in Model 7(c). In general, Table 7.15 shows mixed results in comparing between IND2-9 and the reference industry (i.e. IND1), in relation to the odds of taxpayers' response to the question of sometimes making intentional mistakes. This result was not consistent with results in parts (a), (b) and (c), which indicated that a significant part of industries were not statistically significantly different from the wholesale and retail trade industry in explaining VAT compliance as measured by frequency of untimely submission, involvement in cash transactions and theoretical evasion.

Table 7.15 shows that business size was significantly positively associated with taxpayers strongly agreeing that they would make intentional mistakes. This result was relatively the same regardless of the sample used (Model 7(a) - [Exp (.321) =1.38, $p < .05$], Model 7(b) - [Exp (.477) = 1.61, $p < .10$] and Model 7(c) -

[Exp (.566) =1.76, $p < .05$]). For example, results for Model 7(a) show that a unit increase in the business size category e.g. from 'under 21 employees' category=1 to '21-40 employees' category=2, would increase the odds (by a factor of 1.38) of a taxpayer strongly agreeing that they would make intentional mistakes. It is worth noting that this result was consistent with the result for this factor in part (b), which indicated that business size was significantly negatively associated with VAT compliance. However, the result for this factor in this part was not consistent with that in part (c), which indicated that the increase in business size was associated with increase in VAT compliance.

The results for Models 7(a) and 7(b) also show that taxpayers using professional firms' information were significantly less likely to strongly agree that they would sometimes make intentional mistakes (Model 7(a)- [Exp (-.712) =0.49, $p < .01$], Model 7(b)- [Exp (-1.400) =0.25, $p < .01$]. The factor was not significant for Models 7(c), but was consistent with Models 7(a) and 7(b) in terms of the direction of association i.e. negative. Therefore, with the exception of Model 7(c), the results show that there was a statistically significant negative association between taxpayers using professional firms' information and strongly agreeing that they would sometimes make intentional mistakes.

Furthermore, taxpayers using TRA services were more likely to strongly agree that they would sometimes make intentional mistakes (Model 7(a)-[Exp (.612) =1.84, $p < .05$], Model 7(b) - [Exp (2.024) =7.57, $p < .01$]. For Model 7(c), the factor was not significant but the estimated sign was negative. Therefore, with exception of Model 7(c), the results show that there was a statistically significant positive association between the use of TRA services and these taxpayers strongly agreeing that they would sometimes make intentional mistakes. For this factor, the results in this part are not consistent with that indicated in part (a) (for part (b) and (c) the factor was not significant). In part (a) the use of TRA services was positively associated with VAT compliance, but it is negatively associated with VAT compliance in this part.

In addition, the results show that taxpayers who perceived a societal moral obligation were less likely to strongly agree they would make intentional mistakes (Model 7(a)-[Exp (-.511) =0.60, $p < .05$], Model 7(b)-[Exp (-.877) =0.42, $p < .01$]. For Model 7(c), the factor was not significant and the estimates sign was

positive. Therefore, with exception of Model 7(c), the result shows that there was a statistical significant negative association between taxpayers perceived that VAT compliance is a societal moral obligation and making intentional mistakes. The results for this factor in this part are consistent with that in part (b) and (c), which indicates perceptions of societal moral obligation, was positively associated with VAT compliance.

The results in Model 7(c) also show that the non-user-of-tax-advisers who perceived higher detection likelihood were less likely to strongly agree they would make intentional mistakes [Exp (-.976) =0.38, $p < .01$]. This result was not statistically significant for Model 7(a) and 7(b). This result support the argument that perceived detection likelihood was positively associated with VAT compliance behaviour. Overall, however, if other parts of this section are considered, the strength and direction of association between detection likelihood and VAT compliance was not clear.

Model 7(b) results indicate that the users-of-tax-advisers who favourably perceived the attitude and helpfulness of TRA officials were less likely to strongly agree they would make intentional mistakes [Exp (-.794) =0.45, $p < .05$]. This result was not statistically significant for Models 7(a) and 7(c). This result supports the argument that the way taxpayers perceived attitude and helpfulness of TRA officials was associated with VAT compliance. Overall, however, if other parts of this section are considered, the strength and direction of association between perceived attitude and helpfulness of TRA official and VAT compliance was not clear.

In addition, controlling other factors, the Model 7(c) results indicates that, VAT registered taxpayers for a period between 11 and 20 years, (i.e. YRS_VAT_REG = 2), were more likely to strongly agree they would make intentional mistakes ([Exp (5.237) =188.10, $p < .05$]), than those who have been VAT registered for 21 years or above, (i.e. YRS_VAT_REG = 3). The factor was not significant for Models 7(a) and 7(b). For the sample of non-users of tax advisers, the result indicates that the number of years a taxpayer is registered was negatively associated with VAT compliance.

Furthermore, controlling for other factors in the model, the results of Model 7(c) shows that males were less likely to strongly agree that they would sometimes make intentional mistakes [Exp (-1.716) =5.56, $p < .10$] as compared to females. However, the factor was not significant in Models 7(a) and Model 7(b). The result indicates that compared to females, males were positively associated with VAT compliance behaviour.

7.5.3 Multiple OLS regression

The preceding analysis used a single variable to measure tax compliance. This section uses tax compliance measures derived from EFA. To test the association between VAT compliance as measured by negative attitude towards VAT declaration and untimeliness of VAT returns, and the 23 independent variables, multiple (OLS) regression models are estimated⁴⁰. The dependent variables, negative attitude towards VAT declaration and untimeliness of VAT returns submission were extracted from EFA (see section 7.2.2). Sample 1 and sub-samples 2 and 3 were used in the two multiple OLS regression models for the two dependent variables and the results of the analysis are discussed in the following two parts (a) and (b):

a) Negative attitude towards VAT declaration (ATT_DECL)

The multiple OLS regression model 8 estimates negative attitude towards VAT declaration (ATT_DECL) and Table 7.16 summarises the results. The result of Breusch-Pagan test for heteroscedasticity was $X^2(DF=23) = 4.01$, $p = .04$ ⁴¹, which indicated significant heteroscedasticity, and the literature suggests the use of White's adjusted (robust) standard errors estimates to interpret the results (White, 1980). White's adjusted standard errors relax the OLS assumptions that errors are both independent and identically distributed, and in the presence of heteroscedasticity, these robust standard errors tend to be more trustworthy.

⁴⁰ See the 23 independent variables in Table 7.8, Section 7.5.

⁴¹ The null hypothesis for a Breusch-Pagan test for heteroscedasticity is that residuals at each level of predictor variables are constant. As the p -value = 0.04 (i.e. the X^2 is significant), the null hypothesis is rejected. Therefore, the test has shown that there are some heteroscedasticity problems.

Therefore, Table 7.16 report t-statistics based on White's adjusted standard error estimates.

OLS regression model 8:

$$\begin{aligned} \mathbf{ATT_DECL} = & \beta_0 + \beta_1 \mathbf{GENDER} + \beta_2 \mathbf{AGE} + \beta_3 \mathbf{Use_of_TA} + \beta_4 \mathbf{YRS_BUSSN} + \beta_5 \mathbf{BUSSN_SIZE} \\ & + \beta_6 \mathbf{PRFSN_FRMS_SERV} + \beta_7 \mathbf{TRA_SERV} + \beta_8 \mathbf{SOCTY_MORL_OBLG} \\ & + \beta_9 \mathbf{PERCP_VAT_ASET_BUSS} + \beta_{10} \mathbf{PERC_FARNES_VAT_SYTM} \\ & + \beta_{11} \mathbf{ATTD_HELP_TRA_STAF} + \beta_{12} \mathbf{PERC_DECT_LKHOOD} + \beta_{13} \mathbf{VAT_SANC} \\ & + \beta_{14} \mathbf{IND2} + \beta_{15} \mathbf{IND3} + \beta_{16} \mathbf{IND4} + \beta_{17} \mathbf{IND5} + \beta_{18} \mathbf{IND6} + \beta_{19} \mathbf{IND7} \\ & + \beta_{20} \mathbf{IND8} + \beta_{21} \mathbf{IND9} + \beta_{22} \mathbf{T_VAT_REG} + \beta_{23} \mathbf{YRS_VAT_REG} \\ & + \varepsilon. \dots \mathbf{Equation 8} \end{aligned}$$

Table 7.16: Multiple OLS regression result for model 8

Independent variable	Dependent Variable: ATT_DECL					
	8(a)Full sample		8(b)Use_of_TA =1		8(c)Use_of_TA = 0	
	β	t-statistic ¹	β	t-statistic ¹	β	t-statistic ¹
Constant	-0.155	-0.82	-0.291	-1.16	-0.289	-0.93
GENDER	0.008	0.07	-0.246	-1.76*	0.341	1.89*
AGE	0.043	1.02	0.061	1.11	0.053	0.66
Use_of_TA	-0.010	-0.12	-	-	-	-
YRS_BUSN	-0.106	-1.32	0.063	0.48	-0.237	-2.30**
BUSSN_SIZE	0.026	0.64	0.310	1.01	0.059	0.74
YRS_VAT_REG	0.028	0.19	-0.012	-0.05	0.221	0.95
PRFSN_FRMS_SERV	-0.111	-1.84*	-0.112	-1.48	-0.108	-1.00
TRA_SERV	-0.031	-0.45	0.082	0.96	-0.158	-1.24
SOCTY_MORL_OBLG	-0.115	-2.36**	-0.106	-1.65	-0.029	-0.37
PERCP_VAT_ASET_BUSS	0.631	13.88***	0.656	11.07***	0.604	7.35***
PERC_FARNES_VAT-SYTM	0.072	1.11	0.083	1.22	0.058	0.56
ATTD_HELP_TRA_OFFC	-0.092	-1.51	-0.176	-2.35**	0.008	0.08
PERC_DECT_LKHOOD	-0.026	-0.53	0.029	0.48	-0.168	-2.26**
VAT_SANC	-0.072	-1.52	0.092	-1.36	-0.048	-0.62
IND2	0.269	2.39**	0.117	0.78	0.308	1.75*
IND3	0.031	0.25	0.095	0.74	-0.174	-0.77
IND4	0.469	1.61	0.549	1.16	0.364	0.79
IND5	-0.196	-1.51	-0.226	-1.12	-0.328	-1.31
IND6	-0.239	-1.01	-0.038	-0.11	-0.565	-1.71*
IND7	0.639	1.63		0 ^a	0.859	2.25**
IND8	0.329	2.46**	0.431	2.14**	0.217	0.93
IND9	-0.091	-1.64	0.174	0.85	-0.547	-1.28
T_VAT_REG	0.001	4.76***	-0.204	-1.82*	0.001	3.46***
Model significance:						
N	185		97		88	
Adjusted R-squared	0.69		0.77		0.72	
F statistic DF p-value	27.15 23 0.000		18.35 21 0.000		23.69 22 0.000	
Variables significance:	Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10					

Notes: ¹based on White adjusted standard error

Table 7.16 shows model 8(a) as a whole was highly significant ($F\text{-value} = 27.15$, $p < .01$), adjusted R^2 was 69%, and six factors were statistically significant (at varying levels). The model shows a highly significant positive association between negative attitude towards VAT declaration and four independent variables. These independent variables were perception that collected VAT is a business asset [$\beta = 0.63$, $t = 13.88$, $p < .01$], enforced VAT registration [$\beta = 0.00$, $t = 4.76$, $p < .01$], transportation, storage and communication industry (IND8) [$\beta = 0.33$, $t = 2.46$, $p < .05$] and hotels, tourism and restaurants industry (IND2) [$\beta = 0.27$, $t = 2.39$, $p < .05$]. Furthermore, the model shows significant negative association between negative attitude towards VAT declaration and two independent variables: societal moral obligation [$\beta = -0.12$, $t = -2.36$, $p < .05$] and professional firms' information [$\beta = -0.11$, $t = -1.84$, $p < .10$].

In order to assess the differences in estimating the dependent variable between users and non-users of tax advisors, sub-samples 1 and 2 were used in Models 8(b) and 8(c) respectively. Table 7.16 shows both models were highly significant [Model 8(b) - ($F\text{-value} = 18.35$, $p < .01$) and adjusted R^2 was 77%) and Model 8(c) - ($F\text{-value} = 23.69$, $p < .01$) and adjusted R^2 was 72%).

In Model 8(b) five factors were statistically significant (at varying levels), with two factors (perception that collected VAT is a business asset [$\beta = 0.66$, $t = 11.07$, $p < .01$] and transportation, storage and communication industry (IND8) [$\beta = 0.43$, $t = 2.14$, $p < .05$] showing highly significant positive association with negative attitude towards VAT declaration. Furthermore, the model indicates a significant negative association between negative attitude towards VAT declaration and three factors: attitude and helpfulness of TRA officials [$\beta = -0.18$, $t = -2.35$, $p < .05$], enforced VAT registration [$\beta = -0.20$, $t = -1.82$, $p < .10$] and female [$\beta = -0.25$, $t = -1.76$, $p < .10$].

In model, 8(c) eight factors were statistically significant (at varying levels). The model shows a highly significant positive association between negative attitude towards VAT declaration and five factors. These factors were enforced VAT registration [$\beta = 0.00$, $t = 3.46$, $p < .01$], perception that collected VAT is a business asset [$\beta = 0.60$, $t = 7.35$, $p < .05$], agriculture, livestock and forestry industry (IND7) [$\beta = 0.86$, $t = 2.25$, $p < .05$], hotels, tourism and restaurants

industry (IND2) [$\beta = 0.31$], $t = 1.75$, $p < .10$], and female [$\beta = 0.34$], $t = 1.89$, $p < .10$]. The other three factors were significantly negatively associated with negative attitude towards VAT declaration. These factors were years of business [$\beta = -0.24$], $t = -2.30$, $p < .05$], detection likelihood [$\beta = -0.17$], $t = -2.26$, $p < .05$] and health and beauty industry (IND6) [$\beta = -0.57$], $t = -1.71$, $p < .10$].

The use of sub-samples 1 and 2 appears to have slightly increased the explanatory power from full sample R^2 of 69% to R^2 of 72% and R^2 of 77% for model 8(c) and model 8(b) respectively. Furthermore, Table 7.16 shows that years of business and detection likelihood were significant in the sample of non-users of tax advisers only (model 8(c)), the use of professional firms' information and societal moral obligation were significant in the full sample only, and attitude and helpfulness of TRA officials was significant in the users of tax advisers only.

Generally, the results in Table 7.16 indicate that the perception that collected VAT is a business asset was the most significant factor in explaining variations in taxpayers' negative attitude towards VAT declaration. Finally, enforced registration was also significant in all samples, but the significance was relatively low and negative for users of tax advisers. This implies that for users of tax advisers, increase in enforced registration was associated with an increase in VAT compliance behaviour.

b) Untimeliness of VAT returns

The OLS regression model 9 estimates timeliness of VAT returns (TMLNES_VAT) and Table 7.17 summarises the results. As it was for model 8 in part (a) above, the result of Breusch-Pagan test for heteroscedasticity in model 9 indicated significant heteroscedasticity [χ^2 (DF=23) = 13.86, $p = 0.000$]. Therefore, Table 7.17 report t-statistics based on White's adjusted standard error estimates.

OLS regression model 9:

$$\begin{aligned}
 TMLNES_VAT = & \beta_0 + \beta_1 GENDER + \beta_2 AGE + \beta_3 Use_of_TA + \beta_4 YRS_BUSSN + \beta_5 BUSSN_SIZE \\
 & + \beta_6 PRFSN_FRMS_SERV + \beta_7 TRA_SERV + \beta_8 SOCTY_MORL_OBLG \\
 & + \beta_9 PERCP_VAT_ASET_BUSS + \beta_{10} PERC_FARNES_VAT_SYTM \\
 & + \beta_{11} ATTD_HELP_TRA_STAF + \beta_{12} PERC_DECT_LKHOOD + \beta_{13} VAT_SANC \\
 & + \beta_{14} IND2 + \beta_{15} IND3 + \beta_{16} IND4 + \beta_{17} IND5 + \beta_{18} IND6 + \beta_{19} IND7 \\
 & + \beta_{20} IND8 + \beta_{21} IND9 + \beta_{22} T_VAT_REG + \beta_{23} YRS_VAT_REG \\
 & + \varepsilon. \dots \text{Equation 9}
 \end{aligned}$$

Table 7.17 shows model 9(a) was highly significant ($F\text{-value} = 7.88$, $p < .01$), with an adjusted R^2 of 37%. Seven factors were statistically significant (at varying levels). The model shows a highly significant positive association between untimeliness of VAT returns submission, and four other factors: first, perception that collected VAT is a business asset [$\beta = 0.45$, $t = 6.55$, $p < .01$]. Second, enforced VAT registration [$\beta = 0.00$, $t = 1.67$, $p < .10$], third, real estate and renting business industry (IND5) [$\beta = 0.64$, $t = 2.27$, $p < .05$] and agriculture, livestock and forestry industry (IND7) [$\beta = 1.452$, $t = 2.33$, $p < .05$]. Furthermore, the model shows significant negative association between timeliness of VAT returns submission and three factors: use of TRA services [$\beta = -0.24$, $t = 2.36$, $p < .05$], manufacturing industry IND9 [$\beta = -0.257$, $t = -1.82$, $p < .10$] and perceived detection likelihood [$\beta = -0.10$, $t = -1.81$, $p < .10$].

From the factor analysis (see section 7.2.2), the number of timely submission of VAT returns and submitting VAT returns on time indicated taxpayers' timeliness of VAT returns submission. These results show the perception of collected VAT is a business asset may increase taxpayers' untimeliness in submitting VAT returns, thus VAT non-compliance. However, use of TRA services and perceived probability detection likelihood indicated a decrease in untimeliness of VAT returns submission, thus they appeared to increase VAT compliance. In general, the result in both models (i.e. model 8 and 9) show the perception that collected VAT is a business asset was the most important determinant of VAT compliance in Tanzania. This suggests taxpayers' education, for example, that collected VAT is not supposed to be accounted as a business asset, could help improve compliance.

Table 7.17: Multiple OLS regression result for model 9

Independent variable	Dependent Variable: TMLNES_VAT					
	9(a)Full sample		9(b)Use_of_TA =1		9(c)Use_of_TA = 0	
	β	t-statistic ¹	B	t-statistic ¹	β	t-statistic ¹
Constant	0.136	0.57	-0.079	-0.24	-0.052	-0.13
GENDER	-0.031	-0.19	-0.052	-0.26	0.117	0.40
AGE	0.055	0.85	-0.060	-0.73	0.172	1.55
Use_of_TA	-0.170	-1.46	-	-	-	-
YRS_BUSN	-0.139	-1.21	0.183	0.97	-0.368	-2.49**
BUSSN_SIZE	-0.042	-0.80	-0.004	-0.06	-0.037	-0.49
YRS_VAT_REG	-0.028	-0.17	-0.126	-0.42	0.097	0.43
PRFSN_FRMS_SERV	0.065	0.85	0.008	0.08	0.039	0.27
TRA_SERV	-0.240	-2.36**	-0.158	-1.05	-0.194	-1.08
SOCTY_MORL_OBLG	0.101	1.45	0.138	1.43	0.084	0.84
PERCP_VAT_ASET_BUSS	0.446	6.55***	0.406	4.96***	0.441	3.11***
PERC_FARNES_VAT-SYTM	-0.048	-0.43	0.021	0.15	-0.092	-0.48
ATTD_HELP_TRA_OFFC	0.041	0.48	0.027	0.26	0.029	0.18
PERC_DECT_LKHOOD	-0.101	-1.81*	0.104	-1.51	-0.185	-1.71*
VAT_SANC	0.052	0.81	0.054	0.57	0.083	0.83
IND2	0.103	0.70	0.080	0.50	0.094	0.29
IND3	0.063	0.36	0.280	1.20	-0.153	-0.53
IND4	0.416	1.36	0.721	1.35	0.269	0.49
IND5	0.644	2.27**	0.717	1.79*	0.482	1.00
IND6	-0.328	-1.48	0.120	0.40	0.780	-1.76*
IND7	1.452	2.33**		0 ^a	1.451	2.42**
IND8	-0.170	-0.66	0.012	0.03	-0.295	-1.04
IND9	-0.257	-1.82*	-0.200	-1.13	-2.274	-1.13
T_VAT_REG	0.000	1.67*	-0.004	-0.02	0.000	0.48
Model significance:						
N	185		97		88	
Adjusted R-squared	0.37		0.38		0.42	
F statistic DF p-value	7.88 23 0.000		3.74 21 0.000		4.62 22 0.000	
Variables significance:	Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10					

Notes: ¹based on white adjusted standard error

In order to assess the differences in estimating the dependent variable between users and non-users of tax advisors, sub-samples 1 and 2 were used in Models 9(b) and 9(c) respectively. Table 7.17 shows both models were highly significant [Model 9(b) – (*F-value* = 3.74, $p < .01$) and adjusted R^2 was 38%) and Model 9(c) – (*F-value* = 4.62, $p < .01$) and adjusted R^2 was 42%). In general, all R^{2s} for model 9 are significantly lower than in model 8. This indicates the 23 independent variables were able to explain more variations in the dependent variable ‘positive attitude towards VAT declaration’ than in the ‘timeliness of VAT returns submission’.

In Model 9(b) only two factors were statistically significant (at varying levels), and both were positively associated with untimeliness of VAT returns submission. These factors were perception that collected VAT is a business asset [($\beta = 0.41$), $t = 4.96$, $p < .01$] and real estate and renting business (IND5) [($\beta = 0.72$), $t = 1.79$, $p < .10$]. For users of tax advisors, the increase in the perception that collected VAT is a business asset was associated with increase in taxpayers’ untimeliness in submitting VAT returns, thus decrease in VAT compliance.

In model, 9(c) five factors were statistically significant (at varying levels). The model shows a highly significant positive association between untimeliness of VAT returns submission and three factors: perception that collected VAT is a business asset [($\beta = 0.44$), $t = 3.11$, $p < .01$], agriculture, livestock and forestry industry (IND7) [($\beta = 1.45$), $t = 2.42$, $p < .05$] and health and beauty industry (IND6) [($\beta = -0.78$), $t = -1.76$, $p < .10$]. The other two factors were significantly negatively association with timeliness of VAT returns submission. These factors were years of business [($\beta = -0.37$), $t = -2.49$, $p < .05$] and detection likelihood [($\beta = -0.19$), $t = -1.71$, $p < .10$].

The use of sub-samples 1 and 2 appears to have slightly increased the explanatory power from full sample R^2 of 37% to R^2 of 38% and R^2 of 42% for model 9(b) and model 9(c) respectively. However, the increase was not greater than in model 8. Furthermore, Table 7.17 shows that years of business was significant in non-users of tax advisors only (model 9(c)), with an increase in years of business being associated with a decrease in timeliness of VAT returns submission. Additionally, the use of TRA services, enforced registration and

manufacturing industry (IND9) were significant in the full sample only (model 9(a)).

Generally, the results in Table 7.17 indicates the perception that collected VAT is a business asset was the most important factor in explaining variations in timeliness of VAT returns submission. The significance of the perception that collected VAT is a business asset as clearly shown when comparing, for example, model 9(a) and 9(b). Despite model 9(a) having seven significant factors, and model 9(b) only two significant factors, model 9(b) has relatively the same R^2 of 38% as model 9(a) with R^2 of 37%. Therefore, in this model as in model 8, the increase in the perception that collected VAT is a business asset was associated with decrease in VAT compliant behaviour.

7.6 Regression results and discussion

This section and summarises the results in sub-sections 7.4.1, 7.4.2 and 7.4.3. It aims to corroborate the findings of this study with existing theoretical and empirical literature. In addition, the section provides concluding remarks on whether or not that the findings of this study supports the research hypotheses stated in sub-sections 2.3.1 and 2.3.2.

a) VAT compliance is associated with perceived detection likelihood

The quantitative results show mixed findings on the relationship between perceived detection likelihood and the VAT compliance measures. Table 7.18 presents the summary results, and shows in three models, regardless of the sample used⁴², perceived detection likelihood was not significantly associated with the respective VAT compliance measures. The VAT compliance measures in these models were taxpayers' not notifying TRA of errors in VAT returns, never submitting VAT returns on time and agreeing to engage in theoretical evasion. This also implies that regardless of whether or not a taxpayer uses tax advisers,

⁴² The quantitative analysis had nine models, and each model used three samples. The three samples are defined in chapter 7 Section 7.4. The aim was to assess the significance of the differences between users and non-users of tax advisers' responses to VAT compliance factors.

their perception of detection likelihood would less likely have any effect in these three VAT compliance measure.

Furthermore, in the three remaining samples used, Table 7.18 show six out of the nine VAT compliance measures had significant associations with the factor perceived detection likelihood. Specifically, perceived detection likelihood was positively associated with two VAT compliance measures; enforced VAT registration (non-users of tax advisers sub-sample), and never having been involved in cash transactions (users of tax advisers sub-sample). In addition, it was negatively associated with four VAT compliance measures; not submitting VAT returns on time (full sample and non-users of tax advisers sub-sample), strongly agreeing making intentional mistakes (non-users of tax advisers sub-sample), negative attitudes towards VAT declaration (non-users of tax advisers sub-sample), and untimeliness of VAT returns (full sample and non-users of tax advisers sub-sample).

Table 7.18: Detection likelihood and VAT compliance

Dependent variable	Sample	Sign/Sig	Interpretation: Perceived detection likelihood was-	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	Full sample	+	not significant	No
	Users of TA	-		
	Non-Users of TA	+/**	positively associated with enforced VAT registration	Yes
VAT_RTN_ON_TM	Full sample	-/**	negatively associated with taxpayers not submitting VAT returns on time	Yes
	Users of TA	-	Not significant	No
	Non-Users of TA	-/**	negatively associated with taxpayers not submitting VAT returns on time	Yes
ERR_VAT_RTN	Full sample	+	not significant	No
	Users of TA	+		
	Non-Users of TA	-		
Ordinal Logistic Regression				
N_TML_SUB_VAT	Full sample	-	not significant	No
	Users of TA	-		
	Non-Users of TA	+		
INV_CASH_TRS	Full sample	+	not significant	No
	Users of TA	+/*	positively associated with taxpayers never been involved in cash transactions	Yes
	Non-Users of TA	-	not significant	No
LES_VAT_PAID	Full sample	-	not significant	No
	Users of TA	+		
	Non-Users of TA	-		
INTMSK_REDC_VAT	Full sample	-	not significant	No
	Users of TA	+		
	Non-Users of TA	-/**	negatively associated with sometimes making intentional mistakes	Yes
Multiple OLS regression				
ATT_DECL	Full sample	-	not significant	No
	Users of TA	-		
	Non-Users of TA	-/**	negatively associated with negative attitude towards VAT declaration	Yes
TMLNESS_VAT	Full sample	-/*	negatively associated with untimeliness of VAT returns	Yes
	Users of TA	-	not significant	No
	Non-Users of TA	-/*	negatively associated with untimeliness of VAT returns	Yes
Summary:			Positive association	2
			Negative association	4
			No significant association	3
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

The association between perceived detection likelihood and VAT compliance measures appeared to be significant in more cases (5 times) for non-users of tax advisers than for users of tax advisers (1 time). It was 2 times for the full sample. Table 7.18 also show in five out of the six models that showed significant association, the direction of association indicated the increase in perceived detection likelihood would more likely improve taxpayers' VAT compliance. This shows that for non-users of tax advisers, perceived detection likelihood would more likely be a significant factor in improving VAT compliance than for users of tax advisers. This interpretation is consistent with the literature, which suggests that detection likelihood by itself is not enough. For detection likelihood to positively affect tax compliance, greater uncertainty about tax authorities' audit effectiveness is crucial. Compared to users of tax advisers, it can be argued, non-users of tax advisers are more likely to face uncertainties in their tax affairs because of, for example, a limited knowledge base on tax issues including the extent to which a tax authority is effective in detecting uncompliant taxpayers. Because of a higher perceived level of detection risk, non-users of tax advisers may tend to raise their compliance level accordingly.

Overall, the literature appears to have more support that detection likelihood is positively associated with tax compliance than the opposite (for example, see Alm, 1991; Pommerehne and Frey, 1992; Alm, Jackson and Mckee, 2006; Fischer, Wartick and Mark, 1992; Kirchler, 2007; Chau and Leung, 2009). Additionally, Kirchler's (2007) review of the literature on the relationship between detection likelihood and tax compliance found many studies supporting the hypothesis that higher detection has the likelihood of positively influencing taxpayers' compliant behaviour. In the current research, the results of the five models were consistent with this literature on probability of detection as a factor in tax compliance. However, one model showed the increase in perceived detection likelihood was likely to increase VAT non-compliance as measured by enforced VAT registration. This result may reflect the fact that enforced

registration, according to respondents, was common for most taxpayers in Tanzania.⁴³

b) VAT compliance is associated with perceived influence of VAT sanctions

The summary of quantitative results in Table 7.19 shows, except for enforced registration for users of tax advisers, three out of the nine VAT compliance measures had significant associations with perceived influence of VAT sanctions. In general, unlike the associations between perceived detection likelihood and VAT compliance measures, the results for perceived influence of VAT sanctions and VAT compliance did not indicate significant response differences between users and non-users of tax advisers. In six models, regardless of the sample used, perceived influence of VAT sanctions was not significantly associated with the respective VAT compliance measures. The VAT compliance measures in these models were taxpayers' not submitting VAT returns on time, not notifying TRA of errors in VAT returns, never submitting VAT returns on time, agreeing to engage in theoretical evasion, negative attitudes towards VAT declaration and untimeliness of VAT returns.

The results show perceived influence of VAT sanctions was less likely to be a significant factor in influencing VAT compliance as measured by timely submission of VAT returns. This is because the time variables in all the three regression models, i.e. binary and ordinal logistic and multiple OLS did not indicate any statistically significant association with the perceived influence of VAT sanctions. Furthermore, the results in Table 7.19 show that regardless of whether or not a taxpayer uses tax advisers, their perceived influence of VAT sanctions would unlikely have any effect in taxpayers' notifying TRA of errors in VAT returns, their decision to engage in theoretical evasion, or on their negative attitudes towards VAT declaration.⁴⁴ These results of no significant associations between the sanction-variable and the VAT compliance measures are consistent

⁴³ This interpretation is supported by the results and findings of qualitative data analysis (see Chapter 6, section 6.1.3)

⁴⁴ Noted also, the direction of the insignificant associations indicates sanction would more likely decrease VAT compliance than the opposite.

with the literature that indicates sanctions do not always lead to improved tax compliance levels (Alm *et al.*, 2010). The findings in Alm *et al.*, (2010) show the emphasis on service-oriented approaches, rather than emphasis on the traditional “enforcement” paradigm of tax administration were more effective in improving tax compliance.

Table 7.19: Influence of VAT sanctions and VAT compliance

Dependent variable	Sample	Sign/Sig	Interpretation: Perceived influence of VAT sanctions was-	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	Full sample	+/**	positively associated with enforced VAT registration	Yes
	Users of TA	+	not significant	No
	Non-Users of TA	+/**	positively associated with enforced VAT registration	Yes
VAT_RTN_ON_TM	Full sample	+	not significant	No
	Users of TA	-		
	Non-Users of TA	+		
ERR_VAT_RTN	All 3 samples	-	not significant	No
Ordinal Logistic Regression				
N_TML_SUB_VAT	All 3 samples	+	not significant	No
INV_CASH_TRS	All 3 samples	-/**	negatively associated with taxpayers' never been involved in cash transactions	Yes
LES_VAT_PAID	Full sample	+	not significant	No
	Users of TA	-		
	Non-Users of TA	+		
INTMSK_REDC_VAT	Full sample	-/**	negatively associated with sometimes making intentional mistakes	Yes
	Users of TA	-/**		
	Non-Users of TA	-/**		
Multiple OLS regression				
ATT_DECL	All 3 samples	-	not significant	No
TMLNESS_VAT	All 3 samples	+	not significant	No
Summary:			Positive association	1
			Negative association	2
			No significant association	6
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

As indicated in Table 7.19, perceived influence of VAT sanctions was positively associated with one VAT compliance measures (enforced VAT registration, except for users of tax advisers) and negatively associated with two VAT compliance measures, (taxpayers' never having been involved in cash transactions and strongly agreeing to making intentional mistakes (all three samples). Even with these significant associations, only one association between perceived influence of VAT sanctions and intentional mistakes shows it is more likely that sanctions can improve VAT compliance. The other two associations between perceived influence of VAT sanctions and enforced registration and involvement in cash transactions indicated that an increase in perceived influence of VAT sanction would more likely decrease VAT compliance.

The finding that the perceived influence of VAT sanctions is negatively associated with VAT compliance is extensively supported in the literature (for example, see Snow and Warren Jr, 2005; Kirchler, 2007; Alm, Jackson and Mckee, 1992b). Overall, the literature suggests that sanctions have a direct deterrence effect and tend to enhance tax compliance if properly administered. Properly administered sanctions are those set at "realistic levels" (Alm, Jackson and Mckee, 1992b; Hasseldine *et al.*, 2007; Snow and Warren Jr, 2005). The findings of the current study show two things in relation to sanctions and VAT compliance. First, that there is an association between perceptions on VAT sanctions and some measures of VAT compliance. Second, the hypothesis that sanctions increase VAT compliance was less supported (only one VAT compliance measure) compared to two VAT compliance measures, which did not support. These results indicate that sanctions may not have significant influence in improving VAT compliance in Tanzania.

c) VAT compliance is associated with attitude towards behavioural outcome

Attitude towards behavioural outcome is a factor in TPB, which describes a taxpayers' assessment of the favourableness or unfavourableness of their behaviour (see section 2.3.2 (a)). In the current research, taxpayers indicated the assessment of their behavioural outcome in terms of how important they perceived VAT system fairness was for them and the way tax officials treated the taxpayers.

Table 7.20 presents the summary results, and shows in six models, regardless of the sample used, perceived fairness in the VAT system was not significantly associated with the respective VAT compliance measures. The VAT compliance measures in these models were taxpayers' not submitting VAT returns on time, not notifying TRA of errors in VAT returns, never having been involved in cash transactions, strongly agreeing making intentional mistakes, negative attitudes towards VAT declaration, and untimeliness of VAT returns. This implies that regardless of whether or not a taxpayer uses tax advisers, their perception of fairness in the VAT system would not have any effect in these six VAT compliance measure.

It is also worth noting that no model that used the sample of users of tax advisers showed a significant association between perceived fairness in the VAT system and the respective VAT compliance measures. Therefore, the author argues that fairness of VAT system in Tanzania was more associated with VAT compliance behaviour of non-users than users of tax advisers. Overall, literature indicates the use of tax advisers tends to decrease taxpayers' compliance levels (for example, Murphy and Sakurai, 2001; Attwell and Sawyer, 2001; Klepper, Mazur and Nagin, 1991). Therefore, fairness in the VAT system would less likely be a concern for users of tax adviser compared to non-users of tax advisers. This is because, as the literature cited above suggest, it is more likely that tax advisers will use their expertise to protect their clients if the tax system was unfair. However, this is a resource that non-users of tax advisers may not have; hence, the issue of fairness becomes more important to them than users of tax advisers.

Table 7.20: Fairness in the VAT system and VAT compliance

Dependent variable	Sample	Sign/Sig	Interpretation: Perceived fairness in the VAT system was -	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	Full sample	-/**	negatively associated with enforced VAT registration	Yes
	Users of TA	-	not significant	No
	Non-Users of TA	-/*	negatively associated with enforced VAT registration	Yes
VAT_RTN_ON_TM	Full sample	-	not significant	No
	Users of TA	+		
	Non-Users of TA	+		
ERR_VAT_RTN	All 3 samples	+	not significant	No
Ordinal Logistic Regression				
N_TML_SUB_VAT	Full sample	-/**	negatively associated with taxpayers never submitting VAT returns on time	Yes
	Users of TA	-	not significant	
	Non-Users of TA	-/**	negatively associated with taxpayers never submitting VAT returns on time	Yes
INV_CASH_TRS	Full sample	+	not significant	No
	Users of TA	-		
	Non-Users of TA	+		
LES_VAT_PAID	Full sample	+	not significant	No
	Users of TA	+		
	Non-Users of TA	+/*	positively associated with strongly agreeing to engage in theoretical evasion	Yes
INTMSK_REDC_VAT	Full sample	+	not significant	No
	Users of TA	+		
	Non-Users of TA	-		
Multiple OLS regression				
ATT_DECL	All 3 samples	+	not significant	No
TMLNESS_VAT	Full sample	-	not significant	No
	Users of TA	+		
	Non-Users of TA	-		
Summary:			Positive association	1
			Negative association	2
			No significant association	6
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

Furthermore, depending on the sample used, the summary results in Table 7.20 shows three out of the nine VAT compliance measures had significant associations with perceived fairness in the VAT system. Specifically, perceived fairness in the VAT system was positively associated with only one VAT compliance measure, that was, taxpayers' strongly agreeing to engage in theoretical evasion (non-users of tax advisers). In addition, perceived fairness in the VAT system was negatively associated with two VAT compliance measures: enforced VAT registration (full sample and non-users of tax advisers) and taxpayers' never submitting VAT returns on time (full sample and non-users of tax advisers). Although perceived fairness in the VAT system was significantly associated with some VAT compliance measures, the overall result indicates that increased fairness would more likely improve VAT compliance.

The finding that perceived fairness of VAT system is positively associated with VAT compliance is supported in the literature (for example, see Mason and Calvin, 1984; Song and Yarbrough, 1978b). Overall, the literature suggests that taxpayers tend to avoid paying tax if they perceive the tax system is unfair, that they are treated unfairly, there is a lack of respect towards them, or they feel are being biased treated by tax officials (Braithwaite and Reinhart, 2000; Richardson, 2006).

The second sub-factor of the attitude towards behaviour outcome was the perceived attitude and helpfulness of TRA officials. In TPB, how taxpayers perceive their interactions with tax officials is very important in helping taxpayers' assessment of whether being compliant with tax laws will lead to favourableness outcome (for example, Kirchler, Niemirowski and Wearing, 2006; Kirchler, 2007).

Table 7.21 presents the summary results, and shows in five models, regardless of the sample used, perceived attitude and helpfulness of TRA officials was not significantly associated with the respective VAT compliance measures. The VAT compliance measures in these models were taxpayers' enforced VAT registration, not submitting VAT returns on time, not notifying TRA of errors in VAT returns, never been involved in cash transactions and untimeliness of VAT returns. This implies that regardless of whether or not a taxpayer uses tax

advisers, their perception of TRA officials' attitude and helpfulness would not have any effect in these five VAT compliance measure.

Table 7.21: Attitude and helpfulness of TRA officials and VAT compliance

Dependent variable	Sample	Sign /Sig	Interpretation: Perceived attitudes and helpfulness of TRA officials was-	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	All 3 samples	+	not significant	No
VAT_RTN_ON_TM	All 3 samples	+	not significant	No
ERR_VAT_RTN	All 3 samples	-	not significant	No
Ordinal Logistic Regression				
N_TML_SUB_VAT	Full sample	+	not significant	No
	Users of TA	-		
	Non-Users of TA	+/*	positively associated with taxpayers never submitting VAT returns on time	Yes
INV_CASH_TRS	Full sample	+	not significant	No
	Users of TA			
	Non-Users of TA	-		
LES_VAT_PAID	Full sample	-	not significant	No
	Users of TA	-/*	negatively associated with strongly agreeing to engage in theoretical evasion	Yes
	Non-Users of TA	-	not significant	No
INTMSK_REDC_VAT	Full sample	-	not significant	No
	Users of TA	-/**	negatively associated with sometimes making intentional mistakes	Yes
	Non-Users of TA	+	not significant	No
Multiple OLS regression				
ATT_DECL	Full sample	-	not significant	No
	Users of TA	-/**	negatively associated with negative attitude towards VAT declaration	Yes
	Non-Users of TA	-	not significant	No
TMLNESS_VAT	All 3 samples	+	not significant	No
Summary:			Positive association	1
			Negative association	3
			No significant association	5
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

Furthermore, depending on the sample used, the summary results in Table 7.21 shows four out of the nine measures of VAT compliance had significant

associations with perceived attitude and helpfulness of TRA officials. Specifically, perceived attitude and helpfulness of TRA officials was positively associated with only one VAT compliance measure, which was taxpayers' strongly agreeing to never submitting VAT return on time (non-users of tax advisers). In addition, perceived attitude and helpfulness of TRA officials was negatively associated with three VAT compliance measures; taxpayers' strongly agreeing to engage in theoretical evasion (users of tax advisers), strongly agreeing making intentional mistakes (users of tax advisers) and negative attitudes towards VAT declaration (users of tax advisers).

In addition, the results in Table 7.21 show notable differences between models that use the sample of users of tax advisers and models using the sample of non-users of tax advisers. This difference is in respect of the significance of the association between perceived attitudes and helpfulness of TRA officials and respective VAT compliance measures. The difference is, except for number of timely submission as a measure of VAT compliance, no models using the sample of non-users showed a significant association between perceived attitudes and helpfulness of TRA officials and respective VAT compliance measures. Even for the number of timely submission the association with perceived attitudes and helpfulness of TRA officials was relatively weak, i.e. significance level 10%, and the direction indicated that improved TRA officials' attitude and helpfulness would more likely decrease VAT compliance among non-users of tax advisers.

As indicated above with the differences in the results between models of users of tax advisers and non-users of tax advisers, the results show mixed findings on the association between the perceived attitudes and helpfulness of TRA officials and VAT compliance. This is possibly because users of tax advisers may have a better understanding of TRA official attitude and general helpfulness through tax advisers than non-users of tax advisers.

The above results find support in the literature. For example, procedural justice in terms of support that taxpayers get from tax officials is shown to have a positive correlation with tax compliance (Kirchler, Niemirowski and Wearing, 2006; Kirchler, 2007; Frey and Feld, 2002). For example, in a study conducted in Switzerland by Frey and Feld (2002), being 'friendly, respectful and supportive' of taxpayers were long-term and important factors of enhanced tax

compliance. The finding of this positive association between taxpayer-tax officials relationship and tax compliance is cited as a reason for the change in approach in interacting with taxpayers, by tax authorities in several countries (James and Alley, 2002). The view that taxpayer-tax officials' relationship is important is also supported in a VAT context (Hansford and Hasseldine, 2002).

d) VAT compliance is associated with subjective norms

'Subjective norms' is another factor of TPB. It represents taxpayers' belief about the social acceptability of their intended behaviour (see section 2.3.2(b)). In the current research, taxpayers indicated the assessment of their subjective norms in terms of their perceived societal moral obligation and perception that collected VAT is a business asset.

Table 7.22 presents the summary results, and shows in three models, regardless of the sample used: perceived societal moral obligation was not significantly associated with the respective VAT compliance measures. The VAT compliance measures in these models were taxpayers' enforced VAT registration, never submitting VAT returns on time and untimeliness of VAT returns. This implies that regardless of whether or not a taxpayer uses tax advisers, their perception of perceived societal moral obligation would not have any effect in these three VAT compliance measure.

Furthermore, depending on the sample used, the summary results in Table 7.22 show six out of the nine measures of VAT compliance had significant associations with perceived societal moral obligation. Specifically, perceived societal moral obligation was positively associated with two VAT compliance measures, which were taxpayers' not submitting VAT returns on time (full sample and users of tax advisers) and never having been involved in cash transactions (all three samples). In addition, perceived societal moral obligation was negatively associated with four VAT compliance measures. These VAT compliance measures were taxpayers' not notifying TRA of errors in VAT returns (full sample and users of tax advisers), strongly agreeing to engage in theoretical evasion (full sample and non-users of tax advisers), strongly agreeing making intentional mistakes (full sample and users of tax advisers) and negative attitudes towards VAT declaration (full sample).

Table 7.22: Societal moral obligation and VAT compliance

Dependent variable	Sample	Sign/ Sig	Interpretation: Perceived societal moral obligation was	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	All 3 samples	+	not significant	No
VAT_RTN_ON_TM	Full sample	+/**	positively associated with taxpayers not submitting VAT returns on time	Yes
	Users of TA	+/*		
	Non-Users of TA	+	not significant	
ERR_VAT_RTN	Full sample	-/**	negatively associated with taxpayers not notifying TRA of error in a submitted VAT returns	Yes
	Users of TA	-/**		
	Non-Users of TA	+	not significant	
Ordinal Logistic Regression				
N_TML_SUB_VAT	All 3 samples	+	not significant	No
INV_CASH_TRS	Full sample	+/**	positively associated with taxpayers' never been involved in cash transactions	Yes
	Users of TA	+/*		
	Non-Users of TA	+/**		
LES_VAT_PAID	Full sample	-/**	negatively associated with strongly agreeing to engage in theoretical evasion	Yes
	Users of TA	-	not significant	No
	Non-Users of TA	-/**	negatively associated with strongly agreeing to engage in theoretical evasion	Yes
INTMSK_REDC_VAT	Full sample	-/**	negatively associated with sometimes making intentional mistakes	Yes
	Users of TA	-/**		
	Non-Users of TA	+	not significant	No
Multiple OLS regression				
ATT_DECL	Full sample	-/**	negatively associated with negative attitude towards declaration	Yes
	Users of TA	-	not significant	No
	Non-Users of TA			
TMLNESS_VAT	All samples	+	not significant	No
Summary:			Positive association	2
			Negative association	4
			No significant association	3
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

Except for one (taxpayers not submitting VAT returns on time), all models with significant associations showed that improvement in perceived societal moral obligation would more likely improve VAT compliance. In addition, the strongest

association was between perceived societal moral obligation and taxpayers never having been involved in cash transactions. This overall result on the association between perceived societal moral obligation and the respective VAT compliance measures indicates the importance of societal moral obligation in improving VAT compliance in Tanzania.

The literature supports the importance of social norms, including societal moral obligations, in influencing tax compliance behaviour (Kirchler, 2007). In the current research, societal moral obligations were significantly associated with VAT compliance. Furthermore, studies by Bergman and Nevarez (2005), Cullis and Lewis (1997) and Liebig and Mau (2005) found that social norms from friends and colleagues differentiated compliant from non-compliant taxpayers. In these studies, social norms included the perceived social support and the dominant behaviour among friends and colleagues. For example, if non-compliance were the dominant behaviour among friends and colleagues, then the subject taxpayer would more likely not comply with tax laws.

Consistent with literature, the current research shows respondents significantly perceived VAT compliance as a societal moral obligation, and for that reason, they were more likely to indicate VAT compliant behaviour. This result is also consistent with that of Torgler (2005) who reported that the main reason tax morale was low in Latin America was taxpayers' direct or indirect knowledge of other taxpayers' non-compliant behaviour. In the same way, Welch et al., (2005) found that the perception among taxpayers that tax non-compliance was a common thing in society was more likely to make these taxpayers more non-compliant and the less likely to seriously view tax non-compliance in a negative way.

The second sub-factor of subjective norms was that perceived collected VAT is a business asset. Table 7.23 shows this sub-factor was the only one to have highly significant associations with all VAT compliance measures. Only two models did not show significant association, with respect to all three samples. These were taxpayers' not submitting VAT returns on time, which was not significant for non-users of tax advisers, and not notifying TRA of errors in VAT returns, which was not significant for users and non-users of tax advisers. Consequently, these quantitative results for the perception that collected VAT is

a business asset provide a very strong indication of the importance this factor is likely to have in explaining VAT compliance in Tanzania.

Table7.23: Collected VAT is a business asset and VAT compliance

Dependent variable	Sample	Sign/ Sig	Interpretation: perception that collected VAT is a business asset was	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	Full sample	+/**	positively associated enforced VAT registration	Yes
	Users of TA	+/*		
	Non-Users of TA	+/**		
VAT_RTN_ON_TM	Full sample	+/**	positively associated with taxpayers not submitting VAT returns on time	Yes
	Users of TA	+/*		
	Non-Users of TA	+	not significant	No
ERR_VAT_RTN	Full sample	+/**	positively associated with taxpayers not notifying TRA of error in submitted VAT returns	Yes
	Users of TA	+	not significant	No
	Non-Users of TA			
Ordinal Logistic Regression				
N_TML_SUB_VAT	All 3 samples	+/**	positively associated with taxpayers never submitting VAT returns on time	Yes
INV_CASH_TRS	Full sample	-/**	negatively associated with taxpayers' never been involved in cash transactions	Yes
	Users of TA			
	Non-Users of TA			
LES_VAT_PAID	All 3 samples	+/**	positively associated with strongly agreeing to engage in theoretical evasion	Yes
INTMSK_REDC_VAT	All 3 samples	+/**	positively associated with sometimes making intentional mistakes	Yes
Multiple OLS regression				
ATT_DECL	All 3 samples	+/**	positively associated with negative attitude towards declaration	Yes
TMLNESS_VAT	All 3 samples	+/**	positively associated with untimeliness of VAT returns	Yes
Summary:			Positive association	8
			Negative association	1
			No significant association	-
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

Specifically, the perception that collected VAT is a business asset was positively associated with eight VAT compliance measures and negatively associated with one VAT compliance measure. However, the negative association had the same

implication as the positive associations, which was a more likely decrease in VAT compliance if the perception that collected VAT is a business asset increases.

Existing literature provides a good support of the above results on the perception that collected VAT is a business assets as significantly associated with all VAT compliance measures. For example Adams and Webley (2001) found that some taxpayers perceived the collected VAT as “belonging” to their businesses or themselves. This perception tended to influence taxpayers to act in a more non-compliant behaviour with the aim to maximise collected VAT that they can retain and invest in their business. According to Adams and Webley (2001) the way taxpayers “mentally accounted” for the money they collected for VAT could have caused this perception. Possibly, the accounting difficulties in separating business and VAT revenues and the overall burden in Tanzanian SMEs administering VAT on behalf of TRA could explain this perception’s positive effect on the odds of taxpayers indicating VAT non-compliant behaviour in Tanzania.

e) VAT compliance is associated with perceived behavioural Control

This section discusses the last factor in the TPB, which is the ‘perceived behavioural control’. It represents taxpayers’ perception of the extent to which taxpayers believe they can control the outcome of their behaviour. Two sub-factors measured this factor: the use of professional firm’s information and the use of TRA services.

Table 7.24 presents the summary results, and shows in five models, regardless of the sample used, use of professional firms’ information was not significantly associated with the respective VAT compliance measures. The VAT compliance measures in these models were taxpayers’ enforced VAT registration, not submitting VAT returns on time, not notifying TRA of errors in VAT returns, never submitting VAT returns on time, and untimeliness of VAT returns. Furthermore, the results show the use of professional firms’ information was less likely to be a significant factor in influencing VAT compliance as measured by timely submission of VAT returns. This is because the time variables in all the three regression models (i.e. binary and ordinal logistic, and multiple OLS) did

not indicate any statistically significant association with the use of professional firms' information.

Table 7.24: Use of professional firms' information and VAT compliance

Dependent variable	Sample	Sign/Sig	Interpretation: use of professional firms' information was	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	All 3 samples	-	not significant	No
VAT_RTN_ON_TM	All 3 samples	+	not significant	No
ERR_VAT_RTN	Full sample	-	not significant	No
	Users of TA	+		
	Non-Users of TA	-		
Ordinal Logistic Regression				
N_TML_SUB_VAT	All 3 samples	+	not significant	No
INV_CASH_TRS	Full sample	-	not significant	No
	Users of TA			
	Non-Users of TA	-/**	negatively associated with taxpayers' never been involved in cash transactions	Yes
LES_VAT_PAID	Full sample	-/*	negatively associated with strongly agreeing to engage in theoretical evasion	Yes
	Users of TA	-	not significant	No
	Non-Users of TA	-		
INTMSK_REDC_VAT	Full sample	-/**	positively associated with sometimes making intentional mistakes	Yes
	Users of TA	-/**		
	Non-Users of TA	-	not significant	No
Multiple OLS regression				
ATT_DECL	Full sample	-/*	negatively associated with negative attitude towards declaration	Yes
	Users of TA	-	not significant	No
	Non-Users of TA			
TMLNESS_VAT	All 3 samples	+	not significant	No
Summary:			Positive association	1
			Negative association	3
			No significant association	5
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

Furthermore, depending on the sample used, the summary results in Table 7.24 show four out of the nine VAT compliance measures had significant associations

with the use of professional firms' information. Specifically, the use of professional firms' information was positively associated with one VAT compliance measure, which was taxpayers' strongly agreeing to making intentional mistakes (users of tax advisers and full sample). In addition, the use of professional firms' information was negatively associated with three VAT compliance measures: taxpayers' never been involved in cash transactions (non-users of tax advisers), strongly agreeing to engage in theoretical evasion (full sample), and negative attitudes towards VAT declaration (full sample).

Overall, the results on Table 7.24 show mixed findings. For the four models showing significant associations, two appeared to suggest the use of professional firms' information would more likely improve VAT compliance (i.e. reduce engagement in theoretical evasion and negative attitude towards declaration), and two the opposite (i.e. increase in involvement in cash transactions and making intentional mistakes). The mixed findings in the current research find support from the existing literature on the association between the use of professional firms' information and tax compliance (for example, Murphy and Sakurai, 2001; Ashby and Webley, 2008).

The literature indicates the complexity of tax law may reduce taxpayers' control of their behaviour because of not knowing the outcome of their behaviour (for example, Richardson, 2006; Mwangi, 2014). As a result, in order to overcome the risk associated with not knowing the outcome of their behaviour, taxpayers may resort to seeking more tax information including from professional firms. Literature shows that attempting to control the outcome of their (taxpayers') tax compliant behaviour through use of professional firms' information may have either negative or positive effect on VAT compliance, depending on the taxpayers' motive in using the information (Murphy and Sakurai, 2001; Ashby and Webley, 2008). This research has found that the use of professional firms' information was associated with VAT compliance but the direction of the association was not very clear.

The second sub-factor that measured the factor perceived behavioural control was the use of TRA services, and Table 7.25 presents the summary results for

this sub-factor. In four models, regardless of the sample used, use of TRA services was not significantly associated with the respective VAT compliance measures. These VAT compliance measures were taxpayers' not submitting VAT returns on time, not notifying TRA of errors in VAT returns, never having been involved in cash transactions and strongly agreeing to engage in theoretical evasion. This implies that regardless of whether or not taxpayers use tax advisers, their use of TRA services would less likely have any effect on these four VAT compliance measure.

Table 7.25: Use of TRA services and VAT compliance

Dependent variable	Sample	Sign/Sig	Interpretation: Use of TRA services was	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	Full sample	-	not significant	No
	Users of TA	-		
	Non-Users of TA	-/*	negatively associated with enforced VAT registration	Yes
VAT_RTN_ON_TM	All 3 samples	-	not significant	No
ERR_VAT_RTN	Full sample	-	not significant	No
	Users of TA			
	Non-Users of TA	+		
Ordinal Logistic Regression				
N_TML_SUB_VAT	Full sample	-/***	negatively associated with taxpayers never submitting VAT returns on time	Yes
	Users of TA	-/*		
	Non-Users of TA	-/*		
INV_CASH_TRS	All 3 samples	+	not significant	No
LES_VAT_PAID	All 3 samples	-	not significant	No
INTMSK_REDC_VAT	Full sample	+/*	positively associated with sometimes making intentional mistakes	Yes
	Users of TA	+/***		
	Non-Users of TA	+	not significant	No
Multiple OLS regression				
ATT_DECL	Full sample	-/*	negatively associated with negative attitude towards declaration	Yes
	Users of TA	+	not significant	No
	Non-Users of TA	-		
TMLNESS_VAT	Full sample	-/***	negatively associated with untimeliness of VAT returns	Yes
	Users of TA	-	not significant	No
	Non-Users of TA			
Summary:			Positive association	1
			Negative association	4
			No significant association	4
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

Furthermore, depending on the sample used, the summary results in Table 7.25 show five out of the nine VAT compliance measures had significant associations with the use of TRA services. Specifically, the use of TRA services was positively associated with one VAT compliance measure, which was taxpayers' strongly agreeing to making intentional mistakes (full samples and users of tax advisers).

In addition, the use of TRA services was negatively associated with four VAT compliance measures: taxpayers' enforced VAT registration (non-users of tax advisers), never submitting VAT returns on time (all three samples), negative attitudes towards VAT declaration (full sample) and untimeliness of VAT returns (full sample). Except for VAT compliance measured by taxpayers sometimes making intentional mistakes, the other four indicated that the increase in the use of TRA services would more likely improve VAT compliance.

The use of TRA services included TRA training and workshop and the introduction of new technology like E-filing, EFD, TISS and a new strategic approach in monitoring taxpayers' business activities known as Block Management System (see Chapter 6, section 6.1.1). Overall, knowledge gained from the use of TRA services appeared to have help taxpayers perceive that they were in control of their behavioural outcome. Consequently, the results indicate that the use of TRA services may have a positive effect on taxpayers' VAT compliance. This finding indicates the recent TRA's efforts to improve its tax-processing procedures and communication, to some extent, had helped to improve the positive association between TRA services and VAT compliance.

The results in the current research are consistent with the extant literature that suggests tax compliance is positively associated with tax knowledge (see Kirchler, Hoelzl and Wahl, 2008; Kinsey and Grasmick, 1993; Song and Yarbrough, 1978a). These studies indicate, for example, that reduction in tax complexity through more information about tax and increased taxpayers' tax knowledge increases the likelihood of taxpayers complying with tax laws.

f) VAT compliance is associated with Gender

Table 7.26 presents the summary results, and shows in six models, regardless of the sample used, gender was not significantly associated with the respective VAT compliance measures. The VAT compliance measures in these models were taxpayers' not submitting VAT returns on time, not notifying TRA of errors in VAT returns, never submitting VAT returns on time, never involved in cash transactions, strongly agreeing to engage in theoretical evasion and untimeliness of VAT returns. This implies that regardless of whether or not a

taxpayer uses tax advisers, taxpayers' gender would less likely have any effect in these six VAT compliance measure.

Moreover, depending on the sample used, the summary results in Table 7.26 shows three out of the nine VAT compliance measures, had significant associations with the gender. Specifically, compared to male, female non-users of tax advisers were more likely to have negative attitude towards VAT declaration. Furthermore, compared to male, female users of tax advisers were less likely to have negative attitude towards VAT declaration. This result indicates that a combination of two factors, gender and the use tax advisers, may differentiate female and male attitudes to VAT declaration. Existing literature suggests the use of tax advisers may make a difference in tax compliance behaviour. For example, tax advisers may help by advising taxpayers to comply (Kirchler, 2007), and depending on the taxpayers motive, tax compliance may increase or decrease. Other studies show that tax advisers are more likely to be low risk-takers, which makes them more inclined to tax compliant behaviour and may influence their clients (i.e. taxpayers) in the same way (Sakurai and Braithwaite, 2003).

In addition, compared to males, females were less likely to be registered for VAT by force (full sample and non-users of tax advisers), which indicates that females were more VAT compliant than men in this respect. This is consistent with Baldry (1987) and Hasseldine and Hite (2003) who found females to be more compliant than males. However, compared to female, male were less likely to strongly agreeing to make intentional mistakes (non-users of tax advisers). These results provide mixed findings regarding the association between gender and VAT compliance measures. The reviewed literature supports these findings. For example, while Kastlunger *et al.*, (2010) found that men were more compliant than women, and that women were more likely to act strategically when paying taxes than men, Hasseldine and Hite (2003) findings indicated that women were more compliant than men.

Table 7.26: Gender and VAT compliance

Dependent variable	Sample	Sign/Sig	Interpretation: Gender	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	Full sample	-/**	Female taxpayers were negatively associated with enforced VAT registration	Yes
	Users of TA	-	not significant	No
	Non-Users of TA	-/**	Female taxpayers were negatively associated with enforced VAT registration	Yes
VAT_RTN_ON_TM	Full sample	+	not significant	No
	Users of TA	-		
	Non-Users of TA	+		
ERR_VAT_RTN	All 3 samples	+	not significant	No
Ordinal Logistic Regression				
N_TML_SUB_VAT	Full sample	+	not significant	No
	Users of TA			
	Non-Users of TA	-		
INV_CASH_TRS	Full sample	-	not significant	No
	Users of TA			
	Non-Users of TA	+		
LES_VAT_PAID	All 3 samples	+	not significant	No
INTMSK_REDC_VAT	Full sample	-	not significant	No
	Users of TA	+		
	Non-Users of TA	-/*	Males were less likely to strongly agree that they would sometimes make intentional mistakes	Yes
Multiple OLS regression				
ATT_DECL	Full sample	+	not significant	No
	Users of TA	-/*	Female were negatively associated with negative attitude towards declaration	Yes
	Non-Users of TA	+/*	positively associated with negative attitude towards declaration	Yes
TMLNESS_VAT	Full sample	-	not significant	No
	Users of TA			
	Non-Users of TA	+		
Summary:			Positive association	1
			Negative association	2
			No significant association	6
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

Finally, if enforced VAT registration indicates a possibility of taxpayers becoming VAT non-compliant in the future, the current research findings does not support

Roberts and Hite (1994). Roberts and Hite (1994) found increase in past non-compliance for males, but the current research indicates that males were less compliant in VAT registration but more compliant as they were less likely agree to sometimes make intentional mistakes. This was an indication of VAT compliance behaviour for males, and in agreement with (Kirchler and Maciejovsky, 2001).

g) VAT compliance is associated with taxpayer's age

Table 7.27 presents the summary results, and shows in six models, regardless of the sample used, a taxpayer's age was not significantly associated with the respective VAT compliance measures. The VAT compliance measures in these models were taxpayers' not notifying TRA of errors in VAT returns, never submitting VAT returns on time, strongly agreeing to engage in theoretical evasion, strongly agreeing making intentional mistakes, negative attitudes towards VAT declaration and untimeliness of VAT returns. In addition, no model that used the sample of users of tax advisers has shown significant associations between taxpayer's age and VAT compliance measures. This means for users of tax advisers, age may not be a significant factor in differentiating compliant and non-compliant taxpayers.

Furthermore, among the three models that showed significant associations between a taxpayer's age and VAT compliance all had used the sample of non-users of tax advisers. Specifically, a taxpayer's age was positively associated with taxpayers' not submitting VAT return on time, and it was negatively associated with enforced VAT registration, and never involved in cash transactions. In terms of type of VAT registration, the result showed that older taxpayers were more VAT compliant than younger taxpayers as they were more likely to register for VAT voluntarily. However, compared to younger taxpayers, it was older taxpayers who were less likely to be VAT compliant because of late VAT returns submission and being more likely to be involved in cash transactions.

Table 7.27: Taxpayer's age and VAT compliance

Dependent variable	Sample	Sign/Sig	Interpretation: Older taxpayers were -	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	Full sample	-	not significant	No
	Users of TA			
	Non-Users of TA	-/*	negatively associated with enforced VAT registration	Yes
VAT_RTN_ON_TM	Full sample	+	not significant	No
	Users of TA	-		
	Non-Users of TA	+/**	positively associated with taxpayers not submitting VAT returns on time	Yes
ERR_VAT_RTN	Full sample	-	not significant	No
	Users of TA	+		
	Non-Users of TA	-		
Ordinal Logistic Regression				
N_TML_SUB_VAT	All 3 samples	+	not significant	No
INV_CASH_TRS	Full sample	-	not significant	No
	Users of TA			
	Non-Users of TA	-/*	positively associated with taxpayers' never been involved in cash transactions	Yes
LES_VAT_PAID	All 3 samples	+	not significant	No
INTMSK_REDC_VAT	Full sample	+	not significant	No
	Users of TA			
	Non-Users of TA	-		
Multiple OLS regression				
ATT_DECL	All 3 samples	+	not significant	No
TMLNESS_VAT	All 3 samples	-	not significant	No
Summary:			Positive association	1
			Negative association	2
			No significant association	6
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

The results in Table 7.27 indicate mixed findings of how age is associated with different measures of VAT compliance. On one hand, these results were partly consistent with the reviewed literature, which agree that a taxpayer's age was positively associated with tax compliance (for example, see Baldry, 1987; Jackson and Milliron, 2002; Tittle, 1980; Clotfelter, 1983). Consequently, older taxpayers were more tax compliant than younger taxpayers. On the other hand,

the results show older taxpayers were more likely to be less VAT compliant than younger taxpayers when it came to submitting VAT returns on time and being involved in cash transactions.

h) VAT compliance is associated with business size

Table 7.28 presents the summary results, and shows in five models, regardless of the sample used, business size was not significantly associated with the respective VAT compliance measures. The VAT compliance measures in these models were taxpayers' enforced VAT registration, not submitting VAT returns on time, never submitting VAT returns on time, negative attitudes towards VAT declaration and untimeliness of VAT returns. Except for enforced VAT registration and negative attitude towards declaration, the other factors measured VAT compliance in terms of timeliness of VAT returns submission. Therefore, the results show business size was not significantly associated with VAT compliance as measured by timeliness on VAT returns submission.

Moreover, depending on the sample used, the summary results in Table 7.28 shows four out of the nine VAT compliance measures had significant associations with the business size. Specifically, business size was positively associated with one VAT compliance measure, which was taxpayers' strongly agreeing to making intentional mistakes (all three samples). In addition, business size was negatively associated with three VAT compliance measures: not notifying TRA of errors in VAT returns (full sample), never involved in cash transactions (full sample and users of tax advisers) and strongly agreeing to engage in theoretical evasion (full samples).

Overall, the results on Table 7.28 show mixed findings. For the four models showing significant associations, two appeared to suggest the increase in business size would more likely improve VAT compliance (i.e. increase taxpayers notifying TRA of errors in VAT returns and reduce engagement in theoretical evasion), and two the opposite (i.e. increase in involvement in cash transactions and making intentional mistakes). While the current research indicates mixed results in terms of the direction of association between business size and VAT compliance, the reviewed literature shows a significantly negative association between business size and tax compliance. Mwangi (2014) cites involvement in

cash economy as one reason for SMEs tax non-compliance. In the same way, the current research shows that as the business size increased, taxpayers were less likely to say they have ‘never been involved in cash transaction’. This indicates that small sized businesses were more likely to be compliant in this respect than larger businesses.

Table 7.28: Business size and VAT compliance

Dependent variable	Sample	Sign /Sig	Interpretation: Business size was -	Null Hypothesis rejected
Binary Logistic Regression				
T_VAT_REG	All 3 samples	-	not significant	No
VAT_RTN_ON_TM	Full sample	-	not significant	No
	Users of TA	+		
	Non-Users of TA	-		
ERR_VAT_RTN	Full sample	-/*	negatively associated with taxpayers not notifying TRA of error in a submitted VAT returns	Yes
	Users of TA	-	not significant	No
	Non-Users of TA			
Ordinal Logistic Regression				
N_TML_SUB_VAT	Full sample	-	not significant	No
	Users of TA			
	Non-Users of TA			
INV_CASH_TRS	Full sample	-/*	negatively associated with taxpayers never been involved in cash transactions	Yes
	Users of TA	-/*		
	Non-Users of TA	-	not significant	No
LES_VAT_PAID	Full sample	-/**	negatively associated with strongly agreeing to engage in theoretical evasion	Yes
	Users of TA	-	not significant	No
	Non-Users of TA	-		
INTMSK_REDC_VAT	Full sample	+/**	positively associated with sometimes making intentional mistakes	Yes
	Users of TA	+/*		
	Non-Users of TA	+/**		
Multiple OLS regression				
ATT_DECL	All 3 samples	+	not significant	No
TMLNESS_VAT	All 3 samples	-	not significant	No
Summary:			Positive association	1
			Negative association	3
			No significant association	5
			Total Number of Models	9

Key: Significance levels: ***p < 0:01; **p < 0:05; *p < 0:10.

Chapter Eight

Discussion

8.1 Introduction

This chapter discusses the empirical findings of the current research on VAT compliance factors. This research had three main objectives. First, to assess the factors associated with VAT compliance in Tanzania. Second, to assess the degree to which existing tax compliance theories are applicable in explaining VAT compliance in a developing country. Finally, to identify the strategies employed to encourage VAT compliance in a developing country context. In order to achieve these objectives, the researcher developed research questions and hypotheses, and employed mixed research methods at the data collection and findings discussion stages. Therefore, the findings discussion in this chapter brings together the findings from the qualitative part (see chapter 6) and quantitative part (see chapter 7) of the adopted mixed research methods.

The chapter is organised as follows; section 8.2 reports the strategies used to encourage VAT compliance in a developing country context, taking TRA as an example. Section 8.3 discusses the findings of hypotheses testing and the factors, which this research has found to be associated with VAT compliance in Tanzania SMEs. Section 8.4 presents the discussion of how existing tax compliance theories were applicable in explaining VAT compliance in a developing country. The final section summarises the chapter.

8.2 Encouraging VAT compliance – TRA’s strategies

One of the objectives of this research was to identify the strategies employed to encourage VAT compliance in a developing country context. In order to address this objective, this research sought to address the research question ‘*what role does the TRA play to encourage voluntarily compliance?*’ (RQ3). The approach adopted to address the research question was a content analysis of interviewees’ qualitative responses.

This section presents the discussion of the content analysis findings. The first part of the section covers a comparison of government policy on improving VAT compliance as found in the TRA Service Charter and tax officials' perspective on improving VAT compliance (subsections 8.2.1). Subsections 8.2.2-8.2.4 presents the four main issues that emerged in relation to TRA's strategies in encouraging VAT compliance. While two of the issues indicated strategies, the other two indicated the challenges in TRA's efforts to encourage VAT compliance. The strategies were the introduction of new technology and the use of Block Management System (BMS), and the challenges were the general shortage of staff and costs of administration to TRA.

8.2.1 Comparing TRA services charter and tax officials' perspective on improving VAT compliance

This subsection presents a comparison of government policy and tax officials' perspective on improving VAT compliance (see Table 8.1). In Tanzania, the operationalisation of the tax system is under the TRA, which is a public institution with constitutional power to administer taxes of the Central Government (Fjeldstad and Moore, 2009; Ongwamuhana, 2011; TRA, 2016b). Slemrod (2015) defines a tax system as a 'set of rules, regulations and procedures with three aspects'. A tax system defines events or situations that initiate tax liability (i.e. defines tax bases and rates), specifies who must pay tax and when to remit the tax (i.e. remittance rules), and details procedures for ensuring tax compliance (i.e. enforcement rules).

TRA implements Tanzanian's tax policies, including official government policies attempting to improve VAT compliance through its corporate plan (TRA, 2016b). TRA states its mission *'To be an effective and efficient Tax administration, which promotes Voluntary tax compliance by providing high quality Customer service with fairness and Integrity through competent and motivated staff'* (TRA, 2010). In pursuant of this mission, TRA prepares corporate plans to guide its long-term actions. The fourth TRA corporate plan states that the TRA aim is to increase domestic revenue through improvement of voluntarily tax compliance, and to achieve 70% increase of domestic revenue by 2018 (TRA, 2016b). In order to implement the TRA corporate plan, and improve tax compliance, TRA prepared

a Taxpayer's Service Charter (currently in its 7th edition), which explains the TRA's commitment to achieve certain quality standards in providing services to taxpayers and taxpayers' rights and obligations in complying with tax laws. The aim of this service charter is to strengthen the mutual respect and trust in the existing three-way relationship between the TRA, the public, and private entities (TRA, 2016b).

The service charter outlines key services and the quality standards expected of TRA as shown in Table 8.1. Table 8.1 also indicates the tax officials' perspectives on key issues, which they think are going well or need further improvements. On the issue of VAT registration (Table 8.1, TRA Service 1), taxpayer registration for VAT purposes was generally by enforcement. This means that willingly registering for VAT was still a big problem for SMEs in Tanzania.

In terms of VAT assessment (Table 8.1, TRA Service 2), tax officials indicated some improvement on VAT compliance because of reduction of the VAT rate from 20% to 18%. However, the problem on improving compliance through VAT assessment is taxpayers' poor record keeping. Furthermore, the tax officials' perspective was that effective enforcement of sanctions is very important in improving VAT compliance. Qualitative data also indicated some issues with VAT collections, accounting, and refunds (Table 8.1, TRA Service 3). The two major concerns on this area are the culture of not issuing or requesting tax receipts/invoices, and most taxpayers perceiving VAT money as part of a business asset. These two concerns are related to the fact that most SMEs in Tanzania operate in the informal sector (Ongwamuhana, 2011). Mental accounting may also explain SME taxpayers' perception that they 'own' VAT money as their a business asset (Webley, 2004). For example, Webley and Ashby (2010) found builders perceived VAT money as their own. Perceiving VAT money as belonging to oneself was related to stronger inequity in perceptions of the tax system (Adams and Webley, 2001).

Table 8.1: Comparing TRA services charter and tax officials' perspective on improving VAT compliance

TRA services	TRA	Taxpayers	Tax officials' perspective on improving VAT compliance extracted from qualitative content analysis (Chapter 6)
	Obligations according to the law		
1. VAT registration	Provided after fulfilment of all requirements, within 2 (regional office) to 10 working days (district office) of application	Eligible person to register for VAT purposes	<ul style="list-style-type: none"> • Taxpayers can register voluntarily or after TRA forces them to register. In the current study, registration is mostly through law enforcement, which reduces VAT compliance [37]*
2. VAT assessment	Issue correct tax assessment efficiently and effectively	<ul style="list-style-type: none"> • Filing of VAT returns on time. • File complete and accurate VAT returns and refund claims 	<ul style="list-style-type: none"> • Taxpayers poor record keeping [21] • Reduction of VAT rate from 20% to 18% improved VAT compliance [8] • Effective enforcement of sanctions is very important in improving VAT compliance [65]
3. VAT collections, accounting, and refunds	Collect tax and on time	<ul style="list-style-type: none"> • Timely (prompt) payment of VAT • Duty to issue and demand of fiscal receipts/tax invoice for sale/purchase of goods/services 	<ul style="list-style-type: none"> • The culture of not issuing or requesting tax receipts/invoices [25] • Most taxpayers perceived VAT money is part of their own business asset [24]
4. Tax audits and investigation	<ul style="list-style-type: none"> • Conduct tax audit and finalize the audit within 3 months for Complex cases and 6 months for very complex cases. • Give audit findings and recommendations within 21 days after finalizing the audit. • Reward 'informers' within 30 days after confirmation 	Provide adequate cooperation with TRA Officers in terms of: <ul style="list-style-type: none"> • Disclosing or producing relevant information or documents • Freedom to carry out their lawful duties 	Low probability of taxpayers' being audited because of: <ul style="list-style-type: none"> • Manpower limitation reducing the probability of being audited [16] • General shortage of tax officials is a TRA challenge [15] • Tax audit cost [3] Probability of being detected is higher because of: <ul style="list-style-type: none"> • Comprehensive audit [4] • Effective tax audit, in particular if taxpayers use e-filing [9]

TRA services	TRA	Taxpayers	Tax officials' perspective on improving VAT compliance extracted from qualitative content analysis (Chapter 6)
	Obligations according to the law		
	of payment of tax liability by investigated taxpayer.		
5. VAT education and training	Educate and train taxpayers and other stakeholders on their rights and obligations (e.g. through TRA's Institute of Tax Administration (ITA)	Attend taxpayers' education and training opportunities	Tax knowledge as a resource can be used for compliance or non-compliance behaviour
6. Response to enquiries, complaints, and appeals	Adequately cooperate with, and respect judicial decisions by the Tax Appeals Board/Tribunal and Courts of Law	Provide adequate cooperation with TRA Officers in terms of: <ul style="list-style-type: none"> • Disclosing or producing relevant information or documents 	Researcher did not collect tax officials' perspective on this. The issue is more objective for taxpayers to respond. Taxpayers' responded to a questionnaire, not interview questions.
Tax officials general perspective on improving VAT compliance:			
<ul style="list-style-type: none"> • General taxation fairness was according to taxpayers perception, very low, and threatened voluntary compliance [51] • Taxpayers' lack of patriotism or tax morale [9] • High compliance cost threatens VAT compliance [6] • VAT registered SMEs are disadvantaged when competing with unregistered SMEs. • Acceptance of cash economy which facilitate tax evasion [11] • Overall, the introduction of new technology is a challenge, but has improved VAT compliance [49]. • The use of Block Management System improved VAT registration and collection [11] • Costly tax administration to TRA is a problem in the efforts to improve VAT compliance [13] 			

[37]* = number of tax officials who gave perspective related TRA service on improving VAT compliance.

The other area of the service charter covers tax audits and investigation (Table 8.1, TRA Service 4). On this aspect, the overall perspective of the tax officials is that the probability of effectively sampling auditing taxpayers is relatively low because of work force limitations and higher audit costs. However, for taxpayers included in the audit sample, the detection likelihood is much better because TRA normally aims to conduct comprehensive audits, and E-filing improves detection likelihood. Regarding VAT education and training (Table 8.1, TRA Service 5), tax official had mixed perspective on whether taxpayers' knowledge on VAT matters improves VAT.

Furthermore, tax officials' perspectives included general VAT compliance improvement issues. These were taxpayers complaining about lack of fairness in the tax system and allocation of benefit from taxation by the government. Lack of fairness resulted in poor patriotism (tax morale). Issues related to taxpayers also included higher compliance costs for SMEs and VAT registered SMEs are disadvantaged when competing with unregistered SMEs. For the TRA, the tax officials perspective was that the acceptance of cash economy in Tanzania facilitate tax evasion. Therefore, further improvement in this area was very important in order to improve VAT compliance. Other areas from tax officials' perspective are the challenges arising from the introduction of new technology, measured against the resulting improvement in VAT compliance, and the use of Block Management System leading to improved VAT registration and collection.

8.2.2 ICT and VAT compliance – current findings

The use of information and computer technology (ICT) in taxation is rapidly growing (Schaupp, Carter and McBride, 2010). The use of ICT includes the use of computers, the internet and electronic devices in the filing of tax returns, collection of taxpayers' information and taxes at points of sales, and other forms of communications or transactions between taxpayers and tax authorities. In recent years, TRA has introduced, encouraged and sometimes enforced the use of ICT at different tax collection stages (Chatama, 2013). For example, in 2012 TRA introduced E-filing, which aimed to enable taxpayers to file their VAT, returns electronically. The findings of this study show that tax officials agree

that E-filing had the effect of improving VAT compliance in several ways. For example, E-filing helped to improve timely submission of VAT returns, which reduced compliance costs associated with manually prepared VAT returns submissions. E-filing offered convenience to taxpayers, and provided TRA with an electronic platform with ease of tracking errors in VAT returns. The challenge, however, was the reluctance of most taxpayers to accept the change from manual to the electronic submission of VAT returns. According to tax officials, the possible explanation of this unwillingness to change to e-filing was either taxpayers' general resistance to changes or a genuine lack of computer knowledge. To have conclusive understanding of this focussed research on this area is relevant in the future.

Another ICT improvement aimed at enhancing VAT compliance was the adoption of electronic fiscal devices (EFD). EFD aimed at improving the efficiency in VAT collection. The law requires all VAT registered taxpayers to use EFDs for issuing tax invoices/receipts. This was a strategy to increase the ability of TRA to monitor taxpayers' business activities very closely and control taxpayers' cash transactions. The introduction of EFDs brought more controversies in the tax paying community and became more challenging for TRA to administer. The qualitative findings indicates that EFDs increased VAT deregistration and resistance to changes. This could be because of the difficulties experienced in effectively operating EFD machines, for example, because of unreliable electricity supply. The other difficulty was that most taxpayers struggled in using these machines due to limited skills in operating them. According to tax officials, the use of EFDs resulted in added compliance costs to taxpayers, as they have to hire people with the skill to use the EFDs. The other resistance mechanisms appeared to be taxpayers keying-in incorrect sales amounts in the EFDs; this implied that TRA was able to verify the issue of tax invoices but the indicated sales amounts were incorrect.

The other advancement in the use of ICT in VAT administration is the introduction of on-line payment of taxes through a system called Tanzania Inter-bank Settlement System (TISS). This system creates convenience to taxpayers through easy access, filling and printing the receipts, and ensuring that all information filed by taxpayers reaches the TRA office for accurate record

keeping. Generally, tax officials indicated that TISS had so far helped to improve VAT revenue collection.

8.2.3 ICT and VAT compliance – linking the current findings with the literature

Literature review shows that the use of ICT in taxation such as specialised computer software, e-filing and e-payment can reduce tax compliance costs (Coolidge, 2012). Compliance costs may be reduced because of the flexibility and reduction in the time required to file, easy access to a place where filing can take place (e.g. a computer at the taxpayers office), ease-of use (assuming the taxpayers is knowledgeable), reduced calculation error on the tax return form, and easy information searching and online transactions. This may explain the increased government emphasis in the adoption of e-filing in developing countries (Azmi and Kamarulzaman, 2010). However, as the current study indicates that, for the case of Tanzania, other researchers have shown that the benefit of rapid adoption of e-filing is yet to be well established and there is resistance to change that government need to overcome. Furthermore, the literature shows the challenges of e-filing may be more problematic for developing countries, but the problems can also be observed in developed countries like the US (Azmi and Kamarulzaman, 2010).

For SMEs in developing countries, there are challenges in adopting the use of computer software, E-filing and e-payment. One major challenge is the limited ability to use such technology (Coolidge, 2012). Coolidge (2012) reports the findings of a survey conducted in three developing countries, which show governments efforts to use ICT to improve tax compliance. In Armenia, the findings show that the majority (90%) of SMEs still use manual accounts because of computer affordability problems, and about 25% of SMEs do not have access to computers. The other issue is the access to internet. While access to computer and the internet may be a problem in using E-filing, other evidence from this study indicated face-to-face interaction between taxpayers and tax officials was sometimes a preferred approach as it provided space for corruption (Coolidge, 2012). The issue of taxpayers and tax officials sometime intentionally creating spaces for corruption also was indicated in the current study. Therefore, the

current study argues that while ICT may offer a promising future in terms of improving VAT collection efficiency and effectiveness, the question of corruption in developing countries needs addressing alongside other technological improvements.

In Ukraine, things were relatively different where SMEs access to computer and internet is comparatively better, yet few SMEs bothered to use e-filing. Coolidge (2012) cites the following as the problems for the Ukrainian context: requirement to submit both e-files and hard copies, lack of trust in tax official properly handling the files sent by email by taxpayers. As a result, the use of e-filing did not show a significant reduction in tax compliance time and cost. Furthermore, in Uzbekistan, while the use of computers seemed to reduce the time used for tax accounting, only about 25% of businesses use accounting software (2008 statistics). The main reason cited is mistrust of the computer system (e.g. claims of bugs in software) and some tax officials discouraging the use of tax accounting software in favour of manual system. This is, possibly, for corruption reasons.

The claimed benefits of e-filing cited in the preceding paragraphs are consistent with what the current study found as the reasons for Tanzania adopting e-filing. Furthermore, in Tanzania, the progress in this aspect is relatively slow, and the reasons for this slow progress are mostly the same as those found in other developing countries studies.

The other area of ICT that is relevant for the current study is the adoption of electronic devices in collecting VAT at point of sale. There is a general lack of studies in this area. In the literature review, the researcher identified two studies (Naibei and Siringi, 2011; Weru, Kamaara and Weru, 2013), which are relevant to the current study because the studies are from a neighbour country Kenya, which introduced these devices around the same time. For example, the introduction of Electronic Tax Registers (same devices as EFD machines, introduced in Tanzania) was because of the declining trend of VAT revenues (Naibei and Siringi, 2011). The introduction and claimed success of these tax collection devices were challenged in Kenya, Tanzania and many other countries (Naibei and Siringi, 2011; Weru, Kamaara and Weru, 2013). For example, Kathuri (2006) shows that the devices had not been successful in more than 21 countries. While

literature indicates the effective use of EFD has a positive relationship with VAT compliance, the problem with EFD machines is more about the general acceptability of the use of ICT facilities by taxpayers (Weru, Kamaara and Weru, 2013). This is to a great degree, the conclusion that can be made based on the findings of the current study.

8.2.4 Block management system and other challenges facing TRA

According to tax officials, the Block Management System (BMS) was introduced to monitor business activities of SME taxpayers with a view to make them comply with all taxes in a cost efficient and effective way. Findings indicate that the design of BMS helped tax officials to manage tax affairs of all taxpayers by demarcating geographical areas based on 'manageable block' sizes. BMS enables tax officials to reach more taxpayers, identify and register VAT eligible taxpayers and improved VAT collection in these 'blocks'. Generally, BMS appeared to be a good mechanism in raising VAT compliance levels in most of the tax regions visited. For example, BMS 'simplified the registration of traders, and has brought non-filers and non-payers into the tax net through closer monitoring and collaboration with local government authorities' (Fjeldstad and Heggstad, 2011, p. xiii). BMS involved tax officials visiting taxpayers' businesses door-by-door. In the visits, tax officials checked if taxpayers kept proper records, if they issued tax invoices, and if they paid proper taxes. If taxpayers kept paying small amounts of taxes for long periods, they normally ended-up being subjected to tax audit.

In addition to the challenges specific to the ICT strategy of improving VAT compliance discussed above, tax officials indicated that general shortage of staff was another challenge in TRA's effort to improve VAT compliance in Tanzania. This was because, according to the findings, uncompliant behaviour was a common phenomenon for most taxpayers and frequent and close-scrutiny by tax officials was important in order to improve VAT compliance. Therefore, the general shortage of staff critically limited this much needed frequent and close-scrutiny of VAT uncompliant taxpayers. The staff shortage problem appeared to be known by most taxpayers, who then appeared playing a 'game of putting

their houses in order' if they knew that they were about to be visited with tax officials, for example. Therefore, immediately after these visits, taxpayers normally continued with their non-compliant behaviour because they knew that the next round of tax officials' visits were more likely to take place very far in the future.

The other challenge was high costs of tax administration in terms of registering taxpayers, the cost of investigating taxpayers' financial records and the cost of tracking dormant taxpayers. In terms of VAT registration, tax officials explained that the old VAT registration threshold, which was a turnover of Tshs. 20 million (equivalent £7,171.6), was very costly to TRA. This was because most businesses at this level of turnover were very small (e.g. street hawkers and small women-owned food vendors) who could not keep proper records of their business activities and financial transactions. Furthermore, business owners' limited education was another problem, therefore the solution for this problem was to change the VAT threshold to a turnover of Tshs. 40 million (equivalent £14,342.5).

In relation to VAT threshold, however, tax officials indicated that even with this new VAT threshold, TRA still encountered problems of taxpayers not opting to register voluntarily. In order to avoid being registered, these taxpayers tended to provide false information to TRA. This necessitated TRA incurring costs to investigate and verify the truthfulness of financial records declared by taxpayers. The other challenge that added to TRA's tax administration costs was the difficulties in tracking dormant taxpayers. This was because these taxpayers had provided false details during registrations. Other taxpayers registered for VAT only to achieve a one-off transaction, for example, government tenders for supplying goods and services and this resulted in the VAT register containing many dormant-taxpayers.

The problems of staff shortage and higher costs of tax administration relative to benefits in terms of amount of tax revenues collected are common phenomenon in developing countries (for example, see Yesegat, 2008; Micah, Ebere and Umobong, 2012). For example, in Nigeria, Micah, Ebere and Umobong (2012) found tax authorities suffer from limitations in manpower, money, tools and machinery necessary to meet tax collection targets. As a result, they found

poor remuneration and lack of motivation leads to the negative attitude of tax officials towards taxpayers.

8.3 Hypotheses, findings and discussion

This section discusses findings, which address the first research objective - to assess the factors associated with VAT compliance in Tanzania, by attempting to answer the research question '*what factors are associated with VAT compliance in Tanzania SMEs?*' (RQ1). To answer the first research question, the researcher tested nine research hypotheses. The following sub-sections discuss the results of testing the research hypotheses by both qualitative and quantitative analysis, and address the research question.

8.3.1 Factors under economic theory of tax compliance

This sub-section discusses the findings obtained from testing research hypotheses derived from economic theory of tax compliance (see section 2.3.1).

a) VAT compliance is associated with the perceived detection likelihood

The testing of this hypothesis indicated a statistically significant association between perceived detection likelihood and VAT compliance. Except for one the type of VAT registration⁴⁵, the overall direction of association indicated that increased perceived detection likelihood was more likely to increase VAT compliance. For example, perceived detection likelihood appeared to be positively associated with taxpayers submitting VAT returns on time, being less involved in cash transactions, and less likely to make intentional mistakes. The findings from binary and ordinal logistic regressions were significantly supported by the results of the multiple OLS regression models. For example, the multiple OLS regression indicated that increased detection likelihood may decrease timeliness of VAT returns submission.

⁴⁵ Table 7.11 in section 7.5 shows the increase in perceived detection likelihood is more likely to increase enforced registration, which is a sign of VAT non-compliance.

The findings of this research were significantly consistent with the findings of most studies in this area (Alm, 1991; Pommerehne and Frey, 1992; Alm, Jackson and Mckee, 2006; Fischer, Wartick and Mark, 1992; Kirchler, 2007; Chau and Leung, 2009). The extant literature supports the hypothesis that increased detection likelihood is more likely to reduce tax non-compliance.

In explaining perceived detection likelihood, tax officials indicated staff limitations and tax audit costs caused low probability of auditing a given taxpayer. They also reported the failure to conduct effective tax audits and lack of comprehensive audits led to low probability of detecting taxpayers' VAT non-compliant behaviour. All these pointed to the support of detection likelihood as an important factor in improving VAT compliance. Consequently, tax officials indicated that solving the problem of staff limitations and conducting effective tax audits would lead to increased likelihood of detecting non-compliant behaviour and ultimately enhancing VAT compliance. The findings from analysing tax officials' responses concurred with the hypothesised association between VAT compliance and perceived detection likelihood.

Therefore, based on the content analysis of qualitative data and hypothesis testing based on regression analysis of quantitative data, this research can conclude that VAT compliance in Tanzania is associated with perceived detection likelihood. Furthermore, the overall direction of association indicates the increase in detection likelihood is more likely to improve VAT compliance in Tanzania.

b) VAT compliance is associated with perceived influence of VAT Sanction

The quantitative analysis indicated the influence of VAT sanctions was positively associated with enforced registration. In addition, findings also indicated that influence of VAT sanctions was negatively associated with taxpayers never having been involved in cash transactions and sometimes making intentional mistakes. Therefore, the result indicated that VAT sanctions might not have a significant influence in reducing VAT non-compliance in Tanzania.

In explaining the role of VAT sanctions in influencing VAT compliance, tax officials suggested the importance of 'effectiveness of sanctions' and 'more

severe penalties' in encouraging VAT compliance. Although the quantitative results in this study did not clearly indicate the significance of sanction in increasing VAT compliance, literature supports the perceptions of tax official that sanctions were important. For example, Alm, Jackson and Mckee (1992a) suggested that realistic levels of sanctions have deterrence effect on tax non-compliance. In addition, severe' penalties can significantly deter tax non-compliant behaviour (Hasseldine *et al.*, 2007; Snow and Warren Jr, 2005).

In the Tanzanian context, tax officials suggested that large taxpayers did not fear sanctions, possibly because sanctions were not severe for them. As a result, existing sanctions did not significantly influence VAT compliance for this group of taxpayers. Alm, Jackson and Mckee (1992a) found that large taxpayers did not fear penalties when VAT sanctions are perceived as 'not severe' supported this finding. However, TRA was also losing VAT revenue because penalties appeared to discourage small taxpayers to remain in business. For this group, sanctions appeared to be severe.

For small taxpayers, the severity of VAT sanctions necessitated tax officials and taxpayers negotiating alternative ways, for example, of extending the period over which penalties were paid. These negotiations were necessary in situations where small taxpayers were experiencing difficulties in paying the penalties. Taxpayers and tax officials agreed on the affordable amounts of penalties, which would be paid within a specified period. These negotiations were also a way of building trust between tax officials and taxpayers, which respondents considered important in increasing future VAT compliance. Imposed at a level considered appropriate and fair, literature suggests that sanctions may increase VAT compliance (Braithwaite, 2003; Kirchler, Hoelzl and Wahl, 2008).

In conclusion, the absence of the right balance between sanctions, which are appropriate and fair for both small and large taxpayers as suggested by tax officials, can explain the insignificant results from quantitative data analysis.

c) VAT compliance is associated with actual VAT rate

Tax officials perceived VAT rate as a heavy burden to taxpayers. They indicated that the government had recognised the effect of VAT rate on VAT compliance and had taken the step of reducing it from 20% to 18%. In addition, even at the

VAT rate of 18%, some tax officials were of the opinion that the rate was still very high and for the government to further encourage voluntary compliance the VAT rate should further be reduced. The effect of VAT rate on VAT compliance is a factor supported in the existing literature. Most research findings indicate that higher tax rates lead to less tax compliance (Kirchler, 2007). This finding indicates that proper tax rates may help to enhance VAT compliance.

8.3.2 Factors under behavioural tax compliance theory

This sub-section discusses the findings obtained from testing research hypotheses derived from behavioural tax compliance theories (see sub-section 2.3.2).

a) VAT compliance is associated with attitude towards behavioural outcome

Two sub-factors represented attitude towards behavioural outcome as a VAT compliance factor: the perceived fairness in the VAT system and perceived attitude and helpfulness of TRA officials. The quantitative analysis shows that perceived fairness in the VAT system was significantly associated with three VAT compliance measures, and perceived attitude and helpfulness of TRA officials with four VAT compliance measures.

The researcher designed this study to capture the general concept of fairness as presented in the equity theory, which is the main source of other theories of fairness (Adams, 1965; Greenberg, 1987). Other fairness theories derived from the equity theory are distributive theory (Lamm and Schwinger, 1980; Hatfield *et al.*, 1978) and procedural justice theory (Fuller, 1961; Jackson *et al.*, 2014; Murphy, 2005); but the literature on fairness is categorised in about three branches. Therefore, except where there is mention of the specific types of fairness, the comparison and contrast of the current study with the existing literature will focus on 'fairness' of a tax system in general.

The statistical test of the association between perceived fairness in the VAT system and VAT compliance shows two main findings. Firstly, perceived fairness in the VAT system was significantly associated with three out of nine VAT

compliance measures. Secondly, no model that used the sample of tax advisers resulted in significant association, which indicated fairness was more of a concern to non-users than users of tax advisers. The three significant associations also showed mixed findings on the direction of the relationship between perceived fairness in VAT system and the respective VAT compliance measures. The quantitative results indicate the increase in perceived fairness in the VAT system was associated with decrease in enforced VAT registration and decrease in number of timely submission of VAT returns. However, the increase in perceived fairness in VAT system appeared to be positively associated with VAT non-compliance by taxpayers saying they strongly agreed to engage in theoretical evasion.

The result that perceived fairness of VAT system was positively associated with taxpayer saying they would strongly engage in theoretical evasion appears to be inconsistent with the literature. This is because one would not expect increased fairness to lead to increased uncompliant behaviour, and the opposite. One factor could explain this outcome. As the survey required taxpayers to indicate their perceived 'importance', but not the perceived 'levels of VAT system fairness' in Tanzania, this could explain the resulting positive association between fairness and un-compliant behaviour. Possibly, it is because taxpayers perceived the existing VAT system was unfair (a reason for the indicated VAT non-compliant behaviour), but at the same time perceived fairness to be a very important factor. Therefore, the direction of association in the current research was more about the 'importance of fairness' than 'fairness' itself with VAT compliance⁴⁶.

Nevertheless, the current research results of a significant positive association between perceived fairness and VAT compliant behaviour are supported in the literature (for example, see Mason and Calvin, 1984; Song and Yarbrough, 1978b). Generally, the literature suggests that taxpayers tend to be compliant if they assume the tax system is fair (Braithwaite and Reinhart, 2000; Richardson,

⁴⁶ The reasoning in this paragraph is consistent with the results of the content analysis, which indicated tax officials believed that taxpayers perceived both the VAT system and provision of public goods in Tanzania were generally unfair (see last paragraph of this part (a)).

2006; Webley, Adams and Elffers, 2002). For example, in a cross-country study by Adams (1996), the study found differences between countries' tax compliance behaviour were significantly associated with fairness in tax administration (procedural justice) and exchange equity. Furthermore, the current findings that fairness was negatively associated with VAT compliance as measured by the extent to which respondents agreed to engage in theoretical evasion are not exceptional for this study only. For example, Kaplan, Reckers and Reynolds (1986) and Roberts and Hite (1994) also did not find a significant positive association between fairness and tax compliance.

The second sub-factor of the attitude towards behaviour outcome was the perceived attitude and helpfulness of TRA officials. The testing of this hypothesis showed mixed findings on the relationship between perceived attitudes and helpfulness of TRA officials and the different measures of VAT compliance. The result indicated that for taxpayers who perceived to have a 'good' relationship with tax officials, they were less likely to respond that they strongly agreed to engage in theoretical evasion or sometimes made intentional mistakes. This indicated 'good relationship' between taxpayers and tax officials might increase compliant behaviour. This finding is supported in the literature. For example, 'friendliness', 'supportiveness' and 'respectfulness' by tax officials towards taxpayers were found to have a long-term positive impact on tax compliance (Frey and Feld, 2002; Braithwaite and Reinhart, 2000). In a study by Coleman and Freeman (2002), they found SMEs expressed resentment against a tax system because of perceived procedural and distributive unfairness. In addition, Kirchler (2007) shows that a 'cops and robbers' relationship between tax officials and taxpayers is more likely to increase tax non-compliance whereas a 'service provider and clients' relationship would normally improve tax compliance.

Nevertheless, for non-users of tax advisers, the perceived positive relationship between taxpayers and tax officials indicated VAT non-compliant behaviour by taxpayers responding that they never submitted VAT returns in time. Furthermore, no other models using non-users of tax advisers showed significant associations. The lack of significant associations in using the sample of non-users may indicate non-users of tax adviser's lack of a clear understanding TRA officials' attitude and general helpfulness in their tax affairs.

In explaining attitudes towards behavioural outcome, tax officials indicated that taxpayers only register for VAT purpose following TRA investigation, and they suggested that taxpayers' perception towards VAT system and provision of public goods influence their compliance behaviour. Furthermore, according to tax officials, politicians and government officials used their power to demand financial assistance sometimes burdening taxpayers, for example during elections or fund-raising. Sometimes, even when there were no direct promises of any favours from politicians, they (taxpayers) will give their money because of fear. Therefore, to compensate for money lost from their business because of fear of powerful political influences, taxpayers sometimes resorted to non-compliant behaviour.

There was a sense of disbelief among tax officials that the behaviour of many taxpayers registering for VAT only following investigation was because the taxpayers believed that doing the same was an acceptable behaviour. However, tax officials indicated that few taxpayers might choose to register for VAT purpose voluntarily and only if it was 'favourable' to them. For example, taxpayers may register voluntarily only because they wanted to be eligible for VAT refund.

Tax officials' perception was that taxpayers might be more willing to comply if they perceived that there was fairness in both the VAT system and the governments' provision of public goods and services. In general, tax officials suggested that taxpayers perceived both the VAT system and provision of public goods was unfair. Therefore, tax officials agreed with Saad (2011) that positive perception of taxpayers towards VAT system and the government at large will enhance voluntary compliance. Similarly, Ahmed and Braithwaite (2004) suggested that non-compliant behaviour is significantly higher among taxpayers who perceive low trustworthiness in their government.

b) VAT compliance is associated with subjective norms

The measures of subjective norms included two sub-factors: the perception that VAT compliance is a societal moral obligation and the perception that collected VAT is a business asset. The quantitative analysis shows a societal moral obligation was significantly associated with six VAT compliance measures, and

perception that collected VAT is a business asset with all nine VAT compliance measures.

Except for one model, which indicated taxpayers who perceived VAT compliance was a societal moral obligation were more likely show an uncompliant behaviour, all other models with significant associations were consistent with the literature. For example, perceived societal moral obligation had a significantly negative association with negative attitude towards declaration. This implies that the acceptability of VAT compliance as a societal moral obligation was positively associated with taxpayers indicating VAT compliant behaviour.

In general, the current research, perceiving VAT compliance as a social moral obligation was significantly positively associated with VAT compliance. This implies that taxpayers' perceived VAT compliance as social moral obligation and as a result, they were more likely to indicate VAT compliant behaviour. These findings were supported by Bergman and Nevarez (2005), Cullis and Lewis (1997) and Liebig and Mau (2005). Furthermore, studies have also shown that knowledge that other taxpayers were not compliant with tax laws is one of the main factors for increase in tax non-compliance (Torgler, 2005; Welch *et al.*, 2005).

The second sub-factor was the perception that collected VAT is a business asset. The perception that collected VAT is their own business asset was highly significantly associated with all VAT compliance measures. Furthermore, the results show that the increase in the perception that collected VAT is a business asset was highly significantly associated with the decrease in VAT non-compliant behaviour in terms of all VAT compliance measure. For all of the hypotheses testing in this research, this was the most clear quantitative result in terms of association and the direction of association between the VAT compliance factor and all VAT compliance measures. This result shows how important the perception of collected VAT is to taxpayers. The more taxpayers perceive VAT as part of their business revenue/asset, the more uncompliant they are likely to become.

There is support in the literature on the findings that perceived collected VAT is a business asset is negatively associated with VAT compliance. For example

Adams and Webley (2001) provides a possible explanation of this perception. Adam and Webley (2001) suggest that because of the accounting difficulties in separating business and VAT revenues, taxpayers are more likely to perceive collected VAT as a business asset. Alternatively, the overall tax burden in administering VAT on behalf of TRA could explain this perception's negative effect on the odds of taxpayers indicating VAT compliant behaviour in Tanzania.

In explaining subjective norms tax officials commented that taxpayers' culture of not issuing tax receipts/invoice, perceiving collected VAT as their own and the lack of taxpayers' patriotism were the outcome of the influence of social norms regarding VAT compliance in Tanzania. Tax officials indicated that taxpayers perceived the culture of not issuing tax receipts/invoice as socially "appropriate" and acceptable behaviour. In addition, they indicated that customers somehow supported this non-compliance culture, as they do not normally demand tax receipts/invoice for their purchases. Hence, the culture was a challenge to TRA's VAT compliance enhancement strategies.

According to tax officials, taxpayers' perceptions appeared to form a major part of taxpayers' beliefs in dealing with TRA and the majority of them appeared to be willing to align their intended behaviour along the lines of these beliefs. For example, taxpayers perceived collected VAT paid to TRA's as business loss, an additional tax, and additional business cost. Moreover, they were of the opinion that, taxpayers perceived that collecting VAT on TRA behalf was not their responsibility, and it was simply an added burden to their businesses. Furthermore, tax officials indicated that taxpayers' perceived VAT refund as additional money and they were willing, for example, to forge documents in order to claim VAT refund.

Generally, tax officials indicated the lack of patriotic behaviour among taxpayers formed part of subjective norms that explained taxpayers' behavioural intentions in dealing with TRA. Tax officials also indicated for taxpayers being non-compliant was regarded as a prestigious behaviour. This finding is consistent with the literature that supports the proposition that the most influential non-economic factor on tax compliance is the one, which includes both personal norms and subjective norms (Bobek, Roberts and Sweeney, 2007; Wenzel, 2004b; Wenzel, 2005).

Therefore, based on the content analysis of qualitative data and hypothesis testing based on regression analysis of quantitative data, this research can conclude that VAT compliance in Tanzania is associated with subjective norms. Furthermore, the overall direction of association indicates the increase in subjective norms as represented by societal moral obligation will more likely to improve VAT compliance in Tanzania. However, the increase in subjective norms as represented by the perception that collected VAT is a business asset will more likely decrease VAT compliance.

c) VAT compliance is associated with perceived behavioural control

The measures of perceived behavioural control included two sub-factors: use of professional firms' information and use of TRA services. The quantitative analysis shows the use of professional firms' information was significantly associated with four VAT compliance measures, and the use of TRA services with five VAT compliance measures.

The analysis indicated the increase in the use of professional firms' information would more likely improve VAT compliance by decreasing taxpayers' engagement in theoretical evasion and negative attitude towards declaration. However, the use of professional firms' information would more likely decrease VAT compliance by increasing taxpayers' involvement in cash transactions and sometimes making intentional mistakes. Overall, these results indicate mixed findings on the relationship between use of professional firms' information and VAT compliance are supported by literature. The literature shows that taxpayers use of professional firms information might have negative or positive effect on VAT compliance depending on the taxpayers' motives in using such information (Murphy and Sakurai, 2001; Ashby and Webley, 2008). For example, depending on a taxpayer's motive, professional firms' information may help the taxpayer to either comply or not comply (Kirchler, 2007). The current research has found that the use of professional firms' information was associated with VAT compliance but the direction of the association remained unclear. This suggests the various measures of VAT compliance are measuring different aspects of taxpayers' behaviour.

The second sub-factor measuring perceived behavioural control was the use of TRA services. Compared to the use of professional firms' information, results show the use of TRA services was more likely associated with improvement in VAT compliance. This is because four of the five significant associations with VAT compliance measures showed that increase in the use of TRA services would improve VAT compliance. For example, results show the increase in the use of TRA services would shorten the time taken to submit VAT returns. This finding supports the hypothesis that VAT compliance is associated with perceived behavioural control (H_{2c}). This is because the knowledge gained from the use of TRA services helped taxpayers to perceive that they were in control of their behavioural outcome.

The existing literature suggests the lack of tax knowledge amongst taxpayers may contribute to tax non-compliance. The current research findings are significantly consistent with the literature (for example, see Kirchler, Hoelzl and Wahl, 2008; Kinsey and Grasmick, 1993; Song and Yarbrough, 1978a). The current findings significantly support the hypothesis that use of tax knowledge is positively associated with VAT compliance. Furthermore, literature shows the "service provider and client" relationship between tax authorities and taxpayers has a potential of improving tax compliance (Braithwaite and Ahmed, 2005; Kirchler, 2007). The use of TRA services and the indication in the current research that it can improve VAT compliance is evidence that improved relationship between tax authorities and taxpayers through provision of better tax authority services is good for tax compliance.

The results from content analysis of qualitative data appeared to confirm the results of quantitative analysis on perceived behavioural control as a tax compliance factor. In explaining perceived behavioural control, tax officials indicated factors like tax knowledge, acceptability of cash economy and other evasion opportunities explained VAT compliance in Tanzania. Tax officials viewed tax knowledge as a resource, which strengthen or weaken taxpayers' confidence in dealing with tax matters. For example, tax officials indicated that most small taxpayers had limited tax knowledge and overall understanding of all tax law. Consequently, tax officials also indicated that the general illiteracy of the majority of taxpayers was one of the major causes of VAT non-compliance.

Furthermore, tax officials indicated that most of large taxpayers had good knowledge of tax matters and they were able to use paid tax consultancy services to reduce their VAT liabilities. This was the evidence that taxpayers' ability to access tax consultancy had an overall negative effect on VAT compliance in Tanzania. In addition, tax officials indicated that taxpayers who were able to acquire tax consultancy services appeared to be intentionally non-compliant.

Tax officials indicated that the presence of the 'option' that traders can deal or transact with cash was an opportunity to taxpayers in two ways; first, it is an opportunity to avoid, for example, the details of their transactions appearing in bank records (i.e. transaction trail) if they used cheques. This helped taxpayers being non-compliant because it was difficult for TRA to capture these cash transactions. Second, it was an opportunity to avoid bank charges and other expenses related with business banking, which generally are relatively high in Tanzania. Therefore, as long as dealing in cash transactions and related 'gains' were perceived to be in 'their control', taxpayers appeared to be 'confident' that dealing in cash transaction was beneficial to them.

In addition, according to tax officials, other evasion opportunities included the lack of honesty of some TRA tax officials, corruption, and the lack of proper training, which cause staff incompetence. Others included TRA's ineffectiveness and inefficiency in timely tracking false VAT refund claims, TRA's failure to deal with counterfeit EFD machines and 'fake' companies or 'brief-case' companies. The literature identifies opportunities on tax evasion as an important factor in non-compliance (for example, see Robben *et al.*, 1990; Antonides and Robben, 1995; Maciejovsky, Kirchler and Schwarzenberger, 2007). Therefore, these findings from analysing tax officials' responses concurred with the hypothesised association between VAT compliance and perceived behavioural control.

Thus, based on the content analysis of qualitative data and hypothesis testing based on regression analysis of quantitative data, this research can conclude that VAT compliance in Tanzania is associated with perceived behavioural control. Furthermore, the overall direction of association between perceived behavioural control and VAT compliance depends on the sub-factor measuring perceived behavioural control. For the use of professional firms' information,

the effect on VAT compliance will depend on the taxpayers' motive in using the professional firms' information. However, the use of TRA services was significantly positively with VAT compliance.

8.3.3 Other factors under tax compliance literature

This sub-section discusses the findings obtained from testing research hypotheses derived from other factors explained in tax compliance literature (see section 2.3.3).

a) VAT compliance is associated with gender

The literature inconclusively indicates that gender can explain the variations in the level of tax compliance among taxpayers. The current research shows mixed findings regarding the association between gender and VAT compliance measures. Mixed findings means that in some cases males may be more VAT compliant than females and the opposite was true. This result is indicated in the literature, with some studies supporting the hypothesis that males were more compliant than females (for example, see Kirchler and Maciejovsky, 2001; Kastlunger *et al.*, 2010)) and some studies supporting the opposite, and indicated that females were more compliant than males (Hasseldine and Hite, 2003).

One finding of this study is that females are more likely to register voluntarily for VAT, indicating females were more compliant than males in this respect. This is supported by Baldry (1987) and Hasseldine and Hite (2003). To the extent that enforced VAT registration indicates a possibility of future VAT non-compliant behaviour, the current research does not support Roberts and Hite (1994). Roberts and Hite (1994) found non-compliant male taxpayers of today would be non-compliant in the future, which is not the case in the current research.

The current research indicates that, because taxpayers' compliance behaviour was measured in different stages of VAT compliance, the findings indicate that taxpayers change their compliance behaviour even in one complying circle. In the current study, data analysis shows male taxpayers were less compliant during VAT registration, but became more likely to be compliant by agree that they were less likely to make intentional mistakes to reduce VAT liability. In

general, the findings support the hypothesis that VAT compliance is associated with gender (H_{3a}). However, the direction of the association was not clear.

b) VAT compliance is associated with taxpayer's age

Overall, the findings supported this hypothesis, but the direction of association was again not clear for this hypothesis. For example, in the case of type of VAT registration, older taxpayers were more VAT compliant. However, older taxpayers were less VAT compliant because of untimely submission of VAT returns. Partially, literature is in agreement with the current findings that taxpayer's age is positively associated with tax compliance (for example, see Baldry, 1987; Jackson and Milliron, 2002; Tittle, 1980; Clotfelter, 1983). However, if timely submission of VAT returns is a measure of VAT compliance, older taxpayers appeared to be lesser VAT compliant than younger taxpayers.

c) VAT compliance is associated with business size

The findings indicate mixed results in terms of the direction of association between business size and VAT compliance measures. The results indicated business size was negatively associated with not notifying TRA of errors and strongly agreeing to engage in theoretical evasion. These findings appeared to be not significantly consistent with the literature reviewed (for example, see Mwangi, 2014). In addition, business size was positively associated with involvement in cash transaction and sometimes making intentional mistakes. The finding that cash involvement is one of the major factors contributing to SMEs non-compliance is also supported by Mwangi (2014).

Tax officials indicated that taxpayers' business characteristics, such as business size and type of business-industry sector influenced VAT compliance. Tax officials were concerned with business size as they revealed that large taxpayers were more manageable when it came to TRA enforcing VAT compliance than small taxpayers. For example, it was easy to manage large taxpayers because majority of them kept proper books of accounts and they were quick, for example, in acquiring current tax knowledge and in adapting to new technology like the use of E-filing and electronic transfer of VAT payments (i.e. the use of TISS). Interestingly, because of large taxpayers being categorised as 'being easy to manage' some tax officials appeared to suggest that they were more

compliant than small taxpayers were. It could be that while large businesses are more visible to the TRA they may not necessarily be more compliant by nature than small ones. For example, most small taxpayers were struggling to pay VAT on time and poor record keeping meant that tracking transactions to enforce compliance was very difficult for TRA.

8.4 Applying tax compliance theories in developing countries

This section addresses the second research objective, which was to assess the degree to which existing tax compliance theories apply in a developing country context, by answering the research question *'to what extent do existing tax compliance theories explain VAT compliance in Tanzania?'* (RQ2). The relevance of the answer to this question lies in the fact that the researcher could not ignore the influence, in developing the tax compliance theories, from the context in which the theorists resided. Tax compliance theories were largely theorised in developed countries contexts and emphasised income tax compliance rather than VAT compliance (Andreoni, Erard and Feinstein, 1998; Adams and Webley, 2001). Therefore, the influence of socio-cultural, political, economic and historical trajectory of the theorists' countries of origin may explain the theories' assumptions and predictions of how taxpayers and tax officials/authorities may act or behave in these developed countries (James and Alley, 2002; James and Edwards, 2008; Bird and Gendron, 2006).

Furthermore, complying with income tax law may not necessarily be the same as complying with VAT law, as the later (i.e. VAT) is a tax on consumption not income (Yesegat, 2008). This means in VAT law the ultimate taxpayers are consumers, not business owners. Therefore, while complying with income tax law requires the "business income earners" to bear the ultimate burden of paying "income tax", complying with VAT law requires businesses to simply act as the tax authority's agents for collecting VAT from consumers.

The two main points to note here are; (1) the socio-cultural, political, economic and historical trajectories of developing and developed countries are different (James and Edwards, 2008; Bird and Gendron, 2006). Therefore, it is worth assessing the applicability of the developed-countries-based tax compliance

theories to developing countries tax compliance contexts and (2) the ultimate taxpayer under income tax law is different from the one targeted by a VAT law, which explains why one would not expect extensive VAT non-compliance among VAT registered businesses. However, the existing literature indicates significant VAT non-compliance, which may explain a possibility that the analysis of the VAT compliance problem could be the same as the analysis of the income tax compliance problem.

Therefore, the following sub-sections discuss the extent to which the findings of the current study indicate the applicability of the assumptions and predictions of the income tax compliance theories to the VAT compliance problems in Tanzania.

8.4.1 Applicability of economic theory of tax compliance

Economic theory of tax compliance assumes that taxpayers are risk averse (Allingham and Sandmo, 1972). A rational taxpayer will, as much as possible, aim to maximise utility. Theoretical literature suggests that a rational taxpayer will weigh the expected utility of gaining from non-compliant behaviour with that of losing from the detection of their tax non-compliant behaviour (Alm, McClelland and Schulze, 1992). They will then choose the option that will maximise their expected utility. This theory of tax compliance appears to suggest that taxpayers are honest only to the extent that there are economic incentives. The following parts (a) and (b) presents evidences from the current study on the applicability of the economic theory of tax compliance.

a) Evidence supporting economic theory of tax compliance

In the current research, some of the findings indicate that taxpayers were behaving according to the assumptions of economic theory of tax compliance. For example, this study's analysis indicates that perceived detection likelihood was associated with the increase in on-time submission of VAT returns, a decrease in involvement in cash transactions and a decrease in intentional mistakes to reduce VAT liability. A finding that taxpayers' perception of detection likelihood was associated with them becoming more VAT compliant is arguably a sign of risk-averse behaviour of taxpayers as suggested by economic

theory of tax compliance. Whether taxpayers in the current study were actually able to assess the trade-offs between uncertain tax savings and risk of audit and sanctions as suggested by the theory or their responses were simply intuitive is not critical to the theories' applicability. However, the current study at least indicates that these taxpayers were willing to show that they were risk averse by indicating that they would likely be more VAT compliant if they perceived high detection likelihood.

The finding of content analysis of qualitative data also supported the quantitative analysis finding on detection likelihood and its association with VAT compliance. Tax officials argued that the weaknesses in TRA's tax auditing system, which results in low detection likelihood is one of the main problems in TRA's effort to enhance VAT compliance. Their belief that increased detection likelihood would improve VAT compliance is arguably based on economic theory of tax compliance assumptions and prediction.

Another example that supported the applicability of economic theory of tax compliance was the perceived influence of VAT sanctions and its negative association with intentional mistakes to reduce VAT liability. According to economic theory of tax compliance, this finding indicates a rational approach in whether or not to comply by making or not making intentional mistakes to reduce VAT liability respectively. However, in statistical sense this finding was not strongly supported, as the perceived influence of VAT sanctions was significantly positively associated with only one measure of VAT compliance (i.e. making intentional mistakes to reduce VAT liability).

The inconclusive findings in the quantitative analysis were supported by the qualitative findings of the content analysis. For example, the relatively severe sanctions imposed on SMEs taxpayers in Tanzania did not enhance VAT compliance, rather an atmosphere of hostility was created between tax officials (or TRA) and taxpayers. This forced the TRA to enter into negotiations on how taxpayers would pay the taxes due and penalties and rebuild the lost trust between tax officials and taxpayers.

b) Evidence not consistent with economic theory of tax compliance

Some findings in the current study did not support economic theory of tax compliance. For example, perceived detection likelihood was significantly positively associated with enforced VAT registration, decrease in number of timely submission of VAT returns, increase in late submissions of VAT returns. This implies, for example, that increased perceived detection likelihood was associated with increase in taxpayers registering for VAT following TRA investigation, which was a VAT non-compliant behaviour. In this case, the findings did not support the assumption that taxpayers are rational.

Another finding that did not appear to support the theory was the significant positive association between perceived influence of VAT sanctions and taxpayers registering for VAT only following TRA investigation (i.e. enforced VAT registration) and involvement in cash transactions. This finding suggests that increase in VAT sanctions was associated with increase in VAT non-compliant behaviour. Based on economic theory of tax compliance, the findings suggest that taxpayers were not making rational decisions when it came to registering for VAT and involvement in cash transactions. Instead, taxpayers in this case were irrational and extreme risk takers. For example, taxpayers suggested that they could still be involved in cash transactions while they perceived high levels of VAT sanctions as being influential.

8.4.2 Applicability of behavioural theory of tax compliance

The central position of behavioural theory of tax compliance is that individuals are more than just independent, selfish utility-maximisers as suggested by the economic theory of tax compliance. Therefore, the current study adopted the Theory of Planned Behaviour (TPB) by Ajzen (1991) in order to capture other factors beyond the economic theory of tax compliance. The TPB frames taxpayers' behaviour as they interact with tax authorities around three main factors: first, attitude towards behaviour, second, subjective norms and lastly, perceived behavioural control.

In summary, under TPB taxpayers interact with tax officials/authorities according to attitude, beliefs, norms and their roles in society. Consequently,

taxpayers are not isolated from social groups, societies and culture, and will compare and refer to others in deciding what is considered as 'acceptable' 'reasonable' 'approved' and 'expected' behaviour in society. The following parts (a) and (b) presents evidence from the current study, which support or do not support behavioural theory of tax compliance.

a) Evidence supporting behavioural theory of tax compliance

The current research shows some evidence that support behavioural theory of tax compliance. For example, attitude towards behavioural outcome was associated with taxpayers' VAT payment behaviour. In measuring taxpayers' attitude towards their behaviour outcome, the current study adopted factor analysis and managed to extract two sub-factors: (1) perceived importance of fairness and (2) perceived attitude and helpfulness of TRA officials. These two sub-factors measured taxpayers' assessment of their behavioural outcome favourableness or unfavourableness. The current findings indicate that increased perceived importance of VAT system fairness increased the likelihood of taxpayers agreeing to pay less VAT. This implies that taxpayers perceived the level of fairness in VAT system to be unfavourable leading to VAT non-compliant behaviour.

Another finding supporting behavioural theory of tax compliance was the negative association between perceived attitude and helpfulness of TRA officials and taxpayers' theoretical evasion and making intentional mistakes. This implies that taxpayers assessed the favourableness of their behaviour outcome in relation to how they perceived the attitude and helpfulness of TRA officials. This is consistent with behavioural theory of tax compliance in that the perceived 'good relationship' between taxpayers and tax officials was more likely to lead to taxpayers' compliant behaviour.

'Subjective norms' as a factor was also logically associated with several measures of VAT compliance, hence consistent with behavioural theory assumptions and predictions. In order to measure this factor, factor analysis generated two sub-factors: societal moral obligation and collected VAT as a business asset. The results show that recognising VAT compliance as a societal moral obligation (i.e. relatively an acceptable behaviour) was positively associated with taxpayers VAT

compliant behaviour. Specifically, increased perception of VAT compliance as a societal moral obligation was associated with a decrease in taxpayers not notifying TRA of errors in submitted VAT returns, a decrease in taxpayers' involvement in cash transactions, and decrease in taxpayers engaging in theoretical evasion or making intentional mistakes to reduce VAT liability. Overall, this positive association between VAT compliance as a societal moral obligation and VAT compliance measures is consistent with the assumptions and predictions of behavioural theory of tax compliance.

The interpretation that collected VAT is a business asset is not correct according to VAT law, which defines taxpayers as mere VAT collecting agents for the TRA. However, in the current study, it appeared that there was a consensus (i.e. 'subjective norm') among SMEs taxpayers' that VAT money was a business asset. This implied that as taxpayers were paying VAT to TRA, the general sense was that they were giving away their rightful assets. As a result, the perception that collected VAT is a business asset was significantly positively associated with most of the VAT non-compliance measures. These VAT non-compliance measures were registering for VAT only following investigation, not submitting VAT returns on time and not notifying TRA of errors in submitted VAT returns. Others were never submitting VAT returns on time, or involved in cash transactions, but strongly agreeing to pay less VAT and sometimes making intentional mistakes to reduce VAT liability. The taxpayer showed an increase in negative attitude towards declaration, and increase in untimeliness of VAT returns. Given that perceiving VAT money as a business asset was acceptable personally and socially, then the above finding supports the assumptions and predictions of behavioural theory.

Perceived behavioural control indicated the extent to which a taxpayer would be in control of the outcome of their behaviour. This behavioural control is possible through access to resources and the presence of opportunities or obstacles in performing a particular behaviour. Measuring this factor are two Factor-analysis extracted sub-factors: the use of professional firms' information and use of TRA services.

The positive association between the use of professional firms' information and several measures of VAT compliance indicates the applicability of the

behavioural theory in this study. Specifically, increased use of professional firms' information was negatively associated with taxpayers' involvement in cash transaction, taxpayers' theoretical evasion, and decrease in negative attitude towards VAT declaration. Negative attitude towards declaration represented taxpayers' theoretical evasion and making intentional mistakes. This finding was consistent with the assumptions and predictions of behavioural theory of tax compliance, to the extent that behavioural outcome and subjective norms favoured tax compliant behaviour. This is because, according to TPB, attitude towards behaviour and subjective norms would normally indicate taxpayers' behavioural direction (intention to comply or not to comply) and perceived behavioural control would strengthen or weaken the taxpayers' intention to perform that particular behaviour. However, the use of professional firms' information was negatively associated with VAT compliance when measured in terms of intentional mistakes. Using professional firms' information implied taxpayers having access to professional resources, which would assist them to control their tax complying behaviour. Consequently, taxpayers' behavioural control using professional firms' information appeared to lead into VAT non-compliance behaviour.

Moreover, the quantitative analysis indicated that tax knowledge acquired from TRA was significantly negatively associated with untimeliness of VAT returns submission. This indicates that increased use of TRA services was associated with VAT compliance as taxpayers indicated that they either submitted VAT returns on time or often submitted their VAT returns on time. The perceived behavioural control from knowledge gained from the use of TRA services was associated with the VAT compliant behaviour.

In analysing with the qualitative data, the overall findings support the behavioural theory of tax compliance. For example, tax officials' responses indicated how attitudes towards behavioural outcome played a major role in influencing taxpayers' VAT compliance behaviour. Three sub-themes indicated the attitudes towards behavioural outcome and its influence on VAT compliance. First, taxpayers registering for VAT only following TRA investigation, mainly because taxpayers knew TRA limitations in effectively enforcing VAT law, in making sure that every eligible taxpayer was registered. Delaying the burden of

administering VAT on behalf TRA was favourable to taxpayers, given that it was difficult for TRA to implement effective and timely registration of all eligible taxpayers. Based on the same argument, other sub-themes were the perceived low fairness in the provision of public goods and services, and of the VAT system, leading to VAT non-compliance.

In terms of subjective norms, interviewees highlighted three sub-themes as well, which indicated personal and social influences on taxpayers VAT compliance behaviour. For example, it was culturally acceptable not to issue tax invoice, most taxpayers perceived that VAT money was a business asset, and there was generally a lack of patriotism among taxpayers. All these, according to interviewees, played a significant role in discouraging VAT compliance.

Finally, qualitative analysis indicated the support of the behavioural theory of tax compliance by showing how perceived behavioural control influenced taxpayers VAT compliance behaviour. For example, the acceptability of the cash economy provided an opportunity for taxpayers to 'control' their VAT non-compliant behaviour through involvement in cash transactions. Another perceived behavioural control aspect was tax knowledge. For example, according to interviewees large taxpayers were able to use their own generated tax knowledge or hire tax experts with the intention to reduce their VAT liability. This showed how the 'control' (i.e. access and use of tax knowledge) over the outcome of their behaviour (i.e. not complying by reducing VAT liability) encouraged VAT non-compliance. Other VAT non-compliance controlling opportunities included dishonesty among some tax officials, corruption and the lack of proper training, causing staff incompetence.

b) Evidence not consistent with behavioural theory of tax compliance

Some of the findings did not support the applicability of behavioural theory of tax compliance. Three associations exhibited this inconsistency.

The perceived importance of fairness was negatively associated with taxpayers registering for VAT only following TRA investigation (i.e. enforced VAT registration) and taxpayers saying they never timely submitted their VAT returns. Consequently, this shows increased importance of fairness may lead into increase in VAT non-compliance. On the contrary, behavioural theory

assumptions predicts that fairness in tax system have a positive association with tax compliance. Therefore, the predicted direction of association in this case was not consistent with behavioural theory of tax compliance. It could be that while taxpayers considered there was fairness with the VAT system they did not consider this case as being completely fair.

Furthermore, perceived attitude and helpfulness of TRA officials was positively associated with taxpayers saying they never timely submitted their VAT returns. One would expect an increase in the perception that TRA official attitudes towards taxpayers were positive and that tax officials were helpful to taxpayers to increase VAT compliance. One explanation could be that non-complying taxpayers were the ones more likely to have direct contact with TRA officials.

Finally, an increase in the perception that VAT compliance was a societal moral obligation was associated with one variable indicating increase in VAT non-compliance, which was 'not submitting VAT returns on time'. This also showed the findings in this case did not indicate the direction of association between societal moral obligation and VAT compliance as behavioural theory of tax compliance would be predict.

In concluding this section 8.4, the preceding discussion has highlighted the findings of the current study that indicate the extent to which existing tax compliance theories were applicable in a developing country context. To a certain degree, the current findings appear to support both economic and behavioural theories of tax compliance. However, the overall discussion indicates that it is behavioural theory of tax compliance, which appears to have more support from the findings than economic theory of tax compliance. This conclusion supports the ever-growing criticism of the limited nature of economic theory in explaining tax compliance.

Chapter Nine

Summary, contributions, limitations and conclusions

9.1 Introduction

This chapter provides a general summary of this thesis. The research aimed to investigate the relationship between factors identified in the literature as influencing tax compliance with VAT compliance in Tanzania. The investigation was conducted through statistical testing of relevant hypotheses and content analysis of qualitative data. This chapter focuses on summarising the research by mainly discussing the major contributions and limitations of the research, and recommendations of areas for future research. This chapter is organised as follows; section 9.2 thesis overview and major findings, section 9.3 main contributions of the thesis, and section 9.4 thesis limitations and recommendations for future research.

9.2 Thesis overview and major findings

The literature review in Chapters 2 and 3 discussed theories on factors that are used to explain tax compliance. The theoretical and empirical literature shows several tax compliance factors and explain them within either economic or behavioural theories of tax compliance. In addition, there are other general factors explained in general tax compliance literature, such as gender differences, taxpayers' age and business size. As a background to the significance of this thesis, the literature in Chapter 3 indicates that VAT non-compliance is increasing in Tanzania or more generally, but few studies have been undertaken to address this problem.

The study is based on quantitative analysis of data from a survey. A stratified sample of 350 SMEs VAT taxpayers was used, with 205 taxpayers completing and returning the surveys, achieving a 59% response rate. The qualitative analysis was based on data collected from semi-structured interviews with 32 tax officials. The researcher simultaneously collected the quantitative and

qualitative data in a single data collection phase, which took 9 months and covered seven tax-regions in Tanzania.

The economic theory of tax compliance describes taxpayers as rational and risk averse decision makers in relation to VAT compliance. Based on this rationality and risk averse assumptions, the current study's quantitative findings indicate that taxpayers would likely be VAT compliant if there was an increase in the perceived detection likelihood. For example, increase in the perceived detection likelihood was associated with the increase in on-time submission of VAT returns, the decrease in involvement in cash transactions and the decrease in intentional mistakes, decrease in negative attitude towards declaration and untimeliness of VAT returns. Furthermore, an increase in perceived influence of VAT sanctions was also associated with the decrease in intentional mistakes. However, the quantitative results also indicated that not all the associations between compliance factors and measures of VAT compliance were consistent with the economic theory predictions. In some cases, the increased perceived detection likelihood and perceived influence of VAT sanctions were associated with VAT non-compliant behaviour. For example, perceived detection likelihood was significantly positively associated with taxpayers registering for VAT only following TRA investigation. In addition, perceived influence of VAT sanctions was positively associated with taxpayers registering for VAT only following TRA investigation and involvement in cash transactions.

The finding of a content analysis of qualitative data supported the quantitative results. Tax officials argued that the weaknesses in TRA's tax auditing system, which results into low detection likelihood is one of the main problem in TRA's effort to enhance VAT compliance. Furthermore, tax officials showed that the relatively severe sanctions imposed on SME taxpayers in Tanzania were not contributing to enhancing VAT compliance as expected. In addition, they indicated that perceived VAT rate was a heavy burden to taxpayers. Overall, these tax officials' views regarding the role of tax audit and sanctions on taxpayers' tax compliance behaviour are consistent with the 'rational, risk-averse taxpayer' assumption of economic theory of tax compliance.

Based on behaviour theory of tax compliance taxpayers are assumed to interact with tax officials/authorities according to attitude, beliefs, norms and their roles

in society. Generally, behavioural theory of tax compliance appeared to have more support from the current study's findings than economic theory of tax compliance. Behavioural theory of tax compliance is explained by three factors: attitude towards behaviour, subjective norms and perceived behavioural control. The current study adopted factor analysis to extract two sub-factors, which measured taxpayers' attitude towards behaviour: perceived importance of fairness and perceived attitude and helpfulness of TRA officials. In addition, subjective norms were measured by two sub-factors: societal moral obligation and collected VAT as a business asset. Lastly, perceived behavioural control was measured by two factors: the use of professional firms' information and the use of TRA services.

Taxpayers assessed the favourableness of their behaviour outcome in relation to perceived importance of fairness and perceived attitude and helpfulness of TRA officials. Quantitative findings indicate that increased perceived importance of fairness in the VAT system was more likely to increase the likelihood of taxpayers agreeing they had engaged in theoretical evasion. In addition, increased perceived attitude and helpfulness of TRA officials was associated with increased number of taxpayers saying they never timely submitted their VAT returns. Overall, this finding indicated VAT non-compliance. However, the quantitative findings also indicated that increased perceived importance of fairness was associated with decrease in taxpayers registering for VAT only following TRA investigation (i.e. enforced VAT registration) and taxpayers saying they never timely submitted their VAT returns. Furthermore, increased perceived attitude and helpfulness of TRA officials decreased the likelihood of taxpayers agreeing to engage in theoretical evasion and making intentional mistakes, which indicated VAT compliance.

Taxpayers assessed their beliefs regarding the acceptability or unacceptability of their intended behaviour and the extent to which they were willing to align their intended behaviour with a referent group. For example, in a statistical sense, increased perception of VAT compliance as a societal moral obligation was associated with decrease in taxpayers not notifying TRA of error in submitted VAT returns, decrease in taxpayers' involvement in cash transactions, and decrease in taxpayers' theoretical evasion, making intentional mistakes or

decrease in negative attitude towards declaration. Generally, this finding indicates the increase in this factor may improve VAT compliance. However, the increase in perceived societal moral obligation was also associated with increase in one measure of VAT non-compliance, which was 'taxpayers not submitting VAT returns on time'.

Moreover, the compliance factor that was more significant and indicated a more consistent association with measures of VAT compliance was the perception that collected VAT is a business asset. For all the eight significant associations, the result indicates that the increase in this factor would more likely increase VAT non-compliance. This finding adds to the existing evidence that shows most SMEs fail to distinguish between business money and VAT money. As a result, this perception appears to contribute to SMEs non-compliance behaviour.

Lastly, taxpayers' access to resources and the presence of opportunities or obstacles would also determine their VAT compliance behaviour. For example, increased use of professional firms' information was associated with the increase in VAT compliance through less engagement in theoretical evasion and decrease in negative attitude towards VAT declaration. However, an increase in this factor was associated with decrease in VAT compliance through increase in taxpayers' involvement in cash transaction, and increase in taxpayers making intentional mistakes.

Therefore, in this case, taxpayers' behavioural control through using professional firms' information was directed towards VAT non-compliant behaviour. Moreover, quantitative findings indicated that tax knowledge acquired from TRA services was negatively associated with untimeliness of VAT returns submission, type of VAT registration, and theoretical evasion, indicating VAT compliance. However, the results significantly indicated that the perceived behavioural control through knowledge gained from the use of TRA services was positively associated with intentional mistakes, which indicate VAT non-compliant behaviour.

Based on content analysis results, tax officials in explaining the attitude towards behavioural outcome indicated that enforced VAT registration was an acceptable behaviour for most of the taxpayers. Furthermore, general taxpayers' perception

towards the VAT system and provision of public goods appeared to be associated with VAT compliance behaviour. In addition, other governance issues, for example politicians and government officials, used their power to demand financial assistance from taxpayers, which was a burden to SMEs. Therefore, SMEs had to find a way to compensate, and being VAT non-compliant was the best option to them. Moreover, tax officials in explaining subjective norms indicated that taxpayers were willing to align with the culture of not issuing tax receipts/invoices, perceptions that collected VAT is a business asset and lack of a taxpayers' patriotism. Finally, in explaining perceived behavioural control tax officials indicated that tax knowledge, as a resource to taxpayers appeared to strengthen or weaken their compliance behaviour. For example, tax officials indicated that most small taxpayers had limited tax knowledge and an overall understanding of all tax law. In addition, acceptability of cash economy and other evasion opportunities explained VAT compliance in Tanzania.

Furthermore, the current research finds mixed results regarding gender and VAT compliance. For example, the results showed that compared to males, female non-users of tax advisers were more likely to have negative attitude towards VAT declaration, i.e. female non-users of tax advisers were less VAT compliant than male non-users of tax advisers. However, on the same VAT compliance measure, i.e. negative attitude towards declaration, compared to males, female users of tax advisers were less likely to have a negative attitude towards VAT declaration, i.e. female users of tax advisers were more VAT compliant than male users of tax advisers. Furthermore, compared to males, females were less likely to be forced to register for VAT, i.e. more VAT compliant than males, but in comparison with females, males were less likely to strongly agree that they would sometimes make intentional mistakes, i.e. more VAT compliant than female.

The last two compliance factors were taxpayer's age and business size. The quantitative results show that older taxpayers were more VAT compliant in terms of type of VAT registration, i.e. the older the taxpayer is, the more likely that he/she will register for VAT voluntarily, but were more likely to be less on-time in submitting their VAT returns, which is a VAT non-compliant behaviour. Furthermore, the finding indicates business size was negatively associated with

taxpayers not notifying TRA of errors and strongly agreeing to engage in theoretical evasion. In addition, business size was positively associated with taxpayers' involvement in cash transaction and sometimes making intentional mistakes.

9.3 Contribution of the study

This section presents the contribution of the current study. There are four forms of contribution. There are the methodological, theoretical, and empirical contributions and the policy practical implications of this study.

9.3.1 Methodological contributions

This study contributes to methodology in four ways. Firstly, the sampling of the unit of analysis in the current study is relatively objective in that it deliberately included both taxpayers and tax officials. The inclusion in the sample of both taxpayers and tax officials was beneficial. The benefit came from the ability to capture the views and understanding of the two groups of respondents with relatively opposing positions in the taxation equation. Arguably, this had the advantage of providing the data that can be corroborated and add to the results' objectivity.

Secondly, this study also contributed to the methodology on how to measure VAT compliance. This study adopted mixed method. The mixed approach revealed the significance of investigating the current research problem using both the qualitative and quantitative approaches, whereby the approaches informed, and supported each other. Moreover, both quantitative and qualitative research approach contributed in understanding the relationship of factors in tax compliance and VAT compliance.

Thirdly, this study also contributed to methodological knowledge through the process of determining VAT compliance variables (factors). In the context of this research, previous studies used tax compliance factors to explain VAT compliance (for example see, Adam and Webley, 2001). This study used exploratory factor analysis (EFA) to measure VAT compliance variables (both

independent and dependent variable). Future researchers could use these factors to test and develop models in other tax compliance contexts.

Finally, the achievement of the determination of VAT compliance described in the preceding paragraph required asking relevant questions. As discussed in subsections 4.5.1 (interviews) and 4.5.2 (b) (The survey instrument), the researcher did not adopt existing instruments, but developed the interview and questionnaire questions used in data collection. After a thorough review of the theoretical and empirical literature relevant to taxation, and in particular VAT research, the researcher was able to use these questions.

The issues covered by the interview and questionnaire questions included the what strategies and activities the TRA designed and implemented to improve VAT compliance, the views of tax officials on matters of tax fairness both as tax administrators and their understanding of how taxpayers perceive the fairness of VAT administration in Tanzania. Other questions covered VAT audit and sanctions in relation to compliance (e.g. effectiveness of VAT audit and sanctions in improving VAT compliance). The current study aimed to achieve a broader explanation of factors influencing VAT compliance, which meant the inclusion of not only economic theory of tax compliance, but also theories of fairness perceptions and tax morale, and behavioural theories of tax compliance. Therefore, the researcher included questions on taxpayers' attitude, subjective norms and behavioural control. Finally, questions included issues on tax knowledge of taxpayers, and the VAT status in terms of taxpayers' time and type of VAT registration, and the timing of taxpayers' VAT returns submission.

Taxation research in developing countries is growing, and there are plenty of research opportunities in this area. The researcher argues and believes that the interview and questionnaire questions developed and used in the current study is a methodological contribution, and the questions could be adapted or adopted in other taxation researches.

9.3.2 Theoretical contribution

The economic theory of tax compliance (Allingham and Sandmo, 1972) and the adopted behavioural theory (Ajzen, 1991) are the two main theories that underpinned the formulation of research hypotheses in the current study. Linked to the behavioural theory, are the theories of fairness perceptions and tax morale, which includes Equity Theory, Distributive Justice Theory and Procedural Justice Theory. Therefore, the theories of fairness perceptions and tax morale also informed the design of interview and questionnaire questions for the current study.

This study contributes to these theories by adding further knowledge of the extent to which these theories can be applicable in a developing country context. The current study assesses this applicability by adopting the theories to investigate VAT compliance in Tanzania as a setting. This research indicates both theories were applicable to a certain extent. However, the discussion in section 8.4 shows that behavioural theory of tax compliance appears to have more support from the current findings than economic theory of tax compliance. In other words, the behavioural theory of tax compliance significantly explained more factors that are associated (negatively or positively) with VAT compliance measures included in the current study. In general, developing countries have systems of accountability that are relatively weak. Consequently, behavioural issues like perceived fairness in the tax system and tax morale in general (behavioural theory), have significant association with tax paying decision-making behaviour of taxpayers rather than rationality (economic theory).

The current study has shown the behavioural theory can explain the findings that indicate lack of support of the economic theory in explaining VAT compliance. For example, on one hand, other things being equal the economic theory predicts that higher detection likelihood increases VAT compliance. The current findings indicate several VAT non-compliance measures did not support this economic prediction, and as a result, the association with detection likelihood was positive. More specifically, the findings indicated that perceived detection likelihood was significantly positively associated with enforced VAT registration, decrease in number of timely submission of VAT returns, increase

in late submissions of VAT returns. On the other hand, the findings indicate significant relationship between the importance of VAT system fairness and VAT compliance. While the economic theory may fail to predict taxpayers' VAT compliance behaviour, the behavioural theories are helpful in providing the explanation. Therefore, tax authorities may take costly measure to improve the detection likelihood, yet VAT compliance may still be relatively low simply because the tax systems are perceived to be unfair.

Furthermore, according to the economic theory of tax compliance framework, the three factors in this study i.e. perceived detection likelihood, influence of sanctions and tax rate can explain tax compliance behaviour. Therefore, by applying this framework, this study contributes to the theory through further empirical analysis and findings to support this theoretical framework. The Theory of Planned Behaviour (Ajzen, 1991) identified three factors that may explain and predict taxpayers' intentions and behaviour. These factors are attitude towards behaviour, subjective norms and perceived behavioural control. The empirical analysis and findings derived from this study adds further empirical evidence of the ability of behavioural theory of tax compliance in predicting VAT compliance behaviour, even in a developing country context.

In addition, this study contributes to the understanding of both tax compliance theories by providing empirical evidence on the taxpayers and tax officials in Tanzania context. Existing literature shows there have been studies on VAT compliance. However, the researcher has no knowledge of a study on VAT compliance in Tanzania that adopted these tax compliance theories. Therefore, this thesis expands the knowledge of these two theories in explaining or predicting VAT compliance of SME taxpayers in Tanzania and possibly developing countries in general.

Finally, this study significantly contributes to the body of knowledge as factors explaining VAT compliance differ from developed and developing countries. This difference can be explained by general taxpayers' perception towards paying taxes, and in most developed countries taxpayers view paying tax as 'civic duty and as an important law-abiding behaviour' whereas this is not the case most of the time in most developing countries (Orviska and Hudson, 2003).

9.3.3 Empirical contribution

The current study set out to investigate VAT compliance in a developing country context. Research on VAT compliance in developing countries is a growing area of interest for taxation researchers. The current study has contributed to this area by conducting an empirical investigation, and generated empirical findings and knowledge on the topic of VAT compliance and related factors influencing VAT compliance in developing countries. Arguably, the main difference between the current empirical findings and the existing findings in other developing country studies is the mixed approach nature of the current study in investigating VAT compliance. The approach has helped the researcher to investigate the phenomenon of VAT compliance in a much broader way, and generated broader explanations and understanding of the factors influencing VAT compliance, which might be unique for developing countries.

For example, in relatively more fragmented and less developed tax administration systems common in developing countries, the question of compliance is more likely to be relatively fragmented as well. This means from the stage of identifying taxpayers and registering them for VAT purposes, for example, to the final point where the government receives the undisputed tax revenues, the components (stages) in a tax system are not well connected and the level of VAT compliance at each stage is likely to be different, given the same taxpayer. The current study captures this characteristic of a tax system in a developing country context, by testing the compliance factors association with different stages of VAT compliance.

Section 9.2 presents a lengthy discussion, which summarises the current study's findings. However, as an illustration to substantiate the empirical contribution from the current study, the researcher uses two findings. First, the findings of this study show that the direction of association between perceived behavioural control and VAT compliance depends on the taxpayers' intentions in acquiring the resources necessary for behavioural control. For example, the use of professional firms' information appeared to provide mixed results, with the direction of association depending on taxpayers' motive. Use of TRA services,

however, was significantly positively associated with VAT compliance as measured at different stages of the tax system.

The second illustration is the findings on the relationship between VAT compliance as measured by type of VAT registration. In a study by Roberts and Hite (1994), non-compliant male taxpayers (at the early stage, for example, at registration stage) are likely to continue to be non-compliant in the future. The current study measured VAT compliance using different stages of VAT complying circle; the findings show that taxpayers may change their VAT compliance behaviour even within one tax complying circle. In the current study, data analysis shows male taxpayers were less compliant during VAT registration, but they became more likely to be tax complainant post-VAT registration by showing that they were less likely to agree that they would sometimes make intentional mistakes.

Therefore, while the current study did not provide answers to all potential questions on VAT compliance in developing countries, the study has generated empirical findings that could be used in two ways. Firstly, for taxation researchers interested in VAT compliance in developing countries, these findings can provide a starting point in investigating other similar developing countries' contexts. Secondly, for developing countries with similar socio-cultural and political context as Tanzania, the current empirical findings could provide some insights on what may/may not work in a VAT system and area for further improvements in VAT compliance.

9.3.4 Policy and practical implication of the study

One of the research objectives of this study was to identify strategies employed by TRA to encourage VAT compliance in Tanzania (see Chapter 1, section 1.2.1). Based on content analysis, this study found two main strategies and two main challenges for the TRA's efforts to improve VAT compliance. These were the introduction of new technology, the use of block management system, and then shortage of staff and the burden of tax administration costs (see Chapter 6, section 6.2). This section aims to extend this finding from content analysis by presenting the practical and policy implications of the overall findings of the

current research, including those from quantitative results. Consequently, this section makes policy and practical recommendations that are specific to Tanzania, but which may apply to other developing countries. In addition, the recommendations will also be relevant to academic researchers and taxpayers.

a) VAT registration and VAT returns filing

There is a need to improve the registration process. One challenge that faced the TRA, as indicated by respondents, was the difficulties in tracking dormant taxpayers and related administrative costs (See Chapter 6, section 6.2.3). The main reason was that some new VAT registered SMEs provided false personal and business details during registration. This shows a lack of effective ways of taxpayer identification and verification of the provided personal and business details or information before actual registration. This thesis recommends improvements in the link between TRA and other government agencies that are responsible to keeping records of businesses such as SMEs and their owners, for example, the Business Registration and Licensing Authority (BRELA),⁴⁷ trade offices in districts, municipalities and cities. Furthermore, instead of keeping records of long-term dormant VAT registered SMEs, the thesis recommends the implementation of clear procedures allowing the TRA to de-register dormant taxpayers, and reduce administrative costs in this area.

The other area for improvement in VAT registration is the registration threshold. Respondents appeared to suggest that, compared to the existing SMEs' ability to administer VAT; the current threshold is still very low. This means the system nets taxpayers who are not capable of dealing with the complexity of the existing VAT system. Therefore, this thesis recommends that, compared to old/experienced SME taxpayers, TRA should provide relatively better/specialised services for new VAT registered SME to help them with VAT system complexity and related burden of compliance costs. Some respondents indicated that even with their willingness to comply, the ability to deal with VAT compliance costs was the demotivating factor for them to realise their VAT compliant intentions. In a behavioural theory perspective (TBP by Ajzen (1991), a tax compliant

⁴⁷ BRELA is the agency commissioned by Ministry of Trade and Industry to carry on the function of registering businesses and issue business licenses.

intention may not be realised as a tax compliant behaviour if taxpayers perceives that they cannot control the outcome of their behaviour.

Another problem, it appeared, was that taxpayers were not clear of the benefit of registering for VAT. Overall, a well-designed VAT system, which clearly shows that a taxpayer will benefit, for example, from tax-free purchase of input, would more likely improve taxpayers' positive perception of VAT registration and attract more voluntary registration. Increasing voluntary VAT registration will also be beneficial to TRA by reducing the administration costs related with enforced registration.

The frequency of filing VAT returns was another problem that taxpayers indicated as a VAT compliance burden. The TRA can devise a mechanism that allows smaller taxpayers to file less frequently, for example, quarterly or even annually. While the introduction of e-filing has slightly improved the on-time submission of VAT returns, the effectiveness of the system is still facing some limitations such as unreliable electricity supply and low levels of IT knowledge and awareness among SME taxpayers.

b) VAT auditing, enforcement and the influence of sanctions

In a self- assessed tax system like VAT, the auditing function is very important. In addition, SME forms a large part of the informal sector in most developing countries. Therefore, an effective and efficient auditing function will more likely help to bring these SMEs in the formal sector through VAT registration. In the current study, respondents have indicated the main limitations in the audit function were shortage of (qualified) staff and costs of performing tax audit assignments. In order to improve the audit function, the TRA can implement such measures as investing more in staff training and modernising the auditing function.

Prompt enforcement without fear or favour is also very important. In the current study respondents indicated that there were some elements of favouritism in enforcing the VAT law, and the influence of sanctions was different between smaller and larger SME taxpayers. Political favouritism was a problem as indicated by respondents. For example, for those taxpayers who were able to donate to the ruling political party, it appeared, they had relatively favourable

treatment from tax officials. Respondents also indicated that some taxpayers were favoured because of their connection with tax officials at the TRA.

There was a sense among taxpayers and tax officials that the current tax penalties and interests were 'severe/harsh' for SMEs, in particular those categorised as 'small' SMEs. The current research, supported by other studies, has found that the influence of sanctions was not associated or significantly negatively associated with most VAT compliance measures. This implies that a mere emphasis on sanctions was not sufficient to improve VAT compliance in Tanzania. Therefore, this thesis recommends a new look into the role of sanctions in improving VAT sanctions, and where the necessary penalties and interests should be reduced. This obviously is a trade-off assignment, where the TRA has to compare between the marginal revenue lost from reduced sanctions and the marginal revenue gain from increased VAT compliance and the reduction in investigation and auditing costs.

c) VAT administration and the relationship between TRA and SMEs

The general improvement in VAT administration refers to the general context in which tax officials operate and the perceptions held with regard to the relationship between TRA/tax officials and VAT registered SMEs. For example, the treatment of VAT registered SMEs as 'value added taxpayers' rather than important agents of the TRA and the government in VAT collection is another area for further improvement. In general, taxpayers who participated in this study indicated the 'antagonistic' view/approach in the interaction between the TRA/tax officials and SMEs was one cause of taxpayers' resentment towards TRA/tax officials and non-compliant behaviour in some cases.

Furthermore, the generally corrupt environment in Tanzania has affected most, if not all, areas of governance matters and tax administration is not an exception. Taxpayer respondents indicated that complying with tax laws would further improve if the public perceived that there was overall governance improvement, including the government showing seriousness in dealing with corruption. Specifically, the relatively antagonistic relationship between tax officials and taxpayers is normally fuelled by the perceived lack of a clear link between VAT (and any other tax) collected and the publicly expected responsible

use of government revenues and effective public accountability from the government. In the current study, respondents perceived corruption to be a major problem causing the lack of trust in the government and government officials and, thus, their willingness to pay taxes. Unfortunately, corruption in politics and the government and its agencies is a very common theme in Tanzania, as indicated in most of the recent Tanzania based studies (Gasper, 2006; Mkasiwa, 2011; Mzenzi, 2013; Malagila, 2013).

Therefore, this study agrees with the view of Bird and Gendron (2005, p. 153) that ‘...how VAT performs in any country inevitably reflects political factors and calculations as much as, or more than economic and administrative considerations’. Therefore, while TRA addressing VAT administration problems is important, further achievement in improving VAT compliance depends very much on the government of Tanzania not avoiding (evading?) the responsibility of making sure general governance issues are improved, including effectively dealing with the corruption problem.

9.4 Study limitations and recommendations for future research

This study is not without its strengths and limitations. This section briefly discusses these strengths and limitations. One of the strengths of this study is the adoption of mixed method approach, which the researcher believes to have contributed to increasing confidence in the main results. In respect of quantitative results, particularly the surveys, good response rate was also evidence of the strength of this research. Furthermore, the use of face-to-face interviews with tax officials has increased validity of the representation of response by reducing the wrong interpretation or understanding of the questions. Generally, the use of both methods provided stronger evidence for a conclusion through complementarity of result from one method to another. Moreover, the adoption of mixed method approach provides insight and understanding of VAT compliance factors. Generally, these strengths have increased the strength of generalisation and reliability of the findings.

The main limitations of this study are those associated with adopted embedded concurrent mixed research method. Adopting this method the researcher collected both quantitative and qualitative data simultaneously due to time limitation. This approach did not provide the opportunity for the researcher to analyse the quantitative data from taxpayers and generate preliminary findings before collecting the qualitative data from tax officials. The gap between the analysis of quantitative data from survey responses and subsequent analysis of qualitative data from semi-structured interviews would have provided the researcher with the time to focus the interview question in light of preliminary analysis of the quantitative data.

The current study measured VAT compliance at different stages of the VAT process. For example, VAT compliance was measured at the following five VAT collection and payment stages: VAT registration (registering following TRA investigation), VAT collection (involvement in cash transactions), and thirdly, preparation of VAT returns (intentional mistakes to reduce VAT liability). VAT returns submission (not submitting or high frequencies of untimely submission of VAT returns, and not notifying TRA of errors in VAT returns), and payment of VAT (paying less VAT if there was no chance of being detected/caught – i.e. theoretical evasion). In addition, theoretical evasion and intentional mistakes could also apply to VAT collection and VAT returns preparation stages. This approach of measuring VAT non-compliance at various stages of the VAT process has its strengths and limitations.

On one hand, arguably, the main strength of this approach is its ability to highlight the possibility of taxpayers behaving differently at different VAT collection and paying stages. For example, findings in this study shows that, while females appeared to be less non-compliant at the VAT registration stage i.e. mainly registering voluntarily, it is males who appeared to be less non-compliant at other stages by making intentional mistakes to reduce VAT liability. On the other hand, one key limitation of this approach is that it does not provide the answer to the question of the overall taxpayers' VAT compliance behaviour. For example, it would be interesting to develop a comprehensive measure of the extent to which taxpayers comply from VAT registration stage to VAT payment stage. This measure would provide, for example, an opportunity for researchers

to test the extent to which compliance factors are associated with VAT compliance as whole, not just individual stages of the VAT compliance process. In addition, as tax authorities aim to train their tax officials to be ‘total tax persons’⁴⁸, it is logical then to generate knowledge that will help tax authorities to design and implement measures that will influence taxpayers each to be a ‘total VAT compliant person’.⁴⁹

Finally, this thesis focused on VAT compliance in Tanzania. The relevance of the findings in connection with other types of taxes in Tanzania context remain unknown, in particular to what extent tax compliance theories can explain other tax compliance, for example, income tax in Tanzania. Therefore, examining tax compliance of the various taxes deserve more attention.

⁴⁸ TRA officials defined a total tax person as a tax official who has tax knowledge in administering and collecting all type of taxes administered by TRA.

⁴⁹ In the same way as it is beneficial (for example, cost efficient) for TRA to have its tax officials become ‘total tax persons’, a ‘total VAT compliant person’ means a taxpayers who is influenced to be compliant in all key stages of the VAT collection and paying stages.

Appendices

Appendix 1a: Survey Instrument

THE UNIVERSITY OF SOUTHAMPTON

A Survey Instrument for Small and Medium Traders

TOPIC: Evaluation and Analysis of Value Added Tax (VAT) Compliance: A Case Study of Small Medium Enterprises in Tanzania.

Introduction

This survey is part of a research project undertaken by Salma Y. Msangi who is currently a PhD student at the University of Southampton, United Kingdom (UK). The aim of this project is to determine the explanatory factors of VAT compliance in Tanzania.

This survey seeks to assist the researcher collect VAT compliance data from registered traders in Tanzania. You have been chosen randomly to participate in this project. It should be noted that the participation in this project is voluntarily, and all responses will be treated in strict confidence. Neither the identity of the respondents nor the organisation will be made public. I value the time that you will spend on filling this survey. Please I appeal for your cooperation.

Upon request, the summary of the findings will be made accessible for participants.

For further information please contact Salma Msangi through
Mobile: 0652486292/0752225588 or email address; sm6e08@soton.ac.uk.

Section I: Biographic details

Please tick (✓) in the appropriate box

1. My **gender** is:

Male	<input type="checkbox"/>	(1)
Female	<input type="checkbox"/>	(2)

2. My **age** is:

Under 21	<input type="checkbox"/>	(1)
21-30	<input type="checkbox"/>	(2)
31-40	<input type="checkbox"/>	(3)
41-50	<input type="checkbox"/>	(4)
51-60	<input type="checkbox"/>	(5)
61 or over	<input type="checkbox"/>	(6)

3. What is your **primary business**:-

.....

4. When did you **start your current business** activities?

.....

5. In case your organisation is big enough to employ, what is the approximate **number of employees** in your organisation?

.....

Section II: VAT status

6. When your current business was **first registered for VAT** purpose?

.....

7. **How did you register for VAT** purpose? Tick (✓) the correct response.

Voluntarily	<input type="checkbox"/>	(1)
Following investigation	<input type="checkbox"/>	(2)

Others (please specify)..... (3)

8. Do you **submit your VAT return on time**? Tick (✓) the correct response.

YES	<input type="checkbox"/>	(1)
NO	<input type="checkbox"/>	(2)

9. **How often are your VAT returns made on time**? Tick (✓) the correct response.

Very often	<input type="checkbox"/>	(1)
Often	<input type="checkbox"/>	(2)
Sometimes	<input type="checkbox"/>	(3)
Rarely	<input type="checkbox"/>	(4)
Never	<input type="checkbox"/>	(5)

10. Below are listed statements with regard to the **use of tax adviser** and tax compliance. If your organisation does not use tax adviser, please go to Question 11. Please indicate for each of these statements the extent to which you agree or disagree. Tick (✓) your preferred response.

	Strong disagree (1)	Disagree	Neutral	Agree	Strong agree (5)
(a) My organisation uses a tax adviser because of the complexity available in VAT legislation.					
(b) My organisation uses a tax adviser so as to reduce VAT liability.					
(c) My organisation uses a tax adviser so as to reduce audited rate by TRA.					
(d) My organisation uses a tax adviser so as to ensure VAT compliance.					
(e) Tax advisers are important sources for my organisation in learning about VAT matters.					
(f) My organisation uses a tax adviser to save time to do other business activities.					
(g) A tax adviser is helpful in assessing my organisation's VAT returns.					
(h) A tax adviser's awareness of VAT legislation is important to my organisation.					
(i) A tax adviser's experience in the practicalities of complying with VAT legislation is important to my organisation.					
(j) The use of tax adviser hinders my organisation's ability to develop knowledge in complying with VAT legislation.					
(k) It is more effective to use tax adviser than attempting to learn specific tax laws such as VAT legislation.					

11. Listed below are the statements as to **why I do not use a tax adviser**. Please indicate the extent to which you agree or disagree with each of the statements. Tick (✓) your preferred response.

		Strong disagree (1)	Disagree	Neutral	Agree	Strong agree (5)
(a)	My organisation does not use a tax adviser because it is very expensive.					
(b)	My organisation does not use a tax adviser because I have sufficient knowledge to fulfil with VAT requirements.					
(c)	My organisation does not use a tax adviser because I have experience in the practicalities of complying with VAT legislations.					
(d)	My organisation does not use a tax adviser because I would like to be aware of any changes made in VAT legislation.					
(e)	My organisation does not use a tax adviser because it will hinder its ability to develop knowledge in complying with VAT legislations.					
(f)	My organisation does not use a tax adviser because I have access to the information via friends.					
(g)	My organisation does not use a tax adviser because I have access to the relevant information via relatives.					
(h)	My organisation does not use a tax adviser because I have enough time to deal with business as well as fulfilment of VAT requirements.					
(i)	My organisation does not use a tax adviser because I have no intention to reduce VAT liabilities.					
(j)	My organisation does not use a tax adviser because of concern over confidentiality of my business.					

12. Below are statements with regard to the **source of advice and information** that helps taxpayers to comply with VAT legislations. Please indicate the extent to which you agree with each of the statements and state its usefulness. Tick (✓) your appropriate response.

	Strong disagree (1)	Disagree	Neutral	Agree	Strong agree (5)
(l) My organisation uses the TRA website and newsletter to comply with VAT legislation.					
(m) My organisation uses newsletters and tax bulletins issued by accounting firms to comply with VAT legislation.					
(n) My organisation uses newsletters and tax bulletins issued by law firms to comply with VAT legislation.					
(o) My organisation uses the training provided by TRA to comply with VAT legislation.					
(p) My organisation uses training provided by accounting firms to comply with VAT legislation.					
(q) My organisation uses training provided by law firms to comply with VAT legislation.					
(r) My organisation uses training provided by Taxpayers Association of Tanzania (TATA) to comply with VAT legislation.					

13. What do you think is the mostly likely **reason for making a mistake** when completing a VAT returns? Tick (✓) the correct response.

Insufficient care due to time pressure (1)
Insufficient knowledge of a particular area (2)

Others (please specify).....

14. If it comes to your attention that there is an over/under payment in the VAT returns submitted, **would you notify the TRA?** Tick (✓) the correct response.

YES (1)
NO (2)

If 'YES' go to Question 14(a), If 'NO' go to Question 14 (b)

(a) What would be your **reason(s) for notifying** TRA?

.....
.....

(b) What would be your **reason(s) for not notifying** TRA?

.....
.....

15. Have you ever been **entitled to receive VAT refund?** Tick (✓) the correct response.

YES (1)
NO (2)

If 'YES' please go to Questions 16 and 17, If 'NO' please go to Question 18

16. Do you think the **procedure was easy** to follow?

.....
.....

17. **How long** did it take for you to receive the refund?

.....
.....

18. What could be the **reason for not being refunded?**

.....
.....

Section III: Attitude to VAT

19. **How often** have you been **involved in cash transactions** so as to reduce VAT payments? Tick (✓) the appropriate response.

Very often	<input type="checkbox"/>	(1)
Often	<input type="checkbox"/>	(2)
Sometimes	<input type="checkbox"/>	(3)
Rarely	<input type="checkbox"/>	(4)
Never	<input type="checkbox"/>	(5)

20. Has your **business been audited in the past five years**? Tick (✓) the appropriate response.

Never	<input type="checkbox"/>	(1)
One audit	<input type="checkbox"/>	(2)
Two audits	<input type="checkbox"/>	(3)
Three audits	<input type="checkbox"/>	(4)
More than three audits	<input type="checkbox"/>	(5)

21. Listed below are statements with regard to **tax audit** and VAT compliance. Please rank the following statement from low to high as applicable to your recent experience and perceptions. Tick (✓) your preferred response.

	Very low (1)	Low	Neutral	High	Very High (5)
(a) What do you think is the probability that TRA finds out those businesses receive cash payments?	<input type="checkbox"/>				
(b) What do you think is the probability that TRA finds out those businesses do not provide invoices (receipts) to customers?	<input type="checkbox"/>				
(c) What do you think is the probability of being caught by TRA if you under-declare your VAT liability and submit an incorrect return?	<input type="checkbox"/>				
(d) How likely is it that following an audit taxpayer changes their tax compliance behaviour ?	<input type="checkbox"/>				
(e) How likely is it that un-audited taxpayers change their tax compliance behaviour if they become aware that other businesses have been subjected to audit ?	<input type="checkbox"/>				

22. Listed below are statements that relate to **attitudes/norms of taxpayers** towards VAT compliance. Please indicate the extent to which you agree or disagree with each of the statements. Tick (✓) your preferred response.

	Strong disagree (1)	Disagree	Neutral	Agree	Strong agree (5)
(a) 'When I pay TRA the amount of VAT owned, I think of the money as if it comes from my own business funds'					
(b) 'I think under declaring VAT can substantially contribute to the business profit'					
(c) 'If there was absolutely no chance of being caught I would have paid less VAT than I should'.					
(d) 'Unknowingly I sometimes make unintentional mistake to VAT returns'.					
(e) 'I sometimes make intentional mistake to reduce my VAT liabilities'.					
(f) 'VAT noncompliance is very common in my line of businesses'.					
(g) 'I feel morally obliged to honestly declare the correct VAT liabilities'					
(h) 'Complying with VAT law will result in the fulfilment of my personal, moral and ethical obligations'					
(i) Fulfilment of my personal, moral and ethical obligations as a consequence of my complying with VAT legislation is low.					
(j) If my friends find out that I sometimes under-declare VAT returns they will say it is wrong.					
(k) If some of my competitors are not paying VAT properly, I would bring this to the attention of TRA.					

23. Listed below are the statements about **perception of fairness of VAT system**. Please indicate the extent to which you agree or disagree with each of the statements. Tick (✓) your preferred response.

	Strong disagree (1)	Disagree	Neutral	Agree	Strong agree (5)
(a) Fairness of the VAT system is important to its acceptability.					
(b) Fairness of the VAT system is important to achieve smooth functioning of the TRA.					
(c) Compared to the VAT I pay, I receive too few public services.					
(d) It is unfair that some businesses have to pay less VAT while we are in the same line of business.					
(e) In my opinion TRA should make sure that everyone pays the fair share of VAT liability.					

24. Listed below are the statements about **relationship between tax official and taxpayers**. Please indicate the extent to which you agree or disagree with each of the statements. Tick (✓) your preferred response.

	Strong disagree (1)	Disagree	Neutral	Agree	Strong agree (5)
(a) We have a good relationship with all VAT officers who work with us in the TRA regional office.					
(b) We get on very well with a minority of VAT officers who work with us the in TRA regional office.					
(c) TRA official's attitude is helpful in discussion VAT matters.					
(d) We tend to be less friendly with VAT officer in the TRA regional office.					

25. Which of the following **sanction exist in Tanzania** with respect to VAT?

Fines	<input type="checkbox"/>	(1)
Interest	<input type="checkbox"/>	(2)
Imprisonment	<input type="checkbox"/>	(3)
Close of business	<input type="checkbox"/>	(4)
Publication of names of tax evaders	<input type="checkbox"/>	(5)

26. Rate the **relative influence of each of the following sanction**, as they would influence you in your decision to comply with VAT legislation. Use the following Arabic number to rank each of the following; 1=Very high; 2= High; 3=Normal; 4=Low; 5=Very low

Fines	
Interest	
Imprisonment	
Close of business	
Publication of names of tax evaders	

27. How do you think **sanctions affect your future compliance behaviour?**

.....

28. To what extent do you think **sanctions increase the level of VAT compliance?**

.....

29. If you are making **proposals on how to improve VAT compliance**, what do you think should be used? Tick (✓) your preferred response.

Explanatory leaflets		(1)
Descriptive numerical		(2)
Taxpayers education		(3)
Other (please specify)		(4)

If this interested you, **will you be happy to follow-up interview?** Your identity will be confidential. Please contact me at sm6e08@soton.ac.uk.

End of Survey Instrument

Appendix 1b: Interview Guide -TRA Tax Officials

Goals:

- (1) To obtain an insight on how TRA encourage voluntary compliance with VAT legislation.
- (2) To find out the relevant factors that explains VAT compliance in Tanzania Mainland.

Subjects:

Evaluation and Analysis of Value Added Tax (VAT) Compliance: A Case Study of Small and Mediums Enterprises in Tanzania Mainland.

Confidentiality:

The identity of interviewees will remain anonymous: Names will not be disclosed from the information provided.

Interview Introduction	
General Introduction (Interviewer and Interviewee)	
Interviewee Position at TRA	
What is the major functions of TRA	
Section I: TRA's VAT compliance strategies	
(a)	How VAT compliance effectiveness being assessed by TRA?
(b)	What is your impression of the level of compliance in terms of:
	(i) Registration
	(ii) Filing
	(iii) Accuracy of filed returns
	(iv) Payment of the tax
(c)	Are there any patterns in level of compliance between traders' segmentation
(d)	What factors influence compliance levels (positively or negatively)?
(e)	What were the main reasons for the recent changes of VAT threshold?
(f)	What measures do you take to encourage taxpayers voluntarily comply with VAT law?
(g)	What measures does TRA take to ensure that VAT taxpayers transacting in cash pay fair duties?
(h)	Do you think VAT non-compliance is a major problem for TRA?
Section II: Fairness	
(a)	What do you think about taxpayers' perception towards VAT system?
(b)	Are taxpayers' fairness perception of VAT system important to TRA?
(c)	Do you think the majority of taxpayers pay/remit correct amount of VAT liabilities/duties
(d)	What proportion of taxpayers pay/remit correct amount of VAT liability duties compare to all registrants?
(e)	Does the perception of fairness enhance voluntarily compliance with VAT law?
(f)	Do you think taxpayers relate fairness with provision of public goods and services?
Section III: VAT audit in relation to compliance	
(a)	How often does the TRA undertake a VAT audit for a registered trader?
(b)	How does TRA select taxpayers to be audited?
(c)	Does the TRA undertake repeated or random audits?
(d)	On average, how much additional tax revenue, do you think, is/may be collected after audit?
(e)	Do you think tax audits increase individual compliance?

Section IV: Sanctions and VAT compliance	
(a)	What sanctions exist under VAT legislation?
(b)	Which of those sanctions mostly influence VAT compliance?
(c)	To what extent do you think sanctions influence VAT compliance?
(d)	To what extent do you think penal sanctions needed to ensure compliance with VAT legislation?
(e)	To what extent do you think penal sanctions have effect of increasing or decreasing VAT non-compliance?
(f)	Do you think penalties are adequate means of ensuring compliance with VAT legislation?
Section V: Taxpayers attitudes and norms	
(a)	Do the majority of taxpayers register voluntarily for VAT purposes?
(b)	How do you identify a trader who is eligible for VAT registration?
(c)	What is your opinion on the extent to which taxpayers submit their VAT returns on time?
(d)	What measures does TRA take if VAT returns submitted on prescribed time?
(e)	Have you come across VAT returns that contain mistakes/errors?
(f)	How are mistakes/errors in VAT returns identified?
(g)	Do you think taxpayers make intentional/deliberate mistakes/errors?
(h)	What do you think are the causes of those mistakes/errors?
Section VI: Tax knowledge	
(a)	Does TRA provide general tax knowledge and education to other taxpayers other than registered ones?
(b)	Do you think taxpayers have basic knowledge to help them comply with VAT legislation?
(c)	Does TRA provide taxpayers with the basic VAT knowledge?
(d)	How does TRA provide tax knowledge to trades?
(e)	To what extent does TRA need to provide training for general VAT knowledge to taxpayers?
(f)	How would you describe the response/reaction of taxpayers when communicating amendments to VAT legislation?
(g)	Does TRA reward compliant taxpayers?
Section VII: TRA activities	
(a)	What are VAT refund procedures and processes?
(b)	What requirements needed to be considered in processing VAT refund?
(c)	Do you encounter difficulties in distinguishing legitimate from illegitimate claims?
(d)	In case of legitimate applications for refunds, how long does it take to refund?
(e)	Do you think taxpayers are involved with cash transactions?

“Thank you for your cooperation”

Appendices 2: Tables

Appendix 2A: Content Analysis Result

Table 2A.1 Detection Likelihood

Themes	Sub - Themes	Indicators	Text extract		Themes Frequency count
Detection Likelihood 16+14= [33]	Probability of being audited 16+3 = [19]	Manpower limitation reducing the probability of being audited [16]	Yes, but our work load is too much ... we can't reach our targets [1]	RM 1	[16]
			Yes, but it is very expensive for TRA...we do not have enough tax auditors to undertake this job ... [1]	RM 3	
			We normally assess the risk of a trader not complying ...for high risk trader we tend to audit them every year... for low risk traders, we only audit them once every 3 years...but due to limited number of tax auditors, other taxpayers remain unaudited for more than three years. [1]	RM 5	
			... because of few tax auditors we can't perform tax audit as required [1]	TO 7	
			Yes, but our manpower level is relatively very low compared to the number of taxpayers that need to be audited ... only 3% of our VAT revenue is collected as a result of tax audits... more than 3% can be collected but it is very expensive for TRA ... and we have fewer tax auditors in our region than the number required to cover the audit of all taxpayers [3]	TA 1	
			...because of few tax auditors we can't afford to undertake two comprehensive cases and three other cases per month ... this is a problem in other regions as well. For example Ilala region has more than 6,000 limited companies to be audited per year, but it is impossible for them to undertake effective audit because of few number of tax auditors ... for this year we have allocated only 96 comprehensive cases in action plan but I am not sure if we will manage to audit all of these cases because of small number of tax auditors in our region ... we select taxpayers to be audited by looking at their VAT contribution per year. The tax auditors who audit SMT have many cases as compared to Large Taxpayer Unit (LTU). We have 10 tax auditors for LTU and 20 tax auditors for SMT. You can imagine, SMT that needs to be audited are 3000, their work load is very high. Our main focus is the 181 LTU; they contribute more than 75% of total Domestic	TA 4	

Themes	Sub - Themes	Indicators	Text extract		Themes Frequency count	
			Revenue Department (DRD) collection ... we don't bother to audit taxpayers who contribute only Tshs. 2 million while we have taxpayers who can contribute up to Tshs. 16 million per month as a single business [4]			
			We audit SMEs once in every three years ...taxpayer population is large...we are trying to make sure that in a period of three years all taxpayers are audited...however in practice it is very hard because the small number of tax auditors to do the job [1]	TA 6		
			...we lose a "big piece of cake" as we are not able to conduct effective tax audit to all taxpayers because of the limited number of tax auditors in our region... [1]	TA 7		
			The probability of all taxpayers being audited is very low ... tax laws needs to be improved to encourage voluntarily compliance [1]	RM 3		
			Yes, tax audit is a good mechanism of enhancing VAT compliance...if taxpayers are audited...they will not repeat the same mistakes again next time [1]	RM 5		
			... the probability of taxpayers being audited influence their VAT compliance behaviour [1]	RM 6		
		Tax audit cost [3]		It also very expensive for TRA to conduct tax audit [1]	RM 1	[3]
				...undertaking tax audit is very expensive for TRA in terms of financing the visits and time constraints. In terms of time, the limited number of existing tax auditors means that the few available tax auditors have to sometimes rush through the audits in order to cover as many taxpayers as possible. As a result the quality of tax audits is jeopardised... [1]	RM 3	
				...after conducting tax audit we usually manage to achieve our VAT revenue collection targets ... however, conducting tax audits is a very expensive task for TRA ...[1]	MC 7	
		Probability of being detected		Comprehensive audit [4]	... we usually conduct comprehensive tax audits to large taxpayers once every year because they keep proper records and they pay substantial	RM 2

Themes	Sub - Themes	Indicators	Text extract		Themes Frequency count
	4+9+1 = [14]		amount of tax ... We don't spend much time in auditing small taxpayers with turnover, for example, of Tshs. 40 million (equivalent £14,340) [1]		[9]
			We have an action plan ... in auditing we have two units; large taxpayers unit and Domestic Revenue Department (DRD) ... large taxpayers amounting to 181 taxpayers, we normally undertake comprehensive audit annually to enhance compliance [1]	TA 4	
			...my experience is that frequent audit of taxpayers is needed in order to improve VAT compliance [1]	MC 3	
			Yes, to a large extent it performing comprehensive tax audits increase compliance ... [1]	TA 6	
		Effective tax audit [9]	For those who file electronically, they also cheat but are easily detected by our audit system... [1]	MC 7	
			We have annual tax plan to audit our taxpayers ... our target is to identify 20% additional tax, but after conducting effective tax audit we usually collect more than our target ... we are expecting that taxpayers will change their compliance behaviour after tax audit but this is not the case in our region [1]	TA 6	
			Taxpayers' fear of being audited ... they always postpone appointment with tax auditors, which frustrates our plans. Taxpayers' failure to provide us with proper documents and other evidence to support their claim [2]	MC 1	
			The risk of being caught also determines the level of compliance...if taxpayers think they will not be caught by TRA ... they will choose not to comply ... in particular some taxpayers decide to establish their businesses in rural areas (they call 'safe zones') knowing that it is very difficult for tax officials to frequently visit their businesses ... a taxpayer may say, "why should I pay tax ... while I can run my business in a safe zone" ... Most taxpayers who decide to move their businesses into these "safe zones" have good tax knowledge' [3]	TR 7	

Themes	Sub - Themes	Indicators	Text extract		Themes Frequency count
			...yes, tax audits increase taxpayers' compliance behaviour, but it very much depends on effectiveness of tax audit ... if TRA is able to conduct effective tax audit once a year, taxpayers are more likely to change their compliance behaviour ... [2]	TA 7	
		Taxpayers' fraudulent practices [1]	Taxpayers and their tax consultants colluding in fraudulent practices, and this very much affect our performance and our job more difficult ... [1]	MC 1	[1]

Table 2A.2: Perceived Level of Sanction

Themes	Sub-Themes	Indicators	Text extract		Themes Frequency count
Perceived level of Sanction [65]	Enforcing sanctions 36+11+12+6 = [65]	Effectiveness of sanctions [36]	... it depends on the size of the taxpayer's business, it is yes that it will be adequate if properly administered to small taxpayers... but this is not the case for large taxpayer ... Penalties increase VAT compliance for small trader because they will try not to repeat the same mistakes ... but for large taxpayers, it does not have any impact in their compliance behaviour [1]	RM 2	[36]
			Largely, we use fines, penalties and interests to enhance compliance with tax laws. Taxpayers are obliged to pay their fair share of VAT. However, taxpayers are a part of our society; we cannot send them to prison because their families depend on them. We are generally lenient towards taxpayers, allowing them more time to learn and become more compliant. My experience is that, with time they usually pay their taxes and fine or penalties where applicable...[2]	RM 3	
			...it is true that sanctions positively influence VAT compliance ... they (i.e. sanctions) help us to collect tax and meet our tax collection targets... but it is negatively perceived by most small taxpayers ...because they perceive it as an unfair reduction from their business profit ... I think our ability to collect tax is strengthened by the existence of penalties ... however existing penalties are not adequate for most large taxpayers... we need severe penalties because they will discourage large taxpayers becoming non-compliant [3]	RM 5	
			Penalties also influence taxpayers compliance behaviour because they reduce their (i.e. taxpayers) business profits ... In our region experience shows that penalties increases compliance for small taxpayers, but for larger businesses there very little effect on compliance if any ... we need effective penalties to help small taxpayers comply with tax laws ... but these penalties should not be fixed rate or the same amount to all taxpayers ... TRA should administer different rates or amounts depending on the size of a business [4]	RM 6	

Themes	Sub-Themes	Indicators	Text extract		Themes Frequency count
			To a large extent ... we are able to collect VAT or any other tax because of these sanctions ... if it were not for these sanctions what do you think we could have realistically done? Do you think we could force our way (i.e. using other means apart from lawful sanctions) into their pockets to get the money ...? [1]	MC 1	
			Penalties help TRA to collect tax and meet our target... however they are negatively perceived by taxpayers that reduce their business profit [1]	MC 5	
			We use penalties and interests internally to collect taxes... other tax collection measures include issuing agency notice and distress warrants. We rarely take them to court or imprison them... our main objective is to collect tax, not to put our taxpayers in prisons [2]	MC 7	
			Taxpayers are not ready to part with their money, they are not ready to give it away without a fight ... we have to administer sanctions to get the VAT money [1]	TO 6	
			Penal sanctioned are needed to a large extent... had it been that there were no penal sanctions, taxpayers wouldn't have disclose their incomes and expenses [1]	TO 7	
			In Tanzania taxpayers will not comply with VAT or any other tax if there were no sanctions ... severe penalties are needed to make them comply. [2]	TA 6	
			To a large extent it encourages voluntary compliance ... Penalties increases VAT compliance for SMEs because taxpayers fear sanctions they reduce their business profit... [1]	RM 1	
			Yes, for small taxpayers, they usually comply with VAT because they are afraid of being penalised or fined ... the majority of large taxpayers evade paying VAT ... for them paying penalties of Tshs 2 million to 5 million is nothing ... but for small taxpayers they normally feel the pain [2]	RM 2	
			To a great extent, I promise you if there were not any sanctions ... our taxpayer will never pay their tax voluntarily ... for those few who pay voluntarily it is only because they know they will be fined or penalised [1]	RM 3	

Themes	Sub-Themes	Indicators	Text extract		Themes Frequency count
			Distress warrant mostly influenced our taxpayers to comply with VAT legislation... because taxpayers do not want to appear to other taxpayers as failures in their businesses simply because of not paying taxes... but now the penalties have increased ... for example, depending on the size of our taxpayers' business, they pay penalties amounting from Tshs. 2 million to 5 million, obviously depending on the seriousness of the offence and it can sometimes be a lot of money ... To a large extent ... it can increase VAT non-compliance in a short-run, because taxpayers may choose to close their shops and open another one ... but in a long-run it will decrease VAT non-compliance because the same taxpayers will not repeat the same mistakes again [1]	RM 4	
			To a large extent sanctions do influence VAT compliance ... We use fines and penalties, but mostly we close their business on temporally bases ... they will find the tax owed and pay to TRA because they can't afford to remain closed for long ... as their family depends on these businesses [1]	RM 5	
			I think taxpayers fear paying fine; because taxpayer has to pay penalties and interest on top of fines ... they may end up paying more in fines than when paying the usual taxes. We don't use courts any more unless it is a big case ... because it will take more time and increase compliance cost ... these cases may sometimes take up to 10 years ... To a large extent ... after being sanctioned they normally do not repeat the same mistakes again ... very few keep on repeating the same mistake ... [1]	RM 6	
			To a large extent, taxpayers are scared of sanction ... [1]	MC 3	
			...but after introducing EFD machines ... penalties have increased from Tshs. 2-5 million, so there is a trend to comply ... because of TRA issues distress warranties and taxpayers' fear of ruining their reputation in the society, they end up complying... [1]	MC 4	
			To a large extent sanctions do influence VAT compliance ... issuing distress warranties help ... taxpayers feel ashamed if their business have to be closed or their wealth being confiscated ... in this situation, they will find any means, even borrowing from their banks in order to pay their outstanding taxes ... [1]	MC 5	

Themes	Sub-Themes	Indicators	Text extract		Themes Frequency count
			... Urgency notice and distress warrant positively influence their tax behaviour ... taxpayers are very serious about their reputation...they don't want bad reputation with their suppliers or banks in order to avoid ruining their reputation because of distress warrant. They will take any measure to make sure that they get the money to pay the tax due ... Taxpayers may respect the due dates (laws and regulation)...but then, they will submit false returns and agreed to pay any additional tax with instalment... [1]	MC 7	
			They will submit VAT returns after being reminded by sending offence notice of late submission of VAT returns ... Sanctions are the only reason they comply with tax laws [1]	TO 4	
			Taxpayers only comply with VAT because of sanctions such as penalties ... the majority of taxpayers in our region are small businesses; therefore paying penalties is burdensome... I think penalties decrease VAT non-compliance [1]	TO 6	
			...SMEs are afraid of penalties... they see penalties as a burden to their business and they don't like them....but without penalties none of them would have disclosed their business income ... Taxpayers are very sensitive with their reputation ... We mainly use urgency notice and distress warrant in making them comply with tax law... [2]	TO 7	
			... Taxpayers only comply because of tax laws because they are afraid to be sanctioned... medium and small taxpayers are struggling to pay penalties.....we have to arrange for affordable instalment payments for them to be able to pay...[1]	TA 1	
			... Taxpayers normally change their compliance behaviour because of sanctions... taxpayers don't want to be perceived by other taxpayers as failures. For example, being forced to close a business because of not paying taxes is a bad reputation for the responsible taxpayer ... if a taxpayer sees other taxpayers' businesses are being closed because of not paying taxes, the taxpayer is more likely to come and pay his/her taxes ...in my opinion, for SMEs, penalties increase VAT compliance to a large extent ... this is because penalties significantly reduces SMEs profits [2]	TA 6	

Themes	Sub-Themes	Indicators	Text extract		Themes Frequency count
		Taxpayers do not fear sanctions [11]	... for large taxpayers, paying penalties is not a problem to them...as they pay less compared to the evaded tax... they normally abuse the system [1]	RM 1	[11]
			Before the recent changes to sanctions, the influence to taxpayers was very minor ... because the penalties were only Tshs. 500,000 for failure to pay or lodge VAT returns [1]	RM 4	
			Ooh, in my opinion, sanctions do not very much influence VAT compliance [1]	MC 4	
			Depending on the type of sanction ... to a large extent, say 90% of taxpayers are not afraid of penalties or interests ... Penalties are not adequate measures to influence compliance because taxpayers don't care at all ... it is too little compared to the evaded tax ... for example Tsh.5 million for fraud ... Tshs. 3 million for not issuing tax invoices ... Tshs. 500,000 for under-declaration ... paying these penalties is not a problem for taxpayers at all [3]	MC 7	
			In my experience, sanctions do not significantly influence VAT compliance [1]	TO 7	
			...sanctions do not help at all... the majority of large taxpayers know that penalties are very low compared to the tax they can evade ... so they (i.e. taxpayers) are prepared to be penalised because the penalties do not affect their businesses [1]	MC 3	
			...sanctions does not help at all... most of our clients are aware that penalties are very low.... They choose to evade knowing they will pay less when penalised [1]	RM 3	
			We need to increase the amount of penalties ... the 25% rate is very small especially for larger taxpayers ... larger taxpayers violate the law and pay penalties and keep on paying penalties other than complying with VAT law ... in fact they evade more than what they pay as penalties or fines [1]	TA 1	
			... sanctions do not affect large taxpayers...what they evade is more compared to penalties [1]	TA 6	
			Severe penalties [12]	...severe penalties are needed to discourage VAT non-compliance ...the existing penalties are not adequate; the government needs to increase penalties rates so as to discourage VAT non-compliance ... [2]	

Themes	Sub-Themes	Indicators	Text extract		Themes Frequency count
			To a larger extent especially for the large taxpayers ...the penalties should not be the same to all taxpayers...more severe to the large taxpayers [1]	RM 2	
			To a great extent penalties are needed to ensure VAT compliance ... but they need to be made more severe than they currently are [1]	RM 3	
			Sanctions are not severe, and many taxpayers can simply ignore the penalties because they are able to pay them, but continue to be non-compliant [1]	RM 5	
			To a large extent, there should be severe penalties for larger taxpayers ... the current rate is fair for SMEs as it needed to ensure VAT compliance but not to large taxpayers [1]	RM 6	
			To the large extent but penalties are needed to be more severe [1]	MC 3	
			Yes...however government need to increase penalty rate... the current rate is less as compared to the tax they evade [2]	MC 5	
			...harsh measures are needed to increase government revenue... but for SMEs it decreases their tax morale, it is also time consumption; sometimes they (i.e. SMEs) end up seeking loans from their bankers to pay the required tax...they feel as a loss to their business...recovering this kind of loans take time... this reduces their tax morale and as a result non-compliance increase [1]	MC 7	
			However, for those few who have tax knowledge they choose to evade tax ... what needed to be done is to impose heavy penalties and take them to court, fined and imprisonment ... this will be a lesson to other taxpayers... in general penalties for non-compliance are not severe [2]	TO 7	
		Related observations [6]	To a large extent penalties discourages businesses. For example, sometimes taxpayers with accumulated tax debts decided to close-down their businesses and transfer their assets to a newly registered business names ... TRA loses VAT revenue ... [1]	RM 4	[6]
			... It might be ignorance or simply being clever by trying to evade taxes [1]	RM 6	
			... we also use urgency notice ...taxpayers will be saved with warranties requiring them to pay the tax due ... in using distress warrants from court,	MC 1	

Themes	Sub-Themes	Indicators	Text extract		Themes Frequency count
			<p>we never get anything; usually taxpayers with accumulated tax debts decide to change and transfer their assets to newly registered business names... we usually come to a reasonable instalment that is affordable to taxpayers, and most of them choses to comply. For those few taxpayers who don't comply, we do not encourage the use of sanctions because sanctions discourage small taxpayers to do business, and at the end of the day we (i.e. TRA) will lose even the little amount we are able to collect ... We usually give them time to pay and encourage them to pay by instalments ... we are such a friendly organisation...if the tax remain unpaid ... we sometimes take them to court for those serious offenders [2]</p>		
			<p>Sanctions have helped TRA to increase level of VAT compliance ... though it is a very hard way ... taxpayers tend to change their compliance behaviour but sometimes sanctions discourages them to keep on doing business [1]</p>	MC 4	
			<p>The publication of names of those who evade tax is not acceptable under the current law. We are legally required to maintain confidentiality of our taxpayers, if they are not complying, we are only required to charge them fines, but not to publicise their names [1]</p>	MC 5	

Table 2A.3: Cost and Benefit of Non-compliance

Themes	Sub -Theme	Text extract		Themes Frequency count
Cost and Benefit of non-compliance 8+21+6+5 = [40]	Perceived cost and benefits of non-compliance [8]	... for the majority of taxpayer, if you audit them and find out they have to pay additional VAT ... they will definitely pay you ... but be assured they will always find a way to "steal" more than the amount we collect from them ... that is why whenever we audit them, it is normal to find that they have to pay additional tax ... I can tell you, tax avoidance and evasion are the easiest ways of compensating for the money lost by paying to get favours in the eyes of influential government officials ... they can't steal from their customers. You audit a business every year and find the same mistakes every year [2]	RM 2	[8]
		In addition to that we fine them ... this will help them to remember to comply in the future ... because they pay fine from their business, which reduces their profit. [1]	MC 1	
		...our taxpayers compare the seriousness of sanctions and the amount they will pay in VAT. If they find sanctions are less than VAT payments, taxpayers will normally chose to avoid paying VAT and be willing to pay penalties. They will tell you, "I will pay VAT with penalties, it is not a problem ... [1]	MC 4	
		Of course yes ... when we undertake audit and identify any fraudulent declaration of their financial affairs, taxpayers have to pay the correct VAT amount, penalties, fine and interest. Therefore, taxpayers realise that it is cheaper to submit and pay the correct amount monthly than to wait to be audited, and if caught, to be required to pay the lump sum (i.e. VAT, penalties, fines and interests) [1]	TA 4	
		Yes ... administratively and in terms of monetary costs ... it becomes a burden to taxpayers' business because they will have to pay interest and fines every month ... and it takes time to pay ... we need to educate our taxpayers [1]	TA 5	
		Because (of effective tax audit) they will become aware that repeating the same mistakes will increase the possibility of paying more interests because interests is calculated retrospectively ... always taxpayer fear paying more interests in this way [1]	TI 7	
		...for taxpayers the act of complying or not comply with tax laws depends very much on which act will result into paying more or less money ... taxpayers will normally assess the benefits of complying or not complying and will decide to act on the option which will benefit them more [1]	TR 7	

Themes	Sub -Theme	Text extract		Themes Frequency count
	Taxpayers poor record keeping [21]	Culture of not keeping records ... it is not true that they don't keep record, no, rather it is the method they use doesn't help them to identify tax ... the motives of keeping records for them is simply to identify their profit... if the running cost is not much ... then taxpayer consider himself lack [1]	RM 2	[21]
		Majority of taxpayers purposely tend to not keep proper records so they can remain outside the tax net. For example, traders with turnover below Tshs. 20 million are not entitled to pay neither VAT nor income tax. Majority of taxpayers use this loophole to evade paying any tax ... We normally face a major challenge in making medium and small traders comply because they don't keep records... SMEs are categorised as "high risk cases" because of poor record keeping...hence frequency of audit undertaken for SMEs is very high relative to other business categories [2]	RM 3	
		The VAT threshold has changed from Tshs. 20 million to Tshs. 40 million ... poor record keeping due to insufficient book-keeping knowledge ... Most of our taxpayers don't keep proper records of their business [1]	RM 4	
		They don't keep proper records therefore we audit their sales day book...obtained third party information ... or we send our tax officers for close monitoring... [1]	RM 5	
		Taxpayers' poor record keeping of their business records is a problem ...[1]	RM 6	
		This is also a problem because taxpayers don't keep proper books of accounts [1]	MC 3	
		Poor record keeping is a problem ... it is very difficult to make assumption if they qualify or do not qualify for VAT purposes [1].	MC 4	
		In general our tax community they do not have culture of keeping proper records of accounts ... For those who are VAT registered they also do not keep proper records of their business... also they choose to evade VAT...for example, they select what item they will sell and issue receipts, LCD televisions they usually don't issue receipts because large profit margin...they buy without and sell without receipts [2]	MC 5	
		Poor record keeping... but sometimes it is just about tax evasion [1]	MC 7	
		Poor record keeping – taxpayers they don't proper records [1]	TO 2	
		Assessing VAT compliance is a problem for us because of poor record keeping ... Taxpayers do not keep proper business records ... this is mainly because of culture and poor book-keeping education ... In my opinion sales tax was easily managed by TRA because the tax was directly collected from manufacturers ... compared to the nature of some of the businesses currently being required to collect VAT; for example small	TO 3	

Themes	Sub -Theme	Text extract		Themes Frequency count
		food vendors are not able to keep their business record due to low level of education [3]		
		VAT compliance level is affected because most taxpayers do not keeping proper books of accounts [1]	TO 4	
		Poor record keeping, it is very difficult to make assumption if they qualify or do not qualify for VAT purposes ... Majority of taxpayers with threshold of Tshs. 20 million was small traders;... they were not able to keep proper records of their business [2]	TO 6	
		Taxpayer don't have the culture of keeping proper records of their business ... as a result they are late to submit their VAT returns ... submit error VAT returns ... pay what they want and not what actually they have collected ... SME also do not keep proper records of their account [2]	TO 7	
		Poor record keeping due to the poor level of tax knowledge [1]	TA 1	
	Compliance cost [6]	Under VAT system compliance has not been good ... taxpayers don't like VAT because it is very demanding, for example, it is very time consuming to administer, and it increases compliance costs if a taxpayer is not careful... recently most taxpayers have decided to incur extra costs to hire tax consultants ... may be because we have threatened them that we will to close down their businesses... I sometimes think some taxpayers will go bankrupt because of high compliance cost in our VAT system [3]	RM 2	[6]
		Other taxpayers choose not to comply with VAT because it adds cost to their business [1].	RM 6	
		...in our region the majority of taxpayers have limited level of education; hence, they use tax consultancy ... because of that they consider complying with VAT increase their compliance cost [1]	TO 6	
		Another challenge we are facing as far as EFD machines are concerned is that, traders are required to buy these machines and TRA to offset the expenses when they submit their VAT returns. But this is not the case for traders, they blame the system, they see as if we are taking their business money as a result they cannot afford to run their business smoothly. They usually complain by saying, we interfere their expenditure budgets/plans by forcing them to use their money to buy these machines, even if we later refund the same amount they have paid to buy these machines [1]	RM 5	
		But we have major challenges with EFD: taxpayers are complaining that the machines are very expensive; paying Tshs. 1.8 million to Tshs. 2.2 million is a lot. Second EFD	TO 6	

Themes	Sub -Theme	Text extract		Themes Frequency count
		suppliers in Singida are not serious with their work ... they take taxpayers money without supplying the machines for a period of 6 to 10 months ... sometimes the machines broken down ... no technician to fix them they have to call technician from Dar es Salaam.		
		The perception on VAT is not good because taxpayers incur extra cost in complying with VAT ... generally the cost is very high [1]	TO 7	
	SMEs competitiveness [5]	...they charge price with VAT, and their competitors in similar type of business are not VAT registered, the VAT registered traders will be at a disadvantage. This is because the VAT unregistered traders will be selling at lower price resulting into VAT registered traders not being able to sell their products. Therefore, VAT registered traders tend not to include VAT in their selling prices in order to compete [2]	RM 3	[5]
		...taxpayers avoid issuing tax invoices ... they know if they issue tax invoices, they will have to charge VAT inclusive prices to their customers. VAT inclusive prices mean that their good and services will be more expensive than their competitors who are in a similar type of business but are not VAT registered [1]	MC 7	
		Majority of taxpayer have competition ... both registered and un-registered VAT ... for registered taxpayer they have to sell the VAT - exclusive prices so as to remain in the completion [1]	TO 6	
		The VAT rate is very high that is why many taxpayers choose not to comply with VAT ... complying taxpayers cannot compete with their competitors who don't charge (include) VAT in their prices. But if the rate is low, taxpayer will comply with VAT [1]	TA 4	

Table 2A.4: Perceived Effect of VAT Rate

Themes	Text extract		Themes Frequency count
Perceived effect of VAT rate [8]	Our aim is to make good tax environment for our taxpayers, we have done a lot, and for example we have reduced the VAT rate from 20% to 18% [1]	RM 3	[8]
	We have also reduced VAT rate from 20% to 18% to encourage voluntary compliance [1]	RM 4	
	We have reduced VAT rate from 20% to 18%; we have noted that our taxpayers are happy and comfortable with the new rate [1]	MC 4	
	In my opinion the VAT rate of 18% is very high; the government needs to reduce this rate ... That is why taxpayers perceive VAT system negatively because this very high VAT rate ... [1]	MC 7	
	The reduction of VAT rate from 20% to 18% has improved compliance ... this is very important for us; we real need to know how they perceive the VAT system in general ... this reduction of our VAT rate is meant to make the VAT paid to be fair [2]	TO 4	
	There is a negative attitude toward VAT system ... for example, in my opinion, VAT rate is very high [1]	TO 7	
	VAT compliance is negatively affected with high VAT rate. For example, selling at a VAT-inclusive price increases the price of goods and services... as a result SMEs takes the risk of not complying by giving final consumers the option of paying either VAT-inclusive prices or prices without VAT; But then, it is possible if the VAT rate was relatively lower than the existing rate, final consumer would not have seen a big increase in prices and would more likely agreed to pay the VAT-inclusive prices [1]	TA 4	

Table 2A.5: Attitude towards Behavioural Outcome

Themes	Sub -Theme	Text extract		Themes Frequency count
Attitude towards behavioural outcome (i.e. taxpayer's assessment of the outcome of his/her expected behaviour - is it favourable or unfavourable ?) 37+33+15+3 = [87]	Taxpayers registration is mostly through law enforcement t [37]	Majority do not register voluntarily ... we have to force them to register for VAT [1]	RM 2	[37]
		No, majority of them do not register voluntarily for VAT purpose [1]	RM 3	
		We have two types of VAT registration; voluntary and compulsory. Most of our taxpayers register under section 19 of VAT Act, which is on compulsory registration... Taxpayers don't registrar voluntarily ... majority of taxpayer register for VAT following tax audit [2]	RM 4	
		Most of our traders are forced to register for VAT purposes, because very few register voluntarily. Those who voluntarily register for VAT are the ones who want to apply for tenders to supply the government with goods and services because it is one of the requirements. Such traders (registering because of tender application) are very difficult to administer as they normally disappear if they fail to get the applied tenders and there is no prospect of any other tender in the near future. It is always very difficult to locate them afterward ...The level of compliance is high for large taxpayers ... most of them tend not to submit fraudulent VAT returns as compared medium and small taxpayers. For small taxpayers compliance is a problem. These are mostly sole proprietors and they normally engage in fraudulent activities to reduce their VAT liabilities, sometimes it is very difficult to detect [3]	RM 5	
		I have never met a taxpayer who comes to TRA voluntarily in order to register for VAT purposes ... we believe that taxpayers know that this is not acceptable; but we always have to visit their business premises and involuntarily register them... We register our taxpayers based on their turnover, the threshold is Tshs. 40 million... we normally force the taxpayers to register for VAT purpose because most of them do not willingly come to register... however, after registration some taxpayers tend to submit VAT returns of Tshs. 2 million every month. This means that their annual turnover becomes Tshs. 24 million, which is less that the VAT registration threshold ... in simple terms these taxpayers wants to indicate to the TRA that they do not meet the requirements for them to be VAT registered ... knowing this behaviour, we normally do not deregistered them rather we go and audit them ... They tell their accountant or tax consultants to prepare VAT returns on what they want (not what is legally required) to pay [5]	RM 6	
		Not all taxpayers are registered for VAT purpose ... the majority of them are outside the tax net but we cannot reach them ... we mainly use section 19 of the VAT Act, 1997 to compulsorily register them ... this is usually done after the evidence obtained through	MC 1	

Themes	Sub -Theme	Text extract		Themes Frequency count
		physical verification from suppliers and sales information obtained from these businesses ... Very few taxpayers register voluntarily ... only foreign traders voluntarily register for VAT purpose even if their turnovers are less than Tshs. 40 million ... This is not the case for Tanzanians ... they are usually forced to register for VAT. Ignorance is one of the reasons for this behaviour ... I do not see any problem with VAT, it is simply output minus input tax ... it also helps in income tax assessment if you are a VAT registered taxpayer. just imagine, foreigners voluntarily register for VAT purpose even if they have turnover below the threshold ... this is not the case for Tanzanian citizens [3]		
		...our taxpayers don't like to register voluntarily; we have to register them after assessing their business and determine ourselves that they meet the VAT threshold ... majority of taxpayers compulsory register after tax auditing [2]	MC 3	
		Taxpayers can either register voluntarily or involuntarily, section 19(4) of the VAT Act, 1997 allows us to register any taxpayer if we have a good reason to do so. So we make sure any taxpayer whose turnover is Tshs. 40 million per year is registered for VAT purposes. Very few choose to register voluntarily, except when they want to apply for government tenders. Therefore, we have to force the registration for most of our taxpayers. Since the introduction of the block management system in 2005, the number of VAT registered traders has been increasing ... we mainly used compulsory registration to register most of our taxpayers [3]	MC 4	
		...compulsorily registration is the main approach we use to register business for VAT purposes ... for example, recently one large taxpayer who owns a three storey building, which accommodates a hotel and a bar, reported a total sales figure of Tshs. 150,000 a day while in fact the actual amount was Tshs. 1.5 million a day ... it is very surprising that taxpayers are prepared to pay corrupt TRA officials a lot of money in order to evade paying VAT [3]	MC 5	
		...taxpayers will only register voluntarily if they have tender with government, as it is mandatory if you want to trade with the government, or due to nature of their business, for example hardware and mini-supermarket ... because of their frequent transactions, the probability of being caught by us (TRA) is very high [1]	MC 7	
		... the majority of taxpayers are registered with VAT involuntarily [1]	TO 2	

Themes	Sub -Theme	Text extract		Themes Frequency count
		...taxpayers voluntarily register for VAT purpose only if they expect to benefit from being VAT registered...for example, a taxpayer may register for VAT because he/she wants to import some goods and be eligible to claim VAT refund [1]	TO 3	
		The majority of taxpayers in our region register for VAT following physical visit to their businesses and after tax auditing ... Not all traders register voluntarily ... Because they don't like to collect tax on our behalf ... For most taxpayers VAT registration is a nuisance, we have to force them to register if they meet the required thresholds [2]	TO 4	
		Not at all taxpayers register voluntarily ... the majority of taxpayer registered for VAT purpose compulsorily ... Taxpayers consider VAT as a burden ... they don't want to register voluntarily. We have to force them to register ... we visit their business premises, assess their businesses, turnover and perform tax audit ... if we find out that they meet the VAT threshold we register them for VAT purposes ... Not at all have we mainly used compulsory measure to register taxpayers for VAT purposes... [3]	TO 6	
		Taxpayers register for VAT involuntarily ... We visit their business premises conduct interviews, audit, and examine their business status... most taxpayers registered for VAT following investigation through physical visit or tax audits [2]	TO 7	
		If you wait in the office for them (i.e. taxpayers) to come to register for VAT, they will never come (to register for VAT)... we have to visit their business premises for auditing and register them if they meet the VAT threshold. Most of our taxpayers register for VAT purpose under section 19. Of VAT Act 1997, this is on compulsory registration [2]	TA 1	
		... large taxpayers contribute more than 70% of lost tax collection through corruption in our region [1]	TA 4	
	Perceived fairness in the provision of public goods and services [33]	In general, taxpayers are not happy with what government is providing in exchange with what they pay in taxes, for example corruption in the government discourages taxpayers to voluntary complying with tax laws [1]	RM 2	
		Taxpayers are not happy with how the government is using their tax money. For example, every day in the newspapers and on television, the media talks about EPA and other corruption scandals ... after paying their taxes, taxpayers consider themselves as in exchange relationship with the government ... They pay tax and expect to receive public goods and services, such as roads, hospital, school, etc. ... if they do not see that happening, then we have a problem collecting tax from them ... they will choose to evade tax ... [2]	RM 3	

Themes	Sub -Theme	Text extract		Themes Frequency count
		Taxpayers are not happy with the provision of goods and services, for example schools, hospitals and roads ... Taxpayers don't see the reason paying taxes while they get nothing in return, for example hospital, roads, good school [1]	RM 4	
		Taxpayers do not see the importance of paying tax because they get nothing in return ... Generally; Tanzanians are not well informed about what the government is doing with their tax money; because it appears to Tanzanians that the government is not constructing and administering schools and hospitals, for example, to meet the expectations of Tanzanians. They say "it is the government's responsibility, and paying tax should be matched with country's development" ... Taxpayers think they are being exploited ... and people in the government are benefiting at the expense of the public. They say, "They (i.e. the government) squeeze us so that big-shots in the government can enjoy their life. Anyway, what can we do?" ... Yes ... taxpayers compared the tax they paid with public and service provision ... if not satisfied ... they will not pay tax ... and that makes our job more difficult ... [5]	RM 5	
		Taxpayers perceives the government as not doing enough to the public ... taxpayers are asking, 'why do we have to pay taxes?' ... this is because the government 'made a mistake' to allow the investigation of serious corruption allegations against its senior public officials, as a result corruption in the government was ultimately laid open to the public [1]	RM 6	
		...taxpayers consider themselves as being in exchange relationship with the government ... they expect to get public goods and services from the revenue collected from taxes ... Taxpayers always blame TRA and the government ... they always question ... "where does the VAT money go?"... I think the government is not clear on how it spends the tax revenue it collects ... How tax is used is also an issue ... taxpayers do not see a quid-pro-quo in tax payment and tax revenue usage... Tanzanians are not happy in paying taxes because they do not see how the tax is spent by the government ... for example, there has been big corruption scandals in the government in recent years that has definitely contributed in discouraging our taxpayers in paying taxes voluntarily [4]	MC 1	
		However, to measure tax compliance is very difficult, TRA need to provide good services, education ... reward to compliant taxpayers is also important ... Taxpayers do relate paying tax with what they get in terms of public goods and services ... for example hospital, schools [2]	MC 3	

Themes	Sub -Theme	Text extract		Themes Frequency count
		Yes ... taxpayers perceive fairness as synonymous with government provision of public goods and services [1]	MC 4	
		... If taxpayers know what the government is doing with their money, then they will definitely pay tax voluntarily ... salary is not enough for doctors and nurses in government hospitals ... if you want to get good service ... you have to give them “money to buy a soft drink” (i.e. a bribe) ... Our taxpayers are not satisfied with the provision of public goods and services, such as school, hospital, etc. [2]	MC 5	
		...majority of taxpayers perceived fairness of tax paid with provision of public goods such as hospital, school and means of infrastructure[1]	TO 2	
		Negative perception of taxpayers toward the allocation of public resources, for example schools, hospitals and roads, influences compliance ... Definitely ... our taxpayers do not see the importance of paying tax because they do not perceive that the government is fairly doing its part in providing public goods and services... [2]	TO 4	
		...taxpayers perceive fairness of tax system in terms of government provision of public goods and services ... for example corruption in the government, all this is taxpayers’ money being misused ... this does not only discourage but it is burdensome to taxpayers [1]	TO 6	
		...taxpayer consider themselves as being in an exchange relationship with the government ... they expect to get public goods and services as a return for their taxes ... if the government is not fair in providing goods and services, we should then expect voluntary compliance to be low [1]	TO 7	
		...taxpayers expect more from their government ... if taxpayers feel they don’t get anything in return, they normally choose not to comply [1]	TA 1	
		...taxpayers relate fairness in taxation with the provision of public good and service in their community ... for example, taxpayers complain that government hospital don’t provide medicines ... and corruption scandals (e.g. EPA) really discourage taxpayer to comply with taxes [2]	TA 2	
		In order to improve voluntary compliance the quid pro quo-justification of social services should be seen ... for example government should build hospitals, schools, roads, etc. [1]	TR 7	

Themes	Sub -Theme	Text extract		Themes Frequency count
	Perceived fairness of VAT system [15]	In my opinion VAT if properly followed, is a very simple tax. However, our traders do not see that way ... they simply choose not to comply with VAT because of the negative perception towards us (i.e. TRA official), taxpayers think we are using their money to satisfy our own needs; they normally relate our personal life style with taxes they pay. For example, they say, "TRA officials use our tax monies to buy expensive cars and build nice houses" [2]	RM 3	
		Positive perception of taxpayers towards VAT system, tax officials and the government at large will enhance voluntary compliance. For example, if they consider VAT system unfair they will not comply with the VAT law. Similar, if they perceived they don't get fair treatment from the government ... In general, taxpayers have negative perception towards TRA official [1]	RM 4	
		The other reason that explain VAT compliance in Tanzania are our political leaders ... we receive a lot of "memos" that requires us to excuse larger taxpayers as a result ... we have to squeeze the poor SMEs to pay more taxes and leave them with little money ... if taxpayers perceive VAT to be fair ... I am sure we will have about 100% compliance level ... but this is not the case in Tanzania ... TRA and other government official have businesses, operating in shadows ... they will use different names to register their businesses ... unknowingly if you visit these businesses and ask for the business records ... the shopkeepers will not normally provide correct answers ... they also behave arrogantly and they will sometimes tell you that the business is owned by a senior government official and if you insist on asking questions and request to see the owner, the person will make a call to the owner ... you will be surprised that the person on the line is your boss ... in this situation, it is the end of the road as you can do nothing ... Surprisingly, taxpayers have wrong perception towards VAT, but it is not a complicated tax at all, it is an input/output tax system [2]	MC 3	
		This is a general perception in our taxpaying community; they see us as police officers; they don't see us as helping-hands in their tax matter, but as people who only want to take their money [1]	MC 4	
		Yes ... taxpayer has negative perception toward VAT [1]	MC 5	

Themes	Sub -Theme	Text extract		Themes Frequency count
		... perception of fairness in the VAT system enhance voluntary compliance ... taxpayers don't get the value of their taxes ... if taxpayers perceive our VAT system to be fair ... they will comply voluntarily ... [1]	TO 2	
		...if taxpayers perceive VAT system to be fair (i.e. law itself, tax officials and government at large) ... definitely they will comply with VAT system ... but if there will be an indication of unfair treatment by any of this ... they will not comply with VAT law ... negative perception towards TRA official is a also a problem in the efforts to enhance voluntary compliance [1]	TO 4	
		...generally, taxpayers have negative perception towards VAT system ... therefore they don't voluntarily comply with VAT law ... they only submit VAT monies involuntarily ... one of our (i.e. TRA) mission is to provide good services that exceed taxpayers' expectations ... but as we (i.e. TRA) are perceived to be unfair hence administering and collecting VAT become our major problem [1]	TO 6	
		... we need to know how taxpayers perceive our services because if they perceive our services to be fair they will expectedly be 100% compliant and the opposite is true [1]	TO 7	
		Yes, fairness is important ... if taxpayers perceive VAT system to be fair they will comply ... as it is now taxpayers do not perceive the VAT system as fair, but taxpayers feel they cannot do anything and they are really not happy with the current VAT system... even if they have grievances against any of our officials they cannot say anything because they are afraid of our officials having a big network of other TRA officials that may ruin their businesses by using their official positions ... [2]	TA 2	
		Politicians-policy makers such as member of parliaments need to pay taxes on their allowances ... they should be a good example, and choosing not to pay ... as if they don't see what is happening is not fair... our taxpayers need to be encouraged [1]	TR 2	
		Tanzanian traders have negative perception towards paying VAT ... There is generally a negative attitude towards tax official ... It is very important that TRA becomes aware of how traders perceive the VAT system. We are here to provide the best services to our customer, therefore we will be more than happy to meet their demand as much as we can, and be able to provide a tax-paying environment which is conducive [1]	RM 5	
	Governance issues [3]	...But in my view, we sometimes burden our businesses (i.e. taxpayers) with very heavy loads ... when our leaders need assistance (mostly financially) like individual politicians expenses and communal based contributions like constructing schools, politicians and	RM 2	

Themes	Sub -Theme	Text extract		Themes Frequency count
		government officials sometimes ask businesses to help ... you may ask yourself, where do these businesses get all this money? [2]		
		in this way, you can be excused to say that businesses get very small profit by giving away a lot of money in order to appease big-shots in the government, it should be expected that they (businesses) will also find ways to compensate by either avoiding or evading paying tax ...[1]	TR 2	

Table 2A.6: Subjective Norms

Themes	Sub - Theme	Text extract		Themes Frequency count
<p>Subjective norms (i.e. a taxpayer's (1) Belief of expected acceptability of his/her intended behaviour and (2) Extent of his/her willingness to align the intended behaviour with the expected acceptable behaviour (in other words: belief in what others do and the willingness to 'copy' them). 25+24+9 = 60</p>	<p>The culture of not Issuing tax receipts/in voices [25]</p>	Another problem is taxpayers' not issuing tax receipts... [1]	RM 1	[25]
	 It is our culture not to issue or demand tax receipts as a result we tend to collect less and less revenue each year... [1]	RM 3	
		Majority of taxpayers don't have the culture of issuing tax receipt [1]	RM 4	
		... Taxpayers don't normally issue tax receipts ... they issue tax receipts selectively, only to certain people if they demand... both taxpayers and final consumers don't have the culture of issuing or demanding tax receipts [2]	RM 6	
		Issuing of tax receipt is a problem for our taxpayers ... [1]	MC 1	
		Taxpayers do not issue tax receipts and this is now like a culture for most of them ... where do we start? it is a problem, for example, the same importers who claimed their VAT refunds from TRA sold their goods to wholesalers without issuing the tax invoice (they usually sell from their containers), these wholesalers then sell to retailers (i.e. taxpayers) without issuing tax invoices again ... how then can TRA track this kind of transactions? ... Therefore, the net effect from the government's point of view will be zero tax collection as VAT refunds were paid to importers. [1]	MC 3	
		Tanzanians does not have the culture of asking for receipts, therefore, issuing tax receipts is a major problem for TRA....Culture transformation is needed, to both taxpayers and final consumer on issuing and demanding tax receipts.... Only 30% pay correct amount of VAT ... VAT compliance depends on tax invoice being issued to consumers ... another problem is that of not keeping proper records, dealing in cash transactions, and not using cheques ... it is very hard to track cash transactions ... but we can easily track cheque. [2]	MC 4	
		Every trader want to supress their sale by not issuing receipt ...it is intentional ... but they do without their knowledge because they don't have culture of issuing receipts. [2]	MC 5	
		...our taxpayers, mainly retail SMEs, buy their goods from wholesalers without being issued tax invoices or issued with under-valued tax invoices ... as a result recovering VAT from taxpayers becomes very difficult for TRA because taxpayers realise that they have to pay VAT, which they did not collect and the money they pay to TRA is then part of their business profit... [1]	MC 7	
VAT is a consumption tax ... a VAT registered taxpayer has to issue tax receipts ... this is a	TO 2			

Themes	Sub - Theme	Text extract		Themes Frequency count
		problem to our taxpayers ... they don't have the culture of issuing tax receipt ... and final consumers don't demand tax receipts [2]		
		... most importers are inefficient because they sell all or ¾ of their commodities without issuing tax invoices to wholesalers ... wholesalers also do the same to traders ... there is no records for these transactions ... this is what happens in Kariakoo. So without records, TRA remains with zero or ¼ of VAT and this will only be obtained from those few taxpayers who have been issued tax invoices ... Why final consumer do not request tax invoices? ... It is simply because there are no any incentives of keeping records even at a family level in order to know how much they normally spend in a year ... for example in most European countries if you exit from a European country within a year of entering the country you are eligible to claim VAT refund... under the current tax laws, if a taxpayer from Kenya buys a TV or a Camera from Tanzania and crosses the border, he/she is not eligible for VAT refund... most of final consumers doesn't have the culture of requesting tax invoices ... as they know they can pay less money (price do not include VAT) without asking for a tax invoices [3]	TO 3	
		Our taxpayers don't have the culture of issuing the tax receipts ... not only that but also final consumers don't have the culture of demanding the same [2]	TO 4	
		To make sure that they issue tax receipts, we conduct physical verification... in the past TRA used to send tax officials from other tax regions (unknown to taxpayers) to buy goods and see if they will be issued with tax receipts ... sometimes taxpayers were caught by this trap as they did not issue tax receipts to these tax officials... we reached a point where we were stopping consumers (just after they have purchased something) and ask whether they were provided with tax receipts ... if they did not have tax receipts, we took them back to the shop and request the taxpayer to issue them tax receipts and we penalised the responsible taxpayer ... the final consumer is also liable to be fined ... with the new law that introduced EFD, the final consumer is liable to be fined up to Tshs. 1 million. It is a new law ... we haven't started to administer this fine to final consumer ... it is important that final consumers need to be educated that they should demand tax receipt after each purchase [2]	TO 6	
		Normally, taxpayers don't issue tax receipts and final consumers also don't demand one [1]	TO 7	
		VAT registered taxpayers don't have a culture of issuing tax receipt ... most of taxpayers in our region purchases their goods from Dar es Salaam, they complain that wholesalers (in	TA 2	

Themes	Sub - Theme	Text extract		Themes Frequency count
		Dar es Salaam) do not want to issue tax receipts and if they do they normally issue tax receipts indicating low amount ... for example if total purchases were Tshs. 5 million they will only indicate Tshs. 500,000. As a result, taxpayers continue selling products without issuing tax receipt ... therefore the trend of evading VAT continues [1]		
		We use our experience and the knowledge of the area we operate... for example; I have been working in this region for quite sometimes now...I know most of the taxpayers and their behaviour, I know which traders frequently do not issue tax receipts. For example, particular traders ask their customers if they want receipts or not, they cannot ask such a question to a TRA official because they know us [1]	TA 4	
		90-95% of our taxpayers submit their VAT returns on time [1]	TA 1	
	Perception of VAT money [24]	...taxpayers consider VAT as a loss to their business. This is simply because they do not want to charge their clients prices, which include VAT. They have many reasons not to do so (i.e. charge VAT inclusive prices). For example, they do not understand why they should collect VAT on behalf of TRA, and they do not perceive any incentive for doing so ... At the end of the day, however, VAT registered traders find themselves paying VAT from their own pockets [1]	RM 3	[26]
		Taxpayers perceive VAT as additional tax to their business ... they normally say, "I am sorry I did not come on time because I didn't have money to bring to TRA ... I used the money for family issues/problems" [1]	RM 4	
		Taxpayers do not like to pay VAT; they see paying VAT as a reduction in their business profit. They also think VAT as their personal tax, while in the fact they just act as tax collection agents for the government. The point is that they do not like or do not understand this agency role. Reluctantly, they feel it is not their responsibility and that we are forcing them to collect VAT on our behalf. For sure, we do not have a choice, because we are required by VAT law to do so. In real sense, the ones bearing the VAT burden are supposed to be the final consumers. But still, taxpayers choose not to submit what they have collected; they consider the collected VAT money as their money [3]	RM 5	
		...the major problem is that taxpayers perceive VAT as additional tax and burdensome to their businesses ... for VAT registered taxpayer when they hold VAT money in their hands they consider it as their own money. It is very hard because taxpayers choose how much they want to pay ... and not what they are supposed to pay ... Our taxpayers don't know	RM 6	

Themes	Sub - Theme	Text extract		Themes Frequency count
		business ethics, they cannot distinguish between profits, expenses or taxes ... if they have opportunity to get any additional money ... for example VAT, they will take it [3]		
		Taxpayers normally say "...We don't have money to pay TRA ..." They feel VAT money as their own money ... they don't want to accept the fact that they collect VAT on our behalf ... for example, a taxpayer may say "I have used the money to pay school fees for my children" [1]	MC 4	
		...they think that they are paying VAT from their own pockets... as a result they end up under-declaring their VAT returns and reduce their VAT liability ... They perceive VAT as being paid from their own business ... Taxpayers have negative perception towards VAT ... for them VAT is additional cost and they do not consider themselves as being simply VAT collection agents for the government ... in order to improve the situation there is more to be done by TRA [3]	MC 5	
		...taxpayers feel VAT is part of their profit ... They perceived VAT collected as part of their business money ... [2]	MC 7	
		Taxpayers perceive VAT as reduction to their business profit ... They consider VAT as personal tax ... [2]	TO 2	
		Taxpayers perceive VAT as a burden to their businesses ... Simply because they think paying VAT reduce their business profit ... [2]	TO 4	
		Taxpayers perceive VAT as a burden to their businesses ... Taxpayers consider VAT money as own money therefore paying VAT is a major problem [2]	TO 6	
		They need to be educated that VAT is not their personal tax ... they need to charge the value added from selling their goods/services to final consumers ... and they should know that they collect on our behalf [1]	TO 7	
		...we normally visit their premises to see why they haven't submitted their VAT on time ... their excuses are very surprising, they will say, "I used the VAT money to pay fees for my kids...or to pay medical expenses for my wife, etc.". They will ask to be given more time to pay the tax ... we don't have any other option but to agree for them to pay the tax due by instalments [1]	TA 1	
		... TRA is trying to find a way to control VAT non-compliance but still it is a challenge because taxpayers will always find a way not to comply. They consider VAT as a burden to their business [1]	TA 2	

Themes	Sub - Theme	Text extract		Themes Frequency count
		We need to find some measures to control the current excessive VAT refund claims ... taxpayers consider VAT refund as additional money from TRA ... they will use any means to claim VAT refund ... if we are not careful we will end up paying taxpayers who do not qualify to be refunded ... there are many complaints about this... we need to be firm on this issue, otherwise we will not succeed in raising VAT revenues... many taxpayers forge these VAT refund claims, if we are not careful or become very lenient or allow corruption, we will end up paying a lot of money to undeserving people [1]	TR 7	
	Taxpayers' patriotism [9]	This is an inherent taxpayers' behaviour; taxpayers do not really care much about tax [1]	MC 3	[9]
		...we Tanzanians are not patriotic when it comes to paying taxes to our country ... in our society someone who is truthful in paying taxes will mostly be perceived as a fool ... and a person evading paying taxes is considered by the society as very clever and can even be admired ...people will "point to him/her" as an exemplar in successfully exploiting the weaknesses in the government system ... people will say "do you see that man/woman, ... that personal is exceptional, he/she has a very big business but he/she does not pay taxes!" ...people do not see the importance of paying taxes ... [3]	MC 7	
		Being non-compliance is a prestigious behaviour to other taxpayers [1]	TO 2	
		Generally, for most of our taxpayers benefiting from being non-compliant with any tax is a prestigious behaviour [1]	TO 7	
		...taxpayers don't have the culture of complying with VAT law ... being a tax evader is prestigious ... we have a long way to go reaching voluntary compliance [2]	TA 2	
		...If a taxpayer is aware that other taxpayers who are in a similar business don't comply ... they will choose not to comply as well [1]	TR 7	

Table 2A.7: Perceived Behavioural Control

Themes	Sub -Theme	Indicators	Text extract		Themes Frequency count
<p>Perceived behavioural control (i.e. taxpayer's beliefs regarding the presence/absence of resources/opportunities and obstacles/impediments to perform an intended behaviour [in other words: perceived incentives/disincentives to perform a behaviour, it determines the level of confidence that a taxpayer's intention can be realised by</p>	<p>Acceptance of cash economy which facilitate tax evasion [11]</p>		Yes most of our traders trade with cash ... audit model is needed to control this ... very few trader who trade with government institution (use cheques) ... Imagine you can go and buy a car from a yard by cash ... just like buying sweets [1]	RM 2	[11]
			80% of our taxpayers especially SMEs are involved in cash transactions [1]	RM 3	
			Yes ... the majority of taxpayers engage in cash transactions [1]	RM 4	
			Yes ... cash-based is the main mode of transaction for the majority of taxpayers, particularly SMEs [1]	RM 5	
			Yes ... most of goods and services are transacted with cash ... [1]	RM 6	
			...the majority of our traders are involved in cash transactions in particular small and medium business ... they usually do not want to deal in cheques because of bank charges and they are trying to avoid any additional charges [1]	MC 3	
			Yes ... more than 80% of our traders are involved in cash transaction [1]	MC 5	
			Yes ... most of our traders make cash-based transactions [1]	MC 7	
			Yes ... majority of taxpayer transact with cash ... [1]	TO 2	
			Yes ... majority of taxpayer transact with cash ... [1]	TO 4	
			Yes ... majority of taxpayers deal in cash transaction [1]	TA 2	
			<p>Tax knowledge as a resource 5+7 = 12</p>	<p>Accessing tax consultancy [5]</p>	
...but it is different from one taxpayer to the other ... for those who use tax consultants, they make intentional mistakes [1]	MC 7				
...if taxpayers afford to use a tax consultant ... they make intentional mistakes to reduce tax liability [1]	TO 6				
...taxpayers who afford paying tax consultancy make intentional mistakes to reduce VAT liabilities [1]	TO 7				
...but large taxpayers make intentional mistakes to reduce their tax due ... most of them use tax consultants [1]	TA 1				
...yes, most large taxpayers make intentional or deliberate mistakes in order to reduce their VAT liabilities. This is because most of them have	RM 5	[7]			

Themes	Sub -Theme	Indicators	Text extract		Themes Frequency count
performing a particular behaviour) 11+39+12 = 62		Use of own tax knowledge [7]	good tax knowledge, or they are able to employ tax accountants to deal with their VAT issues [1]		[27]
			... most of our large taxpayers have tax knowledge ... but we have problem with small taxpayer, most of them did not attend/go to school ... never been to school ... [2]	RM 6	
			...for those who have good tax knowledge, especially large taxpayers, they make intentional mistakes. For small taxpayers, most of the time they don't intend to be non-compliant but it is because of very limited VAT knowledge and poor record keeping [2]	MC 7	
			... All taxpayers have VAT knowledge ... they just choose not to declare the correct amount so as to reduce the tax. [1]	TO 4	
			... the level of compliance mainly depends on level of education ... [1]	TO 6	
		Limited acquired tax knowledge [27]	Ignorance and poor level of education (most of our taxpayers have a primary education qualification) [2]	RM 1	
			We are trying to be closer to them ... be friendly with them ... we provide education, seminars and good customer care/services ... we always try to create an environment in which our taxpayers feel they can willingly cooperate with us ...therefore, we have to take the responsibility of meeting and educating them on tax issues at their business locations ... overall, there is a limited level of taxpayers education regarding VAT [1]	RM 2	
			Level of taxpayers' knowledge and understanding of all tax laws is very low [1]	RM 3	
			Most of our taxpayers have limited VAT knowledge ... thorough tax audit we educate our taxpayer ... when our tax auditor visit taxpayers they always start with educating them ... taxpayers become aware that they need to comply with the VAT law [1]	RM 4	
			Poor education and lack of understanding of all tax laws is a cause for non-compliance [1]	RM 5	
			Limited level of taxpayers' education is also a problem ... others (taxpayers) don't know ... for example if taxpayers supply goods to government institution who issued invoice but haven't received the actual payment ... but they don't indicated in their VAT returns ... we have explain	RM 6	

Themes	Sub -Theme	Indicators	Text extract		Themes Frequency count
			to them that, anything leaving/dispatched from your tax point (i.e. business premises) need to be taxed ... tax law they don't understand...I don't know is it because they have written in English a language they don't understand? Or they just don't want to bother. In our region...if we want to provide seminars in a particular area we prepare brochures in Swahili [2]		
			I don't believe sanctions is the way to ensure VAT compliance ... due to nature of our taxpayer community, most of them have only primary education, therefore penalising them is not a good solution, we educate and advise them to pay the unpaid tax with instalment, if these never works them we don't have any other option but penalise them ... Poor education to both traders and final consumer may explain non-compliance ... but our aim in tax audit is to educate traders about tax laws ... how to maintain proper records ... this helps them to be more compliant ... We also educate our taxpayers about tax law and their obligation and responsibilities in order to improve compliance [2]	MC 1	
			Majority of our taxpayers are illiterate and this causes a lot of compliance problems [1]	MC 3	
			Limited education in our taxpayer community is a main cause of non-compliance [1]	MC 4	
			...most of our small taxpayers have very low levels of education ... 95% of our small taxpayers does not have any knowledge in book-keeping... and our job becomes like that of police officers ... The main factor is the ignorance of our taxpayers ...but they send un-qualified people to attend the tax seminars that we organise. For example, they send their house maids-who don't know anything about business, we end up educating wrong people ... [2]	MC 5	
			Taxpayers' poor tax knowledge ... our taxpayers need to be educated ... They do not understand or want to accept that they act like TRA agents ... they collect VAT on our behalf ... final consumers are the ones who bear VAT burden... but I don't think penalties are enough to change taxpayers' compliance behaviour ... taxpayers need to be educated [2]	MC 7	

Themes	Sub -Theme	Indicators	Text extract		Themes Frequency count
			Limited level of education, resulting to low level of compliance ... Provision of tax education and its acceptability to the taxpayers is also a challenge to TRA [1]	TO 2	
			Non-compliance is caused by limited taxpayers' knowledge on VAT and other taxes [1]	TO 4	
			The majority of taxpayers have limited level of education... most have primary education level, this contributes to non-compliance ... We provide tax education ... we have taxpayers service and education department in every tax region ... the aim of this department is to provide education to our taxpayers. However, we don't have enough official to administer this... Small taxpayers mainly have limited level of tax education ... but in my opinion education is the key ... if taxpayers are educated will definitely comply with any tax, in Tanzania we are forcing taxpayer to complying by using penalties ... majority of taxpayer they don't have tax knowledge and are not happy with what government is doing, for example government corruption ... I think our taxpayers need more than that ... they need to be educated ... they also need to know if the government is allocating resources to the public, etc. Taxpayers are not using the EFD machines ... because they don't have knowledge...[3]	TO 6	
			The most important thing is awareness and tax knowledge, most of our taxpayer does not have tax knowledge ... if they are educated there will be a possibility for them to comply with VAT law ... Small taxpayers mainly have limited level of tax education ... for VAT compliance to be effective taxpayers need to be educated ... Majority number of taxpayer never been to school ... I think if they are well educated ... voluntarily compliance will increase [3]	TO 7	
			I don't think small taxpayers make intentional mistakes ... ignorance and poor education [1]	TA 1	
			When we undertake tax audit, we also educate our taxpayers ... sometimes taxpayers unknowingly evade tax ... by educating them, most of them tend not to repeat declaring fraudulent information in the future. Most of our taxpayers establish their business when they do not have tax knowledge ... therefore, after tax audits, they normally realise that there is no reason to	TA 4	

Themes	Sub -Theme	Indicators	Text extract		Themes Frequency count
			evade tax... Limited level of education for most of our taxpayers is one of the reasons for their observed non-compliant behaviour [3]		
			Taxpayers' ignorance of the tax law is one of the reasons for non-compliance [1]	TR 7	
	Other evasion opportunities [12]		...when we analyse the submitted VAT returns, out of 771 active traders, 200 of them will report repayment ... our official need to do their job and to be faithful in tax collection because corruption is the main problem... we also have an official problem... training 'total taxable person' needs more than 3 months, you cannot change a person within this very short period ... "How do you walk in a forest unarmed?" because some of our staff are not competent enough ... [3]	RM 5	[12]
			In the case of VAT refund, some of the taxpayers who are not entitled for VAT refund tend to lobby to get the same VAT refund from TRA ... TRA takes long time to track false VAT refund claims ...more work need to correct this problem. [1]	MC 3	
			Our taxpayers have a saying that the introduction of EFD machines is not about "technology" but they call these machines "TechKnowHow"... taxpayers are very clever, they are always ahead of us ... they install genuine EFD machines alongside counterfeit EFD machines... final consumers will be asked the type of tax invoice they need. Either the tax invoice for purpose of showing to TRA officers (generated by the counterfeit machines) or the genuine tax invoices ... and the genuine tax invoices means that the consumer will pay more (i.e. including VAT), but for the counterfeit tax invoice, a consumer will pay less ... as a result VAT revenue is not collected ... for example, the real price of an item is Tshs.770, 000 using the EFD machine for TRA purposes will show Tshs.77, 000 ... VAT non-compliance is a major problem, only 40% of taxpayers pay VAT ... and evasion of VAT will result into evasion of other taxes as well ... in Tanzania if you're not VAT compliant, other taxpayer will see you as very clever. Most traders in Tanzania operate non-existent (fake) companies, brief-case companies ... they just import one container ... but the way the container disappears after leaving customs/harbour you will never know (it is mysterious, how this happens) ... containers just	MC 7	

Themes	Sub -Theme	Indicators	Text extract		Themes Frequency count
			disappears and are nowhere to be seen. Transit goods are also sold in the country, TRA are not aware... that is why it is very difficult to deal with VAT non-compliance ...it is just a profit maximisation by those responsible ... it is just selfishness to have everything for themselves [3]		
			For income tax purposes, taxpayers with less than a Tshs. 20 million annual turnover are categorised in presumptive tax bands. Therefore, they are required to pay fixed amount of tax, the majority of taxpayers choose not to keep records in order to remain in this category (i.e. presumptive tax) and they will also not be required to register for VAT purpose... the existing contradiction in how the income tax law and VAT law work together also contributes to the majority of taxpayers remaining outside the tax net [2]	TO 3	
			Yes ... more than 80%, in this third world countries ... we don't use cheques ... cash transaction is a major type of transaction [1]	TO 7	
			There are major challenges in the Block Management System (BMS) as well. Really, this area is also very problematic ... for example; I have been involved in managing the Ilala region for a long time now. We were doing physical verification of VAT registration in one street called Narungombe, Kariakoo ... We visited one shop after another from the first shop to the end of the street. We found the first shop was not VAT registered but qualified to be registered ... We normally take note of the shop and allow the person we have found at the shop to prepare for registration (e.g. shop documentations) while visiting other shops in the same street. Surprisingly, returning to this first shop in order to register it, we found a different person (not the one we first found at the shop) and the person presented to us with a VAT registration certificate (which was not there when we first visited the shop moments ago)... it is common to find one business holding four different business licenses... we asked why we did not see this information in our first visit, the person simply defended himself that "I am just a shopkeeper" ... we asked for other documents to support that, he also provided them ... what do you do in such circumstances? ... you definitely know that this is a lie ...but the document this person is giving you showing that they are either VAT registered or	TA	

Themes	Sub -Theme	Indicators	Text extract		Themes Frequency count
			they are legally not required to register for VAT are genuine from TRA. If you go back in the office and check the records all the documents given are legal and come from TRA. This is simply corruption in TRA [2]		

Table 2A.8: General Issues

Themes	Sub -Theme			Themes Frequency count
Costly tax administration to TRA [13]	Effect of registration threshold [7]	It was very expensive for TRA to register all traders with turnover of Tshs. 20 million (£ 7,171.6) because most of them were small traders (e.g. street hawkers and small (women-owned) food venders) who cannot keep proper records. We need to minimise VAT collection costs; that is why we decided to increase VAT threshold up to Tshs. 40 million (£ 14,342.5) [1]	RM 3	[3]
		The VAT threshold has changed to Tshs. 40 million (£ 14,342.5)...It was very expensive for TRA to manage small traders who were eligible for VAT registration under the old threshold... high administration costs because it needed a one-to-one ratio of tax official to VAT registered traders [2]	MC 4	
		We increased the VAT threshold to Tshs. 40 million (£ 14,342.5) because the administration cost was very high ... In my opinion it is easy for businesses to raise Tshs. 40 million (£ 14,342.5) per year because they only need Tshs 110,000 (£) total sales per day for 365 days... in reality, most businesses meets the VAT registration threshold ... the problem is that they don't keep proper books of accounts...for example, a taxpayer may be paying a rent of Tshs. 1.8 million (£) per month but the same taxpayer will complain that he/she cannot generate a total annual revenue of Tshs. 40 million (£ 14,342.5), how could that be true? [1]	MC 5	
		The VAT threshold has changed from Tshs. 20 million (£ 7,171.6) to Tshs. 40 million (£ 14,342.5)... Due to high administration cost [1]	TO 4	
		TRA has increased VAT threshold to Tshs. 40 million (£ 14,342.5) ...Majorities of taxpayers with old threshold was small traders; with limited level of education ... and they were not able to keep proper records of their business ... therefore administration cost were very high for TRA [1]	TO 6	
		...the VAT threshold has changed from Tshs. 20 million (£7,171.6) to Tshs. 40 million (£14,342.5) ... it was very expensive for TRA to manage small traders who were eligible for VAT registration under the old threshold ... high administration costs hindered operation in terms of registering and general management of these taxpayers' [1]	TA 1	

Themes	Sub -Theme			Themes Frequency count
	Investigating correct financial records [4]	...we visit their business premises and even if we find out that their records shows that they haven't achieved Tshs. 40 million turnover... we may register them due to the nature of their business...for example, mini-supermarket nearby petrol stations, hardware stores ... most of these traders have many transactions...through interviews, we can identify those who possess personal cars, renting their business places, the type of schools their kids attend, how much do they spend at home... or if a person owns house..." after the interview we can come to a conclusion that this person is subject for VAT registration... [3]	MC 7	[4]
		Taxpayers' lifestyle, income, expenses such as own houses, and expensive phones ... We also use local knowledge because we know most of our taxpayer and make new assessment and advise them to pay the assessed amount [1]	TO 6	
	Tracking dormant taxpayers [2]	'...in our tax region, 1,201 are VAT registered taxpayers. However, one-third of the 1,201 are dormant taxpayers, as they do not submit their VAT returns and we cannot trace them because they gave us wrong details of their physical addresses and contacts. These taxpayers only register for VAT because they want to apply for government tenders ... if you are dealing with the government... it is mandatory to be a VAT registered taxpayer [2]	MC 7	[2]
Introduction of new technology	E-filing [3]	...E-filing improves compliance. For taxpayers using this system, they usually submit their returns on time ...but many VAT returns are submitted manually, because our taxpayers are reluctant, and they are very slow in changing towards new technology ... this makes our job more difficult... [1]	RM 3	[3]
		Taxpayers use E-Filing to submit their VAT return on time at their convenience [1]	MC 4	
		Introduction of E-filing (taxpayers can submit their VAT return electronically; they will save time for dealing with other business activities) [1]	TO 4	
	Resistance in using e-filling [4]	Very few traders use E-filing and most of our taxpayers submit their returns manually to our regional office [1]	RM 3	[3]
		We have also introduced E-filing, however very few taxpayers use it to submit their VAT return electronically [1]	RM 4	
		Very few taxpayers use E-filing ...Most of our taxpayers submits their VAT returns manually to our office due to lack of computer knowledge and skills [1]	RM 5	

Themes	Sub -Theme			Themes Frequency count
		...our taxpayers are still behind in using electronic means, if our taxpayers accept the filing of their returns electronically and paying taxes thorough banks, they will reduce their compliance costs, so as TRA [1]	MC 7	
	Tanzania Inter-bank Settlement System (TISS) [3]	... Our taxpayers use the Tanzania Inter-bank Settlement System (TISS) ...the system helps them to make VAT payment securely, conveniently and in a timely manner... this has improved VAT revenue collection' ...[1]	RM 4	[3]
		Our taxpayers now use Tanzania Interbank System (TIS); the system helps taxpayers to submit their returns on time [1]	MC 4	
		Taxpayers use TIS (Tanzania Interbank System), this system helps them to submit VAT returns and tax payment on time [1]	TO 4	
	Electronic Fiscal Device (EFD) [16]	Introduction of EFD machines improve compliance level [1]	RM 3	[9]
		Taxpayers don't want to pay VAT that is why TRA have introduced EFD machine so as to increase compliance [1]	RM 5	
		TRA has also introduced EFD machines so as to increase VAT compliance... EFD machines helps TRA to control cash transactions and close monitoring of taxpayers in their business activities ... TRA buys these machines for all VAT registered payers ... but taxpayers they don't see it that way, because they have paid their money and TRA offset their output tax for 6 month [1]	MC 4	
		EFD machines help us in assessments of VAT returns [1]	MC 5	
		After introducing EFD machines the compliance has increased... they consider themselves being watched by TRA [1]	TO 2	
		TRA introduced EFD machine to control cash transaction ... it helps to a small extent... [1]	TA 2	
		TRA has introduced EFD machines to help control cash transaction ... monitoring issue of receipts [1]	TO 6	
		The introduction of EFD machines is a big challenge to our taxpayers as they struggle in to use these machines ... most traders record their sales manually and find paid expert who knows how to use the EFD machines to key in all the transaction before closing the business at the end of a business day. Taxpayers cannot afford to hire these experts on full time basis, and we cannot teach them ... it is not that we don't want ... no, but it is because even if we train them for even 2 years, they will not understand because most of them have never been to school and do not even know	TO 4	

Themes	Sub -Theme			Themes Frequency count
		how to read ... Therefore, it is a big challenge for us. If we find taxpayers not using EFD machine to issue EFD receipts to final consumer, it is an offence and a taxpayer is penalised (the penalty may amount to Tshs. 3million) ... Very few taxpayers use EFD... it nowadays common to find that every day our tax officer/auditor must report at least one offence, this is the only way remaining because they (i.e. taxpayers) do not want to voluntarily comply...they buy the EFD but do not use it ... today if you charge them penalties, tomorrow they will find anyway to use the machine. Really this is a very big problem for now, especially for SMEs [2]		
	Resistance in using EFD machines [23]	... Taxpayers don't issue EFD receipts. For example I went to a hotel...they gave me a normal tax receipt and not EFD receipt. When I questioned the bar tender he told me in this counter we don't have EFD machine and he kept on explaining to me that the tax receipt he gave me has a paid stamp so I shouldn't be worried ... I explained to him that, I want to know if the hotel have paid VAT from service rendered to me ... But he didn't care much ... I had to explain to him that I am a tax officer and this is an offence ... so I went back to the office and assigned my staff to make a follow-up. So you can imagine a place like that where politician and rich people go frequently and they don't issue EFD receipts ... we still have problems [1]	RM 2	[23]
		The level of VAT deregistration has increased after the introduction of EFD machines [1]	RM 4	
		Another challenge we are facing as far as EFD machines are concerned is that, traders are required to buy these machines and TRA to offset the expenses when they submit their VAT returns. But this is not the case for traders, they blame the system, they see as if we are taking their business money as a result they cannot afford to run their business smoothly. They usually complain by saying, we interfere their expenditure budgets/plans by forcing them to use their money to buy these machines, even if we later refund the same amount they have paid to buy these machines [1]	RM 5	
		...taxpayers will give you an EFD generated tax invoice/receipt if only you wear a tie (for men) because they presume that you likely to be a TRA employee, but for others, they just issue the old-manually written tax invoices if the consumer/buyer requests a receipt... [2]	MC 4	

Themes	Sub -Theme			Themes Frequency count
		The introduction of EFD has been negatively perceived by taxpayers ... taxpayers suggest that TRA should buy the EFD machines and distribute to taxpayers and not force taxpayers to buy the machines using their money... they don't want to buy the machine because they are very expensive ... if they don't acquire the machine we punish them... this is unfair to them ... even if TRA offset the payments from VAT returns submissions...[2]	MC 5	
		We have introduced EFD machines ... but it is new technology, and in a poor country such change in the way we do thing does not easily succeed ... this is a country problem ... it is true that most of our registered traders have to use the EFD machines ... but our country electricity is a major problem ... and these machines cannot work if there is no power ... and many traders do not know how to use them ... close supervision is needed ... we cannot work on other assignments, mostly is about making follow-up of our taxpayers ... our taxpayers are scattered ... it is very expensive for TRA because the number of staff is relatively low ... the other big problem is to get people with the expertise in operating these machines ... you visit these taxpayers at their businesses and some of them just tell you that they did not have to use the machines ... or, that they do not know how to use the machines, or the one with the skills to operate the machines was not available ... or because of power problems they receive error messages ... it is still a big challenge [3]	MC 7	
		After introduction of EFD machines ... taxpayers uses the machines after being threatened that their business will be closed ... and they don't key-in the correct amount of their sales ... for example most of the time they issue receipt indicating the less amount ... TRA will be able to see taxpayers are issuing receipt but doesn't mean they issue EFD receipt with correct amount [3]	TO 2	
		The level of VAT deregistration have increased after the introduction of EFD machines ... because many traders don't want to change with technology and they see these machines as barriers [1]	TO 4	
		But we have major challenges with EFD: - taxpayers are complaining that the machines are very expensive; paying Tshs. 1.8 million to Tshs. 2.2 million is a lot. Second EFD suppliers in Singida are not serious with their work ... they take taxpayers money without supplying the machines for a period of 6 to 10 months ... sometimes the machines broken down ... no technician to fix them they have to call technician from Dar es Salaam. Taxpayers are not using the machines ... first they don't have	TO 6	

Themes	Sub -Theme			Themes Frequency count
		knowledge, second due to power supply cut ... also the other challenge is that, EFD is networking with Headquarters and not tax regions therefore monitoring is very hard ... if EFD was networking with tax region it could be easy ... all in all is a big challenge for TRA [2]		
		...we would like to improve our compliance level ... but still it is a big challenge... Taxpayers resist changes, for example the use of EFD machines ... new technology are not efficient ...power cut and taxpayers they are reluctant ... they don't bother ... they need close supervision of which we are not able to provide them because few staff ... [2]	TO 7	
		...majority of taxpayers don't use the EFD machines ... we do surprise check ... comparing amount of money in their possession with what was indicated in EFD machine. We take as sample and do assessment by assuming that is what he/she is doing everyday ... Taxpayers will be entitled to pay VAT according to the assessment [1]	TA 2	
		The introduction of EFD machines is a big challenge to our taxpayers as they struggle in to use these machines ... most traders record their sales manually and find paid expert who knows how to use the EFD machines to key in all the transaction before closing the business at the end of a business day. Taxpayers cannot afford to hire these experts on full time basis, and we cannot teach them ... it is not that we don't want ... no, but it is because even if we train them for even 2 years, they will not understand because most of them have never been to school and do not even know how to read ... Therefore, it is a big challenge for us. If we find taxpayers not using EFD machine to issue EFD receipts to final consumer, it is an offence and a taxpayer is penalised (the penalty may amount to Tshs. 3million) ... Very few taxpayers use EFD... it nowadays common to find that every day our tax officer/auditor must report at least one offence, this is the only way remaining because they (i.e. taxpayers) do not want to voluntarily comply...they buy the EFD but do not use it ... today if you charge them penalties, tomorrow they will find anyway to use the machine. Really this is a very big problem for now, especially for SMEs [2]	TA 4	
		We have introduced EFD to control cash transaction but it is not acceptable by traders...simple they don't want to comply with VAT [1]	TOR 7	

Themes	Sub -Theme			Themes Frequency count
General shortage of official [15]		VAT non-compliance is a big problem ... we try to send our officer in blocks to manage taxpayers and help them to comply but still it's a challenge for TRA because of insufficient staff [1]	RM 1	[15]
		Few staff and quality of service is low ... you can have many staff but they are old and not capable of running up and down chasing taxpayers ... and for those young member of staff, they want to compete with their seniors ...for example, in buying expensive cars... they don't want to accept the fact that we have been working for so long to afford this life we are living... they need to earn more and more wealth within a very short period in their employment [1]	RM 2	
		... The VAT collection performance has been reduced after increasing the VAT thresholds from Tshs. 20 to 40 million ... the main reason being, there is no enough manpower to manage the taxpayer community [1]	RM 3	
		...in general, we have a problem of staff shortage within TRA ...most qualifying taxpayers are out of the tax-net ... identifying and registering them is next to impossible ... and the problem is even made worse because most of our taxpayers don't pay tax if there is no close follow-up... [3]	MC 4	
		...majority of taxpayers are outside the tax net...reaching them have been a big challenge to TRA because of few staff [1]	MC 5	
		...close monitoring is needed but there is shortage of staff makes it impossible... the size of the tax administration area is very big relative to the number of our staffs ... so, when you finish checking one part of the area and go to another, and you turn your back to the finished area, those taxpayers you have just finished visiting, normally continue doing the same things because they know it will take very long time before the tax officers will be able to come back again ... it is a big challenge to TRA ... for taxpayers who file their returns manually, will be investigated by our staff, but it is not possible as we have few staff to deal with all taxpayers ... we understand taxpayers expect good service...but we sadly cannot afford [2]	MC 7	
		Overall, there is fewer TRA staff to administer and collect tax than the number required [1]	TO 6	
		...for VAT compliance to be effective we also need more staff [1]	TO 7	

Themes	Sub -Theme			Themes Frequency count
		One-to-one based operation was needed to administer old VAT thresholds ... this was not possible due to limited number of staff in Domestic Revenue Department...[1]	TA 1	
		The major challenge we are facing are; few staff to administer all taxpayers effectively ... as in other blocks business are scattered ... we do not have centres like other large tax region, for example Ilala ... other taxpayers if they are become aware that we will visit there business, usually they close or sometimes they left shop opened but the owner is no were to be seen ... finding responsible person is always a problem ... They consume much of our time ... in Dodoma we set an operation week, where all officers are allocated in each blocks ... but this is not possible because of insufficient staff [2]	TA 2	
		We have few staff, TRA is not able to employ many staff ... it is a major limitation to our work...[1]	TA 4	
The use of Block Management System [11]		...if we need to be successful the effective use of Block Management System (BMS) will be one step ahead in enhancing compliance ... so far managing BMS is still a challenge to our region...[1]	RM 2	
		...in order to assess compliance; we have introduced block management system (BMS) where staffs have been allocated into small blocks for easy of management...[1]	RM 3	
		...we have introduced block management system (BMS) for close monitoring... in these blocks, we visit taxpayers' business premises and identify taxpayers who meet VAT threshold. All taxpayers who are eligible, register for VAT, submit timely returns and pay their VAT on due date ... using these measures, we have managed to increase the number of VAT registered taxpayers ...[1]	RM 4	
		...for us effectiveness in enhancing compliance is achieved when we see there is an increase in the number of VAT registered traders every year. For example, we have started a block management system; each block has a block head, together with other staff allocated in his block, they are responsible for registering all traders with at least a Tshs. 40 million turnover per year. Not only that, but also the block head has to make sure all traders in his/her block complete and submit their correct monthly returns on time...[1]	RM 5	

Themes	Sub -Theme			Themes Frequency count
		...we also have block management system, our region is divided into 4 blocks ... In total we have 2,470 total taxpayers of which 1,623 are VAT registered...[1]	MC 7	
		...we have block management system and there are 4 blocks in our region...a Head of a Block is responsible for all traders in his/her block... making sure that they pay fair tax and register all taxpayers whose taxable turnover meet our VAT thresholds ...[1]	MC 5	
		...the measure we use to reduce this problem is the introduction of block management... In our region we normally go door by door...to check if taxpayers keep proper records, issue tax invoice and if they pay proper tax... we always monitor their trade ... if they keep on submitting less amount for long ... they normally end-up being subjected to tax audit...we sometimes do surprise visits to their business premises... if we find there is an indication of tax evasion...taxpayer will also be subjected to tax audit ...[1]	MC 7	
		...we have introduced block management system (BMS) to help us administer VAT effectively and efficiently ...[1]	TO 4	
		...we also use block management system (BMS) ... our region is divided into small blocks, and one person is allocated to each sub-block ... Because one tax official cannot do physical verification by himself usually they arrange with other heads of other blocks to undertake the operation in a selected block ...[1]		
		BMS helps us to provide one shopping centre to our taxpayers, we provide all services in our centres, such as; tax education, auditing and banks are located in each of these centres for easy of tax payment... [1]	TA 4	
		...we have introduced block management system... our region is divided into small block ... we have centre in each block which provide all services, for example education, auditing and payments modes (banks) ... tax official monitoring taxpayer closely ...[1]	TO 7	
Business characteristics 26 + 6 = 32	Business size [26]	We have problems with small taxpayers ... they take time to pay their VAT ... But we also experience some difficulties in collecting taxes from companies ... For example, the owner of one company is residing in Dar es Salaam and employs staff to run the business here in Dodoma. All the payment is done in the account which is in Dar es Salaam, staffs submits the returns but always late for payment... when you ask them they will say our employer hasn't send the money yet. It was a routine; we decide to threaten them that we will close the company then he released the fund ... We have	RM 2	

Themes	Sub -Theme			Themes Frequency count
		problem with medium and large taxpayers especially on due date of income tax ... For small taxpayers taxpayer they make unintentional mistakes ... But large companies sometimes make intentional mistakes [5]		
		Yes, we have large, medium and small taxpayers. Large taxpayers always comply more than small taxpayers. Large taxpayers are easy to manage as they keep proper books of account, either by themselves or using tax consultants [3]	RM 3	
		... SMEs use cheques only when transact with government institution [1]	RM 5	
		We have large taxpayer unit and medium and small traders ... for large taxpayer we don't have any problem at all, most of them submit their VAT return electronically. For medium and small taxpayers ... first they don't issue receipts, always have repayments [2]	MC 1	
		Yes, we do have segmentation... the level of VAT compliance between large taxpayers and small taxpayer is quite different. Large taxpayers always comply more with VAT than small taxpayers... we normally have problems with small taxpayers... we don't have much problem with large taxpayers; they always submit their VAT return electronically and on time...we have major problems monitoring medium and small taxpayers ... [1]	TO 2	
		Yes, we have large taxpayer unit and SMEs ... we don't have any problem collecting from larger taxpayers (in total we have 140 large taxpayers) ... usually they file their returns electronically ... most of LT have tax knowledge if not they can afford to hire tax consultants to deal with their tax matters ... for SMEs closer monitoring is needed ... in total almost 150 SMEs pay VAT in our region ... other are nowhere to be seen [4]	MC 7	
		Administrative contribution ... large taxpayers pays correct amount of their tax as compared to small taxpayers ... SMEs does not use cheques because of bank charges ... they are trying to avoid any additional costs in complying with VAT [2]	MC 3	
		Yes ... larger, medium and small taxpayers ... larger taxpayers always submit and pay their VAT on time ... we have problems with medium and small taxpayers ... they always submit incorrect VAT returns ... end up paying less VAT ... Large companies use cheques in their transactions [3]	TO 4	
		Yes ... the level of compliance between large taxpayers and small taxpayer is quite different. We don't have much problem with large taxpayers; they always submit	TO 7	

Themes	Sub -Theme			Themes Frequency count
		their VAT return electronically and on time ... We have major problem monitoring medium and small taxpayers [2]		
		... But for larger taxpayers make intentional mistakes to reduce their tax due [1]	TA 1	
		Level of compliance depends on the type of taxpayers, for large taxpayer their level of compliance is higher, submit their VAT returns and pay VAT on time ... But the level of compliance is small for medium and small taxpayers, most of the times submit incorrect VAT returns which resulting to incorrect tax Most of the time, they choose how much they want to pay as VAT [2]	RM 4	
	Type of business (industry) [6]	47% of VAT collection depends on tourist operation: such as hotels, therefore it depends on the season, in low seasons we collect less as compared to high sessions... 53% from other business... and 47% from manufacturer of, example local spirits and beers [3]	RM 1	
		If you look closely, most of non-filers are road contactor, due to the nature of their business they work under contract basis ... this type of taxpayer will submit NIL VAT returns if he/she hasn't managed to get any other contract. Sometimes they engage in other business but they will never tell ... we review non-filer very often to make sure we have genuine taxpayers... we penalised non-filers and deregister all who become very inactive [1]	RM 2	

Appendix 2B: Factor Analysis

Table 2B.1: Factor Analysis for Independent Variables

Survey Question	Factors/Description	MSA Values	List-wise cases	Bartlett's Test of Sphericity		Eigenvalues	Factor Loading	Variable Explained (%)
				Chi-square	DF			
Source of advice and information [12]	Professional firms' information (PRFSN_FRMS_SERV)	188	.830	603.76*	15	3.605		64.5
	[c] Uses of law firms newsletters and tax bulletins						.964	
	[f] Uses of law firms training						.856	
	[e] Uses of accounting firms training						.740	
	[b] Uses of accounting firms newsletters and tax bulletins					.739		
	TRA services (TRA_SERV)					1.041		
	[d] Uses of TRA training						.685	
	[a] Use of TRA website and newsletter						.657	
Attitudes/norms of the taxpayers [22]	Societal and individual moral obligations (SOCTY_MORL_OBLG)	203	.695	530.06*	15	2.945		54.9
	[j] If my friends find out that I sometimes under-declare VAT returns they will say it is wrong.						.805	
	[k] If some of my competitors are not paying VAT properly, I would bring this to the attention of TRA						.773	
	[h] Complying with VAT law will result in fulfilment of my personal, moral and ethical obligations						.556	

Survey Question	Factors/Description	MSA Values	List-wise cases	Bartlett's Test of Sphericity		Eigenvalues	Factor Loading	Variable Explained (%)
				Chi-square	DF			
	[g] Feeling moral obligation to honestly declare correct VAT liabilities						.542	
	Perception that collected VAT is a business asset (PERCP_VAT_ASET_BUSS)					1.352		
	[a] VAT monies perceived as business funds						.890	
	[b] Under declaring VAT liabilities contribute to business profit						.849	
Tax official and taxpayers relationship [24] and Fairness perception [23]	Perceived attitudes and helpfulness TRA officials (ATTD_HELP_TRA_OFFC)	203	.726	371.69*	10	2.137		64.6
	[a] Good relationship with all VAT officers						.883	
	[c] TRA official's attitudes is helpful in discussion VAT matters						.744	
	[a] Get on well with a minority of VAT officers						.707	
	Perceived fairness in the VAT system (PERC_FARNES_VAT-SYTM)						1.108	
	[a] Fairness of the VAT system is important to its acceptability						.862	
	[b] Fairness of the VAT system is important to achieve smooth functioning of the TRA						.796	
Probability of detection [21] and sanctions [26]	Perceived detection likelihood (PERC_DECT_LKHOOD)	202	.688	350.99*	10	2.473		62.4
	[21.b] Probability that TRA finds out business do not issue tax invoices						.870	

Survey Question	Factors/Description	MSA Values	List-wise cases	Bartlett's Test of Sphericity		Eigenvalues	Factor Loading	Variable Explained (%)
				Chi-square	DF			
	[21.a] Probability that TRA finds out business receive cash payments						.775	
	[21.c] Probability of being caught by TRA if under-declare VAT liability					1.384	.761	
	Influence of VAT sanctions (VAT_SANC)							
	[26.b] Relative influence of interest						.865	
	[26. a] Relative influence of fines						.617	

Notes: * Significance at .000

Appendix 1

Table 2B.2: Factor Analysis for Dependent Variables

Factors	Dependent Variables/Description/ Survey Question	List-wise cases	MSA Values	Bartlett's Test of Sphericity		Eigenvalues	Factor Loading	Variable Explained (%)
				Chi-square	DF			
Positive attitudes declaration (ATT_DECL)	Intentional mistake to reduce VAT liabilities (INTMSK_REDC_VAT) [22 (e)]	197	.614	167.76	6	2.064	.814	55.21
	Less VAT paid (LES_VAT_PAID) [22 (c)]						.692	
Timeliness of VAT returns (TMNESS_VAT)	VAT return on Time (VAT_RTN_ON_TM) [8]					1.037	.752	
	Number of timely submission of VAT returns (N_TML_SUB_VAT) [9]						.654	

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