

Evaluation of Corporate Income Tax Compliance Costs and Compliance Behaviour under the Self-Assessment System

A thesis submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy

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ABSTRACT

Commitment to compliance may cause taxpayers to experience unnecessary compliance costs burden resulting in non-compliance behaviour. This study evaluates the tax compliance costs of corporate taxpayers and their compliance with the corporate income tax (CIT) reporting requirements under the Self-Assessment System (SAS) environment. Tax compliance costs, corporate characteristics, tax attitudinal aspects and the likely compliance behaviour of public listed companies (PLCs) are integrated into a single study, which represents a unique combination of research. A quantitative approach was adopted, whereby data was collected through a self-administered questionnaire survey method. Two types of respondents were utilised, namely corporate taxpayers and external tax professionals, for richness of data and as a measure of consistency.

The mean CIT compliance costs estimate for the year of assessment 2009 is MYR47,126 per company, accounting for approximately MYR0.01 per sales turnover. The mean estimate of this study is 31.5 percent lower when compared to the findings of similar Malaysian pre-SAS study. The aggregated total compliance costs is almost MYR32 million representing 0.11 percent of corporate tax revenue and 0.01 percent of Malaysian gross domestic product (GDP). The magnitude of CIT compliance costs estimate is low compared to similar estimates in other countries. Nevertheless, the normal regressivity of tax compliance costs, in relation to company size, is evident which corroborates the findings of all existing studies. Major components of compliance costs relate to tax computation work (74 percent) and there is a heavy reliance on external sources (63 percent). Business size and estimated tax liability are the significant determinants for the magnitude of tax compliance costs burden for PLCs. The portion of tax incentives and psychological costs to the mean tax compliance costs incurred by large corporations are approximately seven and 18 percent, respectively.

This study also provides empirical evidence in the context of linking between compliance burden of the tax system and compliance behaviour from the large corporate taxpayers' perspective. Tax compliance costs burden appears to have an impact on the likelihood of non-compliance behaviour, though it is not statistically significant at the 10 percent level. The findings further reveal that the length of time companies have been operating, estimated tax liability and perceptions on complexity in the tax systems, are factors that significantly influence all types of non-compliance, namely under-reporting of income, over-claiming of expenses and overall non-compliance. The remaining corporate characteristics and attitudinal aspects examined, specifically business size, business

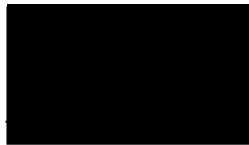
sector, tax rate structure, tax deterrence sanction, tax law fairness and tax psychological costs, are significant determinants in at least one type of the non-compliance behaviour.

This study adds to the growing body of international literature concerning taxpayer compliance costs burden, and to a lower extent, the link between tax compliance costs and tax compliance behaviour. Tax compliance costs and compliance behaviour are clearly important areas of research that have implications for both corporate taxpayers and policy makers. Findings from these research activities should initiate and lead to the progression of more effective and efficient tax policies and practices.

ORIGINALITY STATEMENT

'I hereby declare that this thesis contains no material that has been accepted for the award of any other degree or diploma in any university or equivalent institution, and that to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is provided in the text of this thesis.'

Signed:



Dated:

24.01.2013

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LIST OF ABBREVIATIONS

ACCA	: Association of Chartered Certified Accountants
ANOVA	: Analysis of Variance
ASEAN	: Association of Southeast Asian Nations
ASP	: Approved Services Projects
ATAX	: Australian School of Taxation, University of New South Wales
ATO	: Australian Tax Office
AUD	: Australian Dollar
BRL	: Brazilian Real
CAD	: Canadian Dollar
CFO	: Chief Financial Officer
CFC	: Chief Financial Controller
CFIB	: Canadian Federation of Independent Businesses
CIT	: Corporate Income Tax
CTIM	: Chartered Tax Institute of Malaysia (Formerly known as Malaysian Institute of Taxation-MIT)
DD	: Double Deduction
ETB	: Ethiopian Birr
FDI	: Foreign Direct Investment
GDP	: Gross Domestic Product
GST	: Goods and Services Tax
HKD	: Hong Kong Dollar
HRK	: Croatian Kuna
IA	: Investment Allowance
ICAEW	: Institute of Chartered Accountants in England and Wales
IRAS	: Inland Revenue Authority of Singapore
IRB	: Inland Revenue Board
IRS	: Internal Revenue Service (US)
ITA	: Income Tax Act
KLSE	: Kuala Lumpur Stock Exchange
KMO	: Kaiser-Meyer-Olkin
LMSB	: Large and Medium Size Businesses
NZD	: New Zealand Dollar
MIA	: Malaysian Institute of Accountants
MIDA	: Malaysian Industrial Development Authority

MIRB	: Malaysian Inland Revenue Board
MU	: Monash University
MYR	: Malaysian Ringgit (also known as Ringgit Malaysia – RM)
OAS	: Official Assessment System
OECD	: Organisation for Economic Cooperation and Development
OHQ	: Operational Headquarters Company
PASW	: Predictive Analytics Software for Windows
PIA	: Promotion of Investment Act
PITA	: Petroleum Income Tax
PLCs	: Public Listed Companies
PR	: Public Ruling
RA	: Reinvestment Allowance
RMCD	: Royal Malaysian Customs Department
RPGT	: Real Property Gains Tax
SAS	: Self-Assessment System
SCC	: Social Compliance Costs
SGD	: Singapore Dollars
SIT	: Slovenian Tolar
SPSS	: Statistical Package for the Social Sciences
STD	: Schedular Tax Deductions
SMEs	: Small and Medium Enterprises
TCMP	: Taxpayers Compliance Measurement Program
TDB	: Tax Deductibility Benefits
TIS	: Tax Impact Statement
UK	: United Kingdom
£	: Pound Sterling
UM	: University of Malaya
US	: United States of America
USD	: US Dollar
VAT	: Value Added Tax
VIF	: Variance Inflation Factor

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

The principal purpose of taxation is to raise sufficient revenue to fund the government's expenditure (Musgrave, 1987; Singh, 1999; Lymer & Oats, 2009). According to Sandford, Godwin and Hardwick (1989), the imposition of any tax results in additional costs to the society, apart from the amount of taxes imposed. These additional costs can be divided into three broad categories: administrative, efficiency and compliance costs. The first category, administrative costs, refers to the costs incurred by the government in order to administer and collect the taxes (Sandford et al., 1989). This includes the costs of administering the revenue departments, such as salaries of staff in the tax collection agency. The second category which is efficiency costs, arises because taxes induce changes in relative prices, distort consumer and producer choices and cause losses in overall output (Tran-Nam, Evans, Walpole & Ritchie, 2000, p. 229). The third category relates to tax compliance costs, which are of particular importance to taxpayers and represent the main focus of this study.

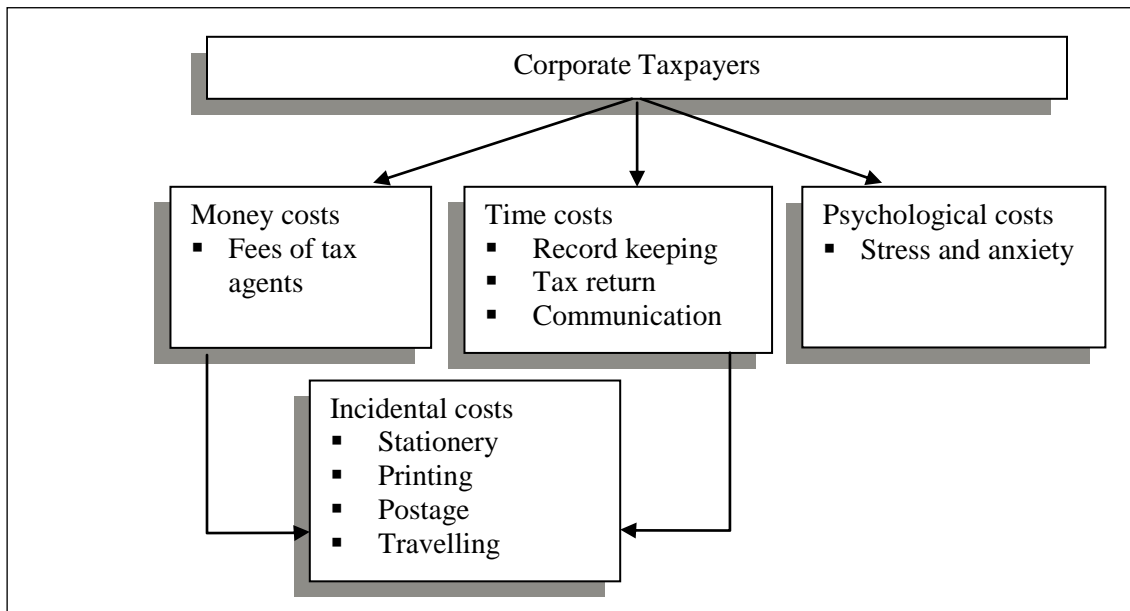
Compliance costs are the most relevant to taxpayers as these costs represent the value of resources expended in complying with their tax obligations (Tran-Nam et al., 2000). Sandford et al. (1989, p. 10) defined tax compliance costs as:

“.....those costs incurred by taxpayers, or third parties such as businesses, in meeting the requirements laid upon them in complying with a given tax structure.”

Based on tax literature, compliance costs for corporate taxpayers include the staff costs of furnishing tax returns, payments to external tax professionals and any incidental costs of postage, phone calls, printing and travelling. Taxpayers may also face some psychological costs with regards to stress and anxiety in dealing with tax issues. These costs are normally grouped into time costs, money costs and psychological costs to the taxpayers (Sandford et al., 1989). A summary of the main forms of tax compliance costs for corporate taxpayers in the Malaysian tax environment is presented in Figure 1.1.¹

¹ Compilation of the main forms of tax compliance costs in the Malaysian tax environment, adapted from Sandford et al. (1989), Tran-Nam et al. (2000), Pope (1993a) and Abdul-Jabbar and Pope (2008a).

Figure 1.1 Main Forms of Tax Compliance Costs



The use of tax legislation to achieve a wide range of fiscal and economic policy objectives of the government has resulted in increasing complexity in the tax system (McKerchar, 2002). Tax experts have expressed concern over the relationship between the complexity of tax systems, compliance costs and level of compliance. High costs of compliance are the product of complex tax legislation (James, Sawyer & Wallschutzky, 1997; Pope, 1993a); where compliance costs estimates reflect complexity in the tax system (McKerchar, 2002). Complexity of the Malaysian tax system should be considered in the context of Self-Assessment System (SAS), which was introduced to supersede the Official Assessment System (OAS).

The principal objectives of introducing the SAS are to increase the collection rate, minimise the costs of collecting taxes and to encourage voluntary compliance (Kasipillai, 2005). The move into the SAS regime however involves a substantial shift of responsibility upon taxpayers in terms of computing accurate amounts of tax liability and to make payment based on the computation. In addition, taxpayers also have to be responsible in maintaining proper records and retaining the records in safe custody. As a result, compliance costs of taxpayers are expected to increase under the SAS environment. According to Sandford (1994), there is a great deal of evidence to indicate that countries with SAS incur greater compliance costs. Moreover, Berhan and Jenkins (2005) stated that the eagerness of governments in the emerging economies to create modern tax systems has resulted in large compliance costs on taxpayers due to weak tax administrations.

A high level of compliance costs due to complexity in the tax system may increase the level of non-compliance among taxpayers. Slemrod (1989) suggested that high compliance costs, due to a complex tax system may have been a source of frustration and resentment about the tax legislation, thereby resulting in increased non-compliance. According to Franzoni (1998), tax administrators should avoid the vicious circle of countering evasion by introducing complex tax legislations, which increases compliance costs and fosters non-compliance. In this thesis, it is argued that the tax compliance costs of corporate taxpayers are significant under the SAS regime and the compliance behaviour is dependent on the tax compliance costs burden of taxpayers. This thesis examines the issues by evaluating the taxation compliance costs and the compliance behaviour of corporate taxpayers in Malaysia under the SAS environment.

This chapter provides background information of the thesis and the remaining sections are organised as follows. Section 1.2 provides a general overview of the Malaysian taxation system, with particular emphasis on corporate taxation. This is followed by identifying the research problem statements (Section 1.3), research objectives (Section 1.4), research questions (Section 1.5), and the research significance in Section 1.6. The structure of this thesis is outlined in Section 1.7 and finally, a summary of this chapter is presented in Section 1.8.

1.2 Overview of the Malaysian Tax System

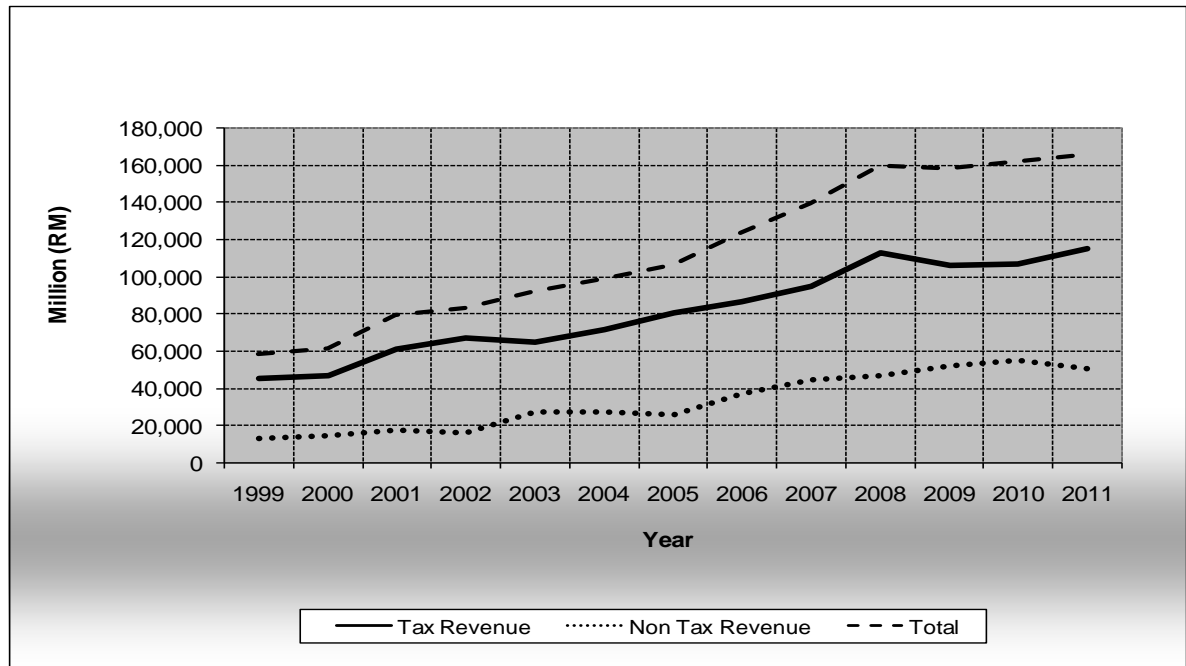
This section begins with a general overview of the Malaysian tax system, which includes some background of tax revenue in Malaysia, focusing on corporate taxation. It is followed by a deliberation on the SAS in Malaysia and tax compliance costs issues pertaining to its implementation.

1.2.1 Malaysian Tax Revenue

The Malaysian federal government revenue can be broadly categorised into tax revenues and non-tax revenues. Based on past records, the Malaysian government relies mainly on taxes for its revenue (Figure 1.2). For example, in 2009, tax revenue constituted 67 percent of the total federal government revenue and this portion rose to 70 percent in 2011. The remaining portion of 33 and 30 percent, for 2009 and 2011 respectively, were revenue derived from non-tax sources. The sources of non-tax revenues for the Malaysian government include fees for issue of licenses and permits, fines and penalties, interest and returns from investment, petroleum

royalties/gas cash payments, as well as contributions from foreign governments and international agencies (Economic Report, 2011/12).

Figure 1.2 Malaysian Federal Government Revenue



Source: Economic Reports (various years), author's compilation

The federal government tax revenue in Malaysia is classified into two main categories, namely direct and indirect taxes. The Malaysian Inland Revenue Board (IRB) is responsible for administering the direct taxes. Main examples of direct taxes include income tax on individuals and corporations, petroleum income tax, real property gains tax and stamp duties. Indirect taxes are under the jurisdiction of the Royal Malaysian Customs Department (RMCD) and include taxes such as customs duties on export and import, excise duties, sales tax and service tax. Table 1.1 provides the details of direct and indirect taxes under the current Malaysian federal tax system.

With regards to revenue contributions from these two types of taxes, in the 1960s, indirect taxes played an important role as a major contributor to the government's revenue, as compared to the direct taxes. For instance, in 1960, indirect taxes accounted for 76.7 percent of total tax revenue (Figure 1.3). This is supported by Musgrave (1987), who argued that most emerging economies relied heavily on indirect taxes during the early stages of development.

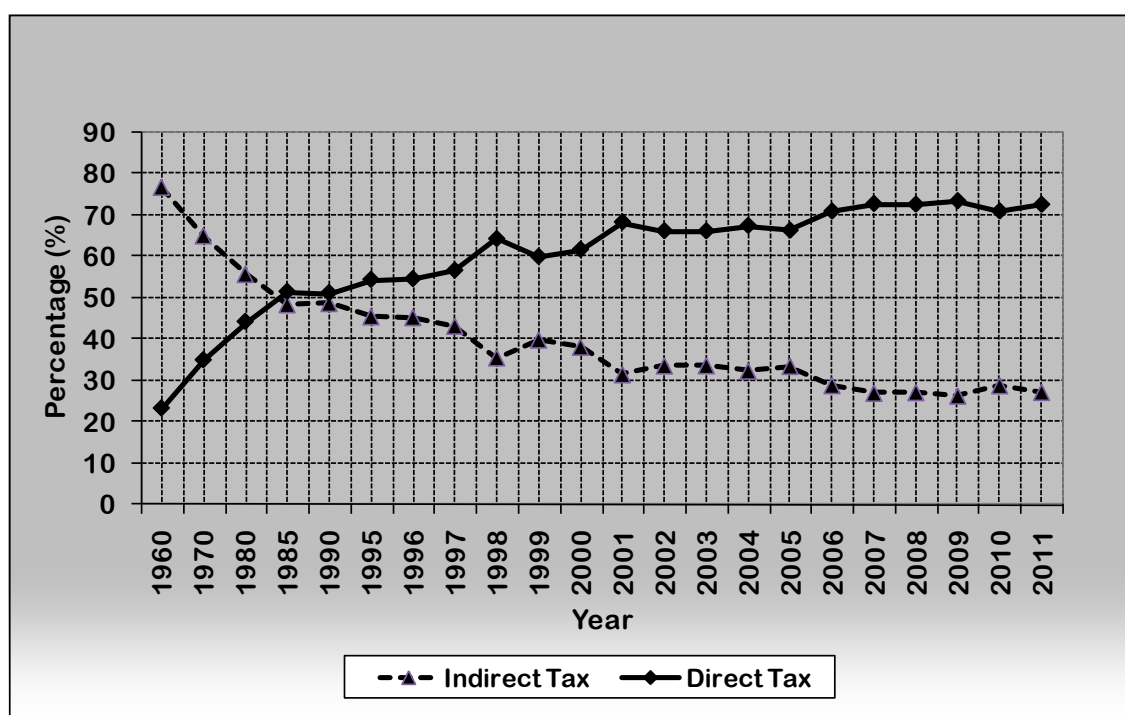
Table 1.1 Types of Malaysian Federal Taxes (2010)

<i>Direct Tax</i>	<i>Indirect Tax</i>
<p>Income Tax</p> <ul style="list-style-type: none"> ▪ Levied on the income of any persons (individuals and companies), deriving income from businesses, employments, dividends, interests, rents, royalties, pensions, annuities and other periodical payments. ▪ The individual income tax rates are progressive up to 26 percent while the corporate tax rate is fixed at 25 percent. <p>Petroleum Income Tax</p> <ul style="list-style-type: none"> ▪ Levied on the income from petroleum operations under the Petroleum Income Tax Act 1967. ▪ The rate of petroleum income tax is 38 percent. <p>Real Property Gains Tax</p> <ul style="list-style-type: none"> ▪ Imposed on capital gains arising from the disposal of real property and/or shares in a real property company. ▪ The applicable rate ranges from five to 30 percent based on holding period of chargeable assets. With effect from year of assessment 2011, the applicable rate is five percent irrespective of the holding period of chargeable assets <p>Stamp Duty</p> <ul style="list-style-type: none"> ▪ Levied on instruments listed in the first schedule of the Stamp Act 1949. ▪ Fixed duties are imposed without any relation to the amount expressed in the instrument while ad valorem duties levied based on the amount stated in the instrument. 	<p>Sales Tax</p> <ul style="list-style-type: none"> ▪ Sales tax is imposed on all goods manufactured in or imported into Malaysia unless specifically exempted. ▪ The sales tax rates differ among the different types of goods. ▪ The general rate of sales tax is 10 percent <p>Service Tax</p> <ul style="list-style-type: none"> ▪ Charged and levied on certain goods and services provided in certain prescribed establishments. ▪ Under the present law, service tax is charged and levied at the rate of six percent. <p>Excise Duties</p> <ul style="list-style-type: none"> ▪ Levied on selected locally manufactured goods. ▪ Different rates apply to different types of products based on a few broad groupings. <p>Customs Duties</p> <ul style="list-style-type: none"> ▪ Levied on any goods imported or exported from Malaysia. ▪ The export and import duties vary according to the type of goods imported or exported.

Source: Malaysian Inland Revenue Board (IRB) and Royal Malaysian Customs Department (RMCD) websites.

Nevertheless, the relative importance of indirect taxes has steadily declined over the years, which by 1999, generated less than one third of the tax revenue, to the lowest point of 26.4 percent in 2009. Kasipillai (2005) suggested that as the economy developed and with the introduction and expanded range of other taxes, less reliance was placed on indirect taxes. Correspondingly, the importance of direct taxes has increased. In 1960, direct taxes contributed only 23.3 percent of revenue. The proportion of direct taxes reached 51.6 percent in 1985 and remained around this level for several years with a steady increase from 1990 onwards. In 2009, the estimated share of direct taxes to federal tax revenue stood at 73.6 percent.

Figure 1.3 Malaysian Federal Tax Revenues 1960-2011: Direct and Indirect Taxes



2010 Revised Estimate 2011 Budget Estimate
Source: Economic Reports (various years), author's compilation

It can be seen from the 1960 to 2011 data that the percentages of indirect and direct taxes contributions indicated a reversal trend from the 1980s (Figure 1.3). This overall shift in emphasis towards direct taxes in place of indirect taxes is a reflection of changing economic structure and the rising importance of personal tax as a source of tax revenue (Kasipillai, 2005). He suggested that income tax was one of the surest ways by which the IRB could obtain a steady source of revenue, and from which the government could budget its annual expenditure, due to fluctuating export prices of Malaysia's primary commodities.

1.2.2 Corporate Taxation in Malaysia

With effect from year of assessment 2008, the IRB introduced a single-tier income tax system replacing the imputation system previously adopted. Under the new system, corporate income is taxed at the company level and the corporate tax paid on a company's profits is a final tax (IRB website). Therefore, corporations are no longer required to deduct tax on dividends distributed as dividends received by shareholders are exempted from tax (Kasipillai, 2010a). Table 1.2 presents the essential features and comparisons between the two systems.

Table 1.2 Comparisons between Imputation and Single Tier Tax System

<i>Imputation System</i>	<i>Single Tier System</i>
<ul style="list-style-type: none">▪ Tax paid by a company is not a final tax.▪ Tax is deducted from dividend paid, credited or distributed to shareholders.▪ Shareholders are taxed on gross dividends received and entitled to claim section 110 set-off.▪ Tracking mechanism through section 108 account.	<ul style="list-style-type: none">▪ Tax paid by a company is a final tax.▪ No tax is being deducted from dividend paid, credited or distributed to shareholders.▪ Dividends are exempt in the hands of shareholders.▪ No tracking mechanism is required.

Source: IRB Publication (2008).

The IRB provided three reasons for introducing the single tier system:

- (i) the imputation system was not able to accommodate increasingly sophisticated business transactions;
- (ii) the obligation of resident companies to maintain the franking account which entailed high compliance costs; and
- (iii) to remove the constraint that a company might have distributable profit and yet could not frank dividend because of insufficient credits.

With any tax reform, there would be some discussions over the implications of the new system. Table 1.3 presents the benefits and drawbacks for the adoption of the single tier system.

Table 1.3 Benefits and Drawbacks of Single Tier Tax System

<i>Benefits</i>	
(i)	Reduce administrative cost and enhance efficiency for companies and government as there is no need to maintain section 108 balances.
(ii)	Companies with huge section 108 balances may pay special dividends during the transitional period. Companies with capital gains and non-taxable accounting profits are also able to declare dividends without any constraint. Thus shareholders may enjoy higher dividend yields.
(iii)	High income bracket individuals need not pay tax on the differential between his marginal tax rate and the corporate tax rate.
(iv)	Reduces tax leakages as the dividends are exempt from tax. Any manipulation to shift tax burden on dividends ceased to serve its purpose.
<i>Drawbacks</i>	
(i)	The holding costs (interest on loans, bonds) that are attributable to the financing of investments will no longer be tax deductible once dividends become single tier exempt dividends. Corporations need to undertake a tax review on how their investments are held and funded.
(ii)	Issuers of fixed rate preference shares need to ascertain whether the coupon rate specified is a gross or net rate as there may be additional cost on payment of dividends.
(iii)	Individuals with lower income such as pensioners and retirees will not enjoy any tax refunds. Such refunds may represent an important source of fund for this category of persons. Tax exempt bodies and non-profit organizations will also lose the right to tax refunds.
(iv)	Increase cash flow for government as companies may maximise dividend payouts during the transitional period.

Source: IRB Publication (2008).

In Malaysia, corporations are taxed at a flat rate on their chargeable income. The corporate income tax (CIT) rate has been gradually reduced over the last decades (Table 1.4). The CIT rate was 50 percent up to year of assessment 1985 and was reduced gradually to reach the current rate of 25 percent.

Table 1.4 Malaysian Corporate Income Tax Rates: In Percentages

<i>Year of Assessment</i>	<i>Income Tax Rate</i>	<i>Development Tax Rate</i>	<i>Excess Profit</i>	<i>Total Rate</i>
1985 and before	40	5	5	50
1986 – 1987	40	5	3	48
1988	40	5	Abolished	45
1989	35	5	-	40
1990	35	4	-	39
1991	35	3	-	38
1992	35	2	-	37
1993	34	Abolished	-	34
1994	32	-	-	32
1995 – 1997	30	-	-	30
1998 – 2006	28	-	-	28
2007	27	-	-	27
2008	26	-	-	26
2009 to current	25	-	-	25

Source: Wee (1997) and IRB website

The main reason for the CIT rate reduction is to bring it more in line with the taxes of neighbouring countries (Wee, 1997) and to spur growth of private investments (The Star Online, 2007, September 8). The Malaysian corporate tax rate of 25 percent compares relatively fairly with other ASEAN countries as listed in Table 1.5. The corresponding current tax rates in the ASEAN countries are 30 percent for Thailand and Philippines, 25 percent for Indonesia, 22 percent for Brunei and 17 percent for Singapore. Certain companies in most of the ASEAN countries are given preferential tax rates.²

² For example in Malaysia, small and medium-sized companies (SMEs) with paid-up capital of MYR2.5 million and below at the commencement of the basis period for a year of assessment are eligible for a reduced corporate tax rate of 20 percent on chargeable income of up to MYR500,000 (IRB website).

Table 1.5 Corporate Income Tax Rates of ASEAN Countries (2010)

<i>Country</i>	<i>Tax Rate (%)</i>	<i>Notes</i>
Thailand ^a	30	The standard corporate tax rate is 30% on net profit. Reduced corporate income tax rates may apply depending on types of taxpayers. For examples, small companies with net profit not exceeding 1 million Bath are tax at 15% and companies listed on stock exchange of Thailand are tax at 25% on the first 300 million Bath net profit.
Philippines ^b	30	The standard corporate tax rate is 30% on net taxable income from all sources. Proprietary educational institution and non-profit hospitals are taxed at 10% on net taxable income provided that the gross income from unrelated trade, business or other activity does not exceed 50% of the total gross income.
Malaysia ^c	25	The standard corporate tax rate is 25% on chargeable income. Resident SMEs with paid up capital of MYR2.5 million or less are taxed at 20% on the first MYR500,000 and the subsequent balance are taxed at the standard corporate tax rate.
Indonesia ^d	25	The standard corporate tax rate is 25% on taxable income. Companies with gross turnover up to Rp50 billion get a 50% tax rate reduction from the standard corporate tax rate.
Brunei ^e	23.5	The standard corporate tax rate is 23.5% on chargeable income. The corporate tax rate is 22% with effect from year of assessment 2011. Tax rate for oil and gas companies is 55%. Companies incorporated under International Financial Centre regime are not subjected to corporate income tax.
Singapore ^f	17	The standard corporate tax rate is 17% on chargeable income. Partial tax exemption is available for companies and full tax exemption on the first SGD100,000 for new start-up companies.

Source: Compilation by author from publication of the relevant tax authorities – ^a Revenue Department of Thailand (<http://www.rd.go.th>); ^b Bureau of Internal Revenue (<http://www.bir.gov.ph>); ^c Malaysian Inland Revenue Board (<http://www.hasil.gov.my>); ^d Directorate General of Taxes of Republic Indonesia (<http://www.rd.go.th>); ^e The government of Brunei Darussalam official website (<http://www.rd.go.th>); ^f Inland Revenue Authority of Singapore (<http://www.rd.go.th>).

Apart from a competitive CIT rate, tax incentives are commonly utilised in order to make a country an attractive investment destination. Malaysian incentives provided through the tax system are contained in the Income Tax Act (ITA), 1967.³ Some of the most important forms of tax incentives available include the approved services projects, investment allowance, reinvestment allowance, operational headquarters companies and double deduction (Table 1.6).

Table 1.6 Tax Incentives under the ITA, 1967

<i>Incentive</i>	<i>Notes</i>
Approved Services Projects (ASP)	The income of companies undertaking ASP is exempted at statutory level. The quantum of tax exemption on statutory income varies between 70% and 100% for a period of 5 to 10 years from the date the first income is generated.
Investment Allowance (IA)	IA is an alternative incentive for companies undertaking ASP. Under IA, the quantum of allowance available to companies undertaking ASP in respect of qualifying capital expenditure incurred within 5 years from the date the qualifying capital expenditure is first incurred varies from 60% to 100%.
Reinvestment Allowance (RA)	RA is given to manufacturing and agricultural companies producing essential food (rice, maize, vegetable, tubers, livestock farming, production of aquatic products and any other activities approved by the Minister of Finance) undertaking expansion, modernisation, diversification and automation activities.
Operational Headquarters Company (OHQ)	An OHQ generally refers to a company that provides support services to its offices or related companies regionally and globally. An approved OHQ company is eligible for income tax exemption for a period of 10 years for income derived from business, interest and royalties.
Double Deduction (DD)	Expenses incurred on selected activities can be set off twice against company's taxable profits. Examples are expenses on promotion of exports, employee training programs and freight charges.

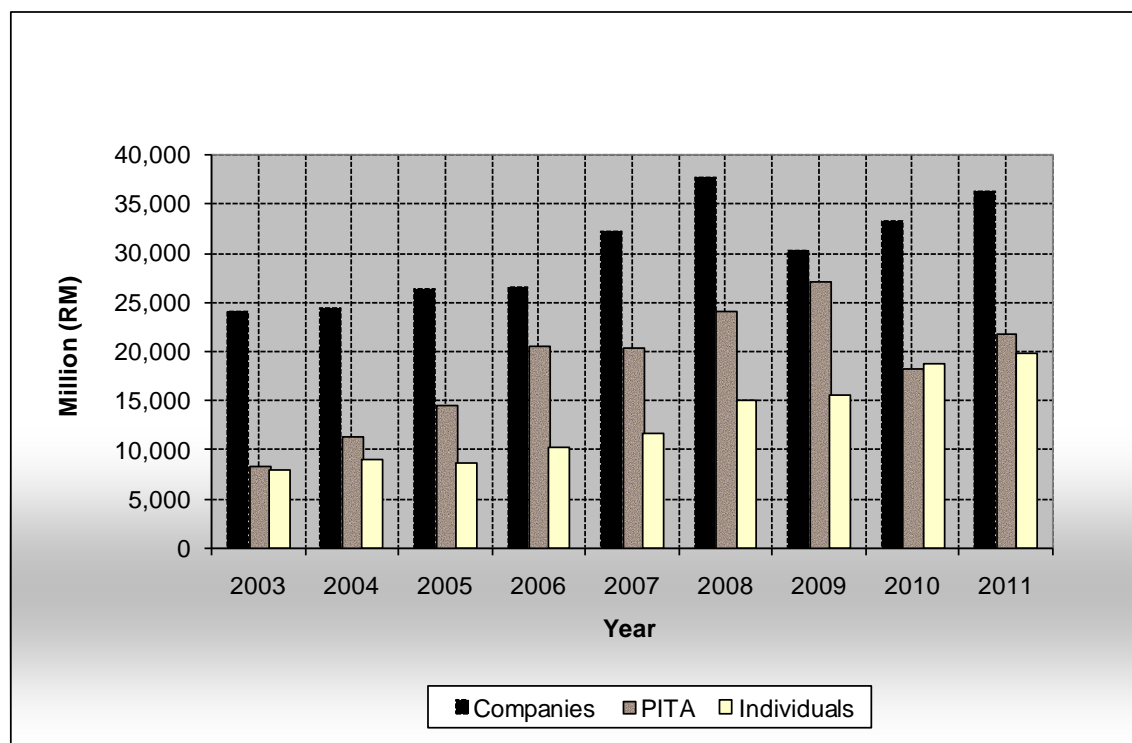
Source: Income Tax Act, 1967. Retrieved from: <http://www.hasil.gov.my>

³ The full range of tax incentives are listed and described in the ITA, 1967 which is assessable through IRB website. There are also incentives specifically directed to the manufacturing sector contained in the Promotion of Investments Act (PIA), 1986. Investment incentives available are listed and described in the Malaysian Industrial Development Authority (MIDA) website and 'Investors' Guide' of the Economic Report. Some of the main incentives available under the PIA 1986 are the investment tax allowance for companies producing 'promoted products' and pioneer status for investments in agriculture, industrial and hotel.

A government may also use tax incentives as an avenue to channel investment capital into favoured activities (Sassi, 2002). According to Wee (1997), Malaysia expended its income tax incentives as part of the overall strategy to generate increased industrial activities and attract foreign direct investment (FDI). Tax incentives reduce the effective tax rates, which in turn, lower the taxes paid by corporate taxpayers. Examples of these incentives include tax holidays, regional investment and special enterprise zones.

In terms of revenue contributions, CIT has always represented the highest portion of federal income tax revenue (Figure 1.4). In 2003, CIT accounted for 59.3 percent, while petroleum income tax (PITA) and individual taxation contributed 20.9 and 19.8 percent respectively of the total income tax revenue. This proportion of CIT to federal income tax revenue ranged from around 40 to 60 percent between the years 2003 to 2011. Despite lowering of tax rates, corporate taxation has remained the main contributor to the government revenue. Wee (1997) suggested that the revenue loss from tax rate adjustments was compensated by the tax revenue accrued from corporate profits due to the rapid rise in business activities.

Figure 1.4 Federal Tax Revenues of Income Taxes by Types



Source: Economic Reports (various years), author's compilation

1.2.3 Self-Assessment System (SAS) in Malaysia

The Malaysian Government officially announced the introduction of SAS to replace the OAS on 22 November 1998. The adoption of SAS was implemented in stages for different categories of taxpayers (Table 1.7), beginning with corporate taxpayers in the year of assessment 2001. It was later introduced to businesses, partnerships and cooperatives in 2003, and salaried individuals in 2004.

Table 1.7 Implementation of Self-Assessment System

<i>Categories of Taxpayers</i>	<i>Year</i>
Companies	2001
Business, partnership and cooperatives	2003
Salaried individuals	2004

Over the last few decades, SAS has been adopted by several tax administrations in both the advanced and emerging economies⁴ (Table 1.8). Countries pioneering the adoption of SAS are the United States (US) and Canada in 1913 and 1917 respectively, followed by Japan in 1947 (Ishi, 2001). Subsequently, Sri Lanka (1972), Pakistan (1979), Bangladesh (1981), Indonesia (1984), Australia (1986-87), Ireland (1988), New Zealand (1988) and the United Kingdom (UK) in 1996-97 implemented the new tax filing system. There have been variations in the extent of implementation, with some countries starting with partial adoption, while others went for full adoption of SAS for all groups of taxpayers (Loo, 2006). Nevertheless, some developed countries like Singapore, Belgium, Luxembourg and France, have not embraced SAS (Palil, 2010).

The SAS is an approach by which taxpayers are obligated by law to ascertain their chargeable income, compute their tax liability and submit their tax returns, based on existing tax legislations (Kasipillai, 2005). Under the previous OAS regime, the annual tax returns computation was conducted by the IRB officers. A notice of assessment was sent to the taxpayer stating the amount of tax due for a particular year of assessment. A taxpayer would then pay income tax based on this assessment. With SAS, it is the responsibility of taxpayers to

⁴ Emerging economies are countries that are progressing toward becoming advanced economies, specifically with a rapid phase of economic development, government policies favouring economic liberation and the adoption of a free market system (Arnold & Quelch, 1998).

make the assessment and subsequently pay income tax based on their computation. Notice of assessment is not issued as taxpayer assessment is deemed to be the notice of assessment. Thus, there is a substantial shift of responsibility onto the individuals and companies in terms of their tax compliance obligations.

Table 1.8 Adoptions of Self-Assessment System

<i>Country</i>	<i>Year SAS was introduced</i>	
	<i>Company</i>	<i>Individual</i>
United States	1913	1913
Canada	1917	1917
Japan	1947	1947
Sri Lanka	1972	1972
Pakistan	1979	1979
Bangladesh	1981	1981
Indonesia	1982	1984
Australia	1986/87	1992
New Zealand and Ireland	1988	1988
United Kingdom	1999	1996/7
Malaysia	2001	2004

Source: Adapted from Loo and Ho (2005) and Palil (2010)

Self-assessment for Malaysian companies has redefined the roles and responsibilities of corporate taxpayers. Under SAS, corporate taxpayers are required to furnish estimates of taxes, make instalment payments, determine taxes payable, lodge tax returns and remit tax liability to the IRB. An estimate of tax payable must be filed with the IRB in a prescribed form (CP204) not later than 30 days before the beginning of the company's basis period. Based on the estimation, tax payable must be remitted to the IRB on or before the 10th day of each month in equal monthly instalments, commencing from the second month in the basis period.⁵

⁵ Regarding individual taxpayers, the basis period is 1st January to 31st December, with returns due on 30th April the following year. Taxpayers may submit returns via the internet, through a tax agent, by ordinary mail or even by hand to the tax office. Returns must be submitted to the IRB along with payment for any outstanding income tax liabilities. The IRB will refund any excess of the schedular tax deductions (STD) amount within one month if taxpayers submit their returns via e-filing and within three months if the returns are filed manually (IRB website).

Corporate taxpayers are then required to compute their income tax liability and furnish a tax return in the prescribed form (Form C) within seven months from the date following the close of the accounting period. The tax return furnished by the company is deemed to be the date on which the notice of assessment is issued to the company.⁶ If the estimated tax is less than the actual tax but is still within the 30 percent margin, the company is required to settle the difference within seven months after the closing of the accounts.

Therefore, the adoption of self assessment involves a substantial shift of accountability upon taxpayers in terms of their compliance obligations (Abdul-Jabbar & Pope, 2008a). Additional compliance responsibilities for taxpayers include an obligation to report, compute and pay their taxes according to tax laws. In fulfilling these obligations, taxpayers must maintain appropriate records, understand the tax laws and exercise reasonable care in the reporting of matters affecting tax liability (Marshall, Smith & Armstrong, 1997). The following are some of the impacts on taxpayer's compliance burden resulting from the introduction of SAS.

(i) Obtaining appropriate knowledge

As the burden of ascertaining tax liability has shifted from the IRB to corporations, it is presumed that taxpayers possess the necessary knowledge and skills to comply with the tax laws. Therefore, taxpayers are indirectly forced to learn or obtain appropriate knowledge in order to understand tax rules and regulations (Barr, James & Prest, 1977). With the implementation of SAS, the IRB has conducted seminars and training for the purpose of providing exposure concerning taxpayers' responsibilities under the SAS (IRB Annual Report, 2001). This kind of training will certainly benefit taxpayers in terms of obtaining the necessary knowledge, but at the same time, taxpayers need to spend time and incur incidental costs such as travelling expenses, in order to gain that knowledge.

(ii) Engaging external tax professionals

Kasipillai (2007) anticipated that a large number of taxpayers, especially the business community, would employ external tax professionals with the introduction of SAS. In Australia, the percentage of taxpayers who sought professional assistance to prepare returns under the

⁶ Refer to the Malaysian ITA 1967 (amended in 1986), for further details on self assessment for companies.

SAS rose from approximately 20 percent in 1980 to 72 percent in 1992 (Marshall et al., 1997). Many authors, including Ishi (2001) and Kasipillai and Hanefah (2000), argued that SAS will further burden the taxpayers in terms of hiring tax professionals to prepare and submit tax returns on their behalf.

(iii) Tax audit and investigation

As the IRB officials are relinquished from the tasks of assessment and review of tax returns filed under SAS, their emphasis has shifted to enforcement activities, mainly to tax audits and investigations. The conduct of tax audits is expected to be a common and regular feature under SAS, as emphasis would be placed on post-assessment audit and examination (Lim & Chang, 1999; Singh, 2003). Public Ruling 7/2000 stipulates that reasonable facilities and assistance should be provided by taxpayers to enable IRB officials to gain access to buildings, books and documents. A tax audit division has also been set up by the IRB to monitor the expansion of audit activities and to coordinate the audit programme, education and training activities (IRB Annual Report, 2006). Tax audit procedures conducted, however, may increase the compliance burden on taxpayers, in terms of time taken to prepare tax records and meet with tax authorities, as well as the level of anxiety in being audited and investigated by IRB. Andreoni, Erard and Feinstein (1998) further argued that tax audit and investigation can result in considerable compliance costs burden, not only to the non-compliant taxpayers, but also to the honest taxpayers.

(iv) Record keeping practices

Section 82 of the ITA (1967) requires a taxpayer to keep sufficient records for at least seven years from the end of the year to which the income relates or the year in which the returns are furnished. In addition, the IRB has issued Public Rulings 4/2000, 5/2000 and 6/2000 pertaining to the keeping of sufficient records by companies and co-operatives; individuals and partnerships; and persons other than companies or individuals, respectively. Self-assessment procedures do not involve detailed checking of tax returns by IRB, but require an increased level of record keeping on the part of taxpayers for audit purposes (Singh, 2003). Ariff and Pope (2002) argued that under SAS, a taxpayer needs to keep more costly systematic records in the event of reviews or audits by the IRB.

1.3 Research Problem Statement

Reforms and changes in tax laws may affect the level of complexity in the tax system. In Malaysia, the introduction of SAS, to replace the OAS, is a major reform of the taxation system since the inception of the ITA in 1967 (Kasipillai, 2005). The new assessment system imposes greater accountability in terms of computational, record-keeping and filing requirements upon taxpayers. Apart from the responsibility of computing income tax liability now lying with the taxpayer, there is also an increase in record keeping requirement. Furthermore, as tax officials are no longer reviewing all returns filed under the SAS, more resources are available for enforcement activities to ensure greater tax compliance. The increase in taxpayer obligations coupled with higher possibility of audit may also require taxpayers to seek assistance from external tax professionals to handle tax matters on their behalf. This action may result in extra compliance costs for the taxpayers, as hiring of external tax professionals is a significant compliance costs component. Thus, tax compliance requirements cost taxpayers' time and money and the obligations under SAS may further increase taxpayer compliance burden. This study estimates and identifies the determinants of tax compliance costs for corporate taxpayers under the SAS environment. Furthermore, this study fills a gap in tax compliance costs research by estimating compliance costs associated with corporations applying for tax incentives⁷ and those psychological costs incurred in complying with tax legislation for corporate taxpayers.

Under the self assessment environment where voluntary compliance is essential, tax compliance costs burden may have an impact on the level of tax compliance. One of the factor that affects levels of voluntary tax compliance as suggested by Hasseldine (2001) is tax compliance costs. To date, there is no empirical study that has been undertaken to identify the relationship between tax compliance costs and tax compliance behaviour of large corporations. This warrants for the need to conduct research that could provide insights into compliance costs and the non-compliance issues of corporate taxpayers. Furthermore, when the tax legislation is complex, taxpayers usually have to resort to external tax professionals. According to Franzoni (1998), external tax professionals, with their superior knowledge of enforcement patterns, may have the ability to influence their clients' compliance behaviour. This study, therefore, investigates the relationships of tax compliance costs and large corporate taxpayer compliance behaviour.

⁷ This is an original contribution to the field and included in this study. Analysis of this is separate from the usual tax deductibility of compliance costs, discussed fully in Section 3.6.2.

1.4 Research Objectives

The research problem was investigated by focusing on the following four research objectives:

- (i) To assess the magnitude and nature of tax compliance costs incurred by Malaysian corporate taxpayers under the SAS.
- (ii) To examine the relationship between the determinants that are expected to impact the magnitude of CIT compliance costs and the compliance costs estimate.
- (iii) To evaluate the relationship between CIT compliance costs and compliance behaviour of taxpayers.
- (iv) To examine the relationship between corporate characteristics, tax attitudinal aspects and compliance behaviour of taxpayers.

1.5 Research Questions

In order to achieve the objectives of this study, the following research questions were formulated:

- (i) What is the magnitude of CIT compliance costs in Malaysia, as a share of the following: CIT revenue and gross domestic product (GDP) in relation to international standards?
- (ii) To what extent do the corporate characteristics (business size, sector, length and tax liability) influence the tax compliance costs of corporate income taxpayers?
- (iii) How does the tax compliance costs burden influence tax compliance behaviour of corporate income taxpayers?
- (iv) How do the corporate characteristics and tax attitudinal aspects influence tax compliance behaviour of corporate income taxpayers?

1.6 Research Significance

The main focus of this study is on the identification and estimation of tax compliance costs incurred by large corporate taxpayers. The compliance costs estimation has been reported in detail for most countries in the advanced economies. However, Ariff and Pope (2002) argued that the literature available from empirical studies conducted in those countries might not provide answers to some of the compliance costs issues in other economies. They asserted that different forces were evident in the emerging economies, such as a large hidden economy, corruption, inefficiency in tax collection and high compliance costs. Thus, the lack of studies

conducted in Malaysia, and in the emerging economies generally, warrants more attention and focus towards conducting empirical studies that could provide insights to address some of the tax compliance costs issues. This study also sets an important benchmark against which the taxation compliance costs of corporations in the emerging economies may be measured in future studies.

Tax compliance requirements may be further complicated by various incentives built into the tax system by the policy makers. According to Wee (1997), the corporate tax system in Malaysia is relatively straight forward although several complications may arise from the elaborate tax incentives system. Taxpayers have to be familiar with all rules and regulations underlying the tax incentives being offered or they may have to outsource the work to external tax professionals for their expertise. Furthermore, the use of tax incentives as socio-political tools in order to achieve certain economic goals is one of the sources of complexity in the tax system (Tran-Nam, 2000). In cases where companies can opt for alternative incentives,⁸ taxpayers have to spend time on acquiring and comparing information in order to make optimal use of these tax incentives. A significant share of tax compliance cost could include costs incurred in relation to government incentives provided through the tax systems. Accordingly, this study identifies the fraction of the tax compliance costs associated with tax incentives.

The main aim of most tax compliance costs studies is to establish consistent findings that compliance costs comprise a significant share of tax related costs. The research into compliance costs has played an important role in the development of compliance costs impact assessment when there is a significant change in the tax system. According to Hanefah, Ariff and Kasipillai (2001), as a result of the extensive studies on tax compliance costs in the advanced economies, their governments normally produced an impact statement before introducing new tax laws. For instance, in the UK, all significant changes to the tax system are accompanied by a published evaluation of compliance costs (Sandford & Hasseldine, 1992). The results of this study may enlighten the Malaysian tax authorities on the tax compliance costs incurred by corporate income taxpayers. Based on research findings, researchers would be able to convince the policy makers to acknowledge the compliance costs issue when making policy decisions. In addition, Sandford and Hasseldine (1992) recommended for more research to be undertaken to examine the compliance costs trend in a particular tax regime. Thus, findings from this study could be

⁸ One example is the alternative incentives between ASP and IA that are mutually exclusive, which means, company can only enjoy either one of the incentives and not both (see Table 1.6 and/or IRB website).

used as a base to measure large or significant changes in compliance costs over time which may result from changes in taxation policy.

While studies on tax compliance costs have been conducted in Malaysia and overseas, they have generally focused on the estimation without any linkage to the tax compliance behaviour. On reviewing the tax compliance costs literature, there appear to be very limited studies that bridge these two very important tax areas. There is prospect that by combining these two areas coupled with stronger research methods, it can offer potential for furthering knowledge in this field. Thus, this study covers both areas of tax compliance behaviour and compliance costs in a single study; with particular attention to the public listed companies (PLCs). The findings of this study will inform policymakers of the need to consider the importance of tax compliance costs and its impact on compliance behaviour when planning to formulate future tax policies.

Generally, a large proportion of PLCs do not have an in-house tax compliance department but instead outsource all their tax activities (Erard, 1997; Loh, Ariff, Ismail, Shamser & Ali, 1997; Slemrod & Venkatesh, 2002). As this study focuses on PLCs, separate surveys of external tax professionals who normally handle tax affairs of these companies were utilised. Additional valuable information obtained through surveys of external tax professionals provided corroborative evidence to the main corporate taxpayers' survey (see for example Christensen, 1992). Apart from using two categories of respondents, this study adopted a self-administered questionnaire survey method for data collection. This method was chosen because it tends to provide a more accurate compliance costs estimation of the survey responses, thus improving the validity of the study (Oppenheim, 1992).

Compliance costs can be divided and assessed at a business level as well as at the individual level. This thesis examines the taxation compliance costs incurred by businesses and their compliance behaviour, focusing on large corporations. Corporations were considered due to four reasons: (i) a number of studies have generally concluded that corporate taxes impose higher compliance costs than individual taxes as a result of more complex and extensive tax compliance requirements;⁹ (ii) prior studies have also established external tax fee as the most likely cause of compliance costs, and businesses who employed external tax professionals are the group likely to be most affected; (iii) in the case of Malaysia, the lack of awareness and

⁹ For further discussion on this issue; see for example: Pope (1993a, 1995); Sandford (1995a); Slemrod and Venkatesh (2002).

recent work on compliance costs required the researcher to focus on PLCs due to data accessibility and reliability;¹⁰ and (iv) CIT is an important source of Federal Government's revenue in Malaysia. Despite contributing a large portion of the IRB's tax collection (see Section 1.2.2), prior tax research in Malaysia has largely ignored the compliance burden faced by the corporate sector and their tax compliance behaviour (Abdul-Jabbar, 2009).

Finally, the World Bank administers worldwide comparisons on the cost of doing business, comprising the cost of remitting and collecting taxes on an annual basis.¹¹ The report addresses the taxes and mandatory contributions that companies must remit or withhold in a tax year, together with measures of administrative burden in complying with tax regulations. In the World Bank Doing Business 2008 Report on the Paying Taxes indicator, Malaysia ranks 56th among the 178 countries in ease of paying taxes. Based on this information, a study into the compliance costs burden of corporate taxpayers would be useful.

1.7 Structure of the Thesis

As outlined in Figure 1.5, this thesis consists of seven chapters.

Chapter 1 begins with a brief background of this study, followed by an overview of the Malaysian tax system. The overview highlights the significance of CIT to federal government revenue and a deliberation on the SAS in Malaysia. Following this, research problem statement, research objectives, research questions and significance of this study are presented. This chapter concludes with an outline of the thesis structure and a chapter summary.

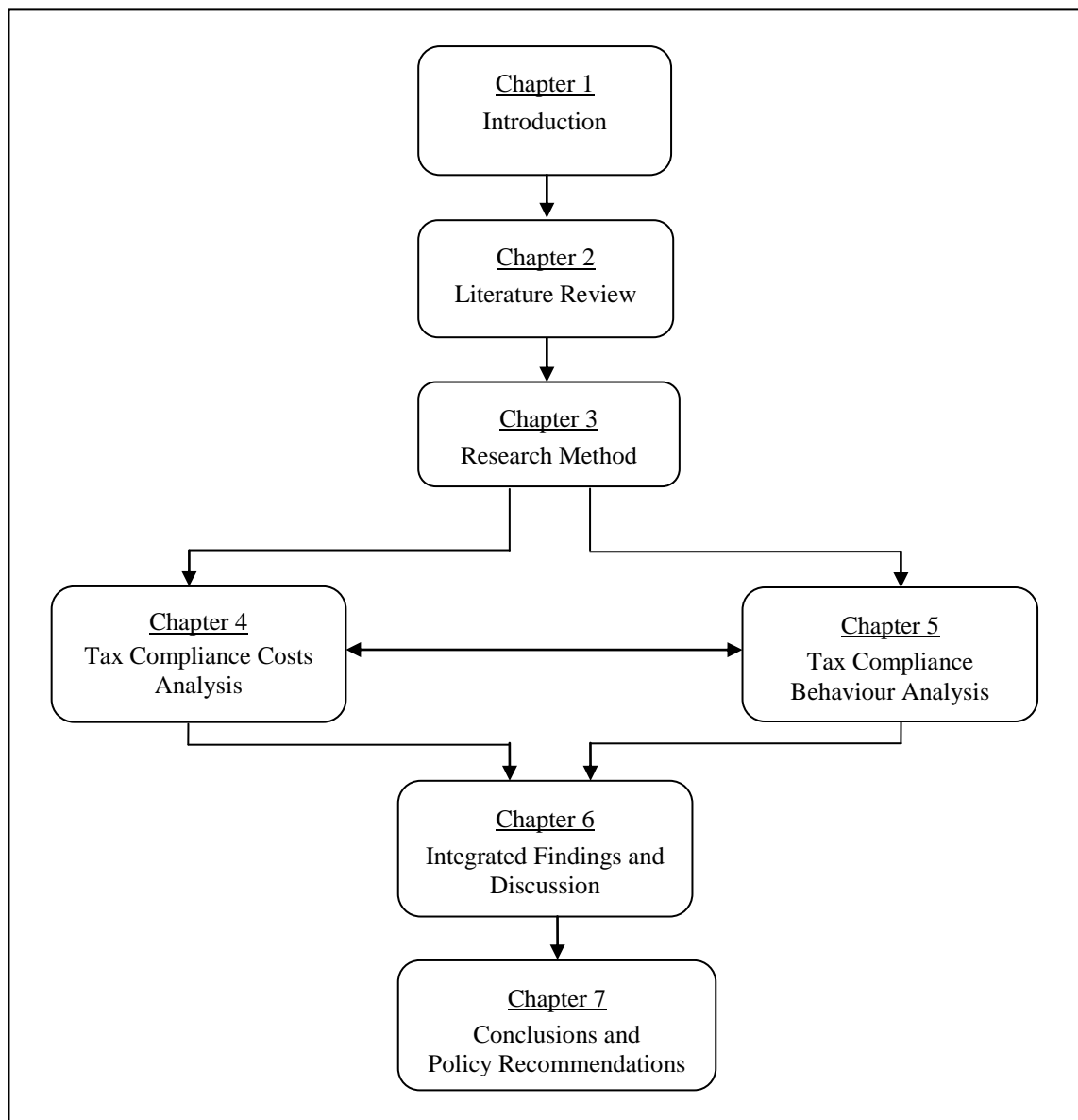
Chapter 2 contains a review of the theoretical and empirical literature of the two main streams of tax research, namely compliance costs and compliance behaviour. With regards to theoretical aspects, measurement issues and relevant theories underpinning this research are discussed in this chapter. By examining the empirical literatures, common themes which emerge from the experiences of both advanced and emerging economies are identified. Relying on these literatures, the estimation framework of tax compliance costs and the research model of this study are constructed, along with the development of the hypotheses for this study.

¹⁰ There are three relevant and distinct corporate taxpayers' populations; namely, all companies, large companies and PLCs (refer to Section 3.4).

¹¹ The research study and corresponding data are accessible at <http://www.doingbusiness.org>.

In Chapter 3, the research method employed in this study is outlined. Justification for the study's research paradigm and overview of the research methods in tax research together with the justification for choosing the survey research method are provided. Next, sample population studied and the instrumentation used in measuring variables of this study are identified. Two sets of questionnaires for corporate taxpayers and external tax professionals were designed and pre-tested to ensure the accuracy and reliability of the research instruments. This is followed by a discussion of the survey implementation utilising a self-administered survey method. Finally, a brief discussion on the data analysis method, descriptive analysis of the sample and chapter summary are provided.

Figure 1.5 Outline of Thesis Structure



Chapters 4 and 5 present the findings of this study from the surveys of corporate taxpayers and external tax professionals. Chapter 4 reports on the tax compliance costs estimates at the company level and aggregate PLCs' level, covering both the social and taxpayer compliance costs. The analysis of tax compliance costs by corporate characteristics, sources of income tax work and components of costs are provided. Then, the incidence of tax compliance costs based on specific characteristics of companies is examined. Chapter 5 documents the results of tax compliance behaviour of PLCs measured from a business managerial perspective. The determinants of compliance behaviour and the association between variables, namely corporate characteristics, tax attitudinal aspects, compliance costs and non-compliance behaviour are examined.

Drawing on the analysis of taxpayers' compliance costs and compliance behaviour in the preceding two chapters, Chapter 6 presents the integrated findings and discussions. Comparisons of key findings are made between the corporate taxpayers and external tax professionals' surveys and the existing Malaysian and international studies.

The final chapter (Chapter 7) summarises and discusses major findings in relation to the objectives and hypotheses of this study. Apart from summarising the results, this chapter highlights the contributions made to extant literature and provides the policy implications of the findings. This is followed by discussion on limitations of study, suggestions for future research directions and the conclusion of this thesis.

Finally, the references and appendices are annexed at the end of this thesis.

1.8 Chapter Summary

The introductory chapter outlines the composition of this study from which the foundation of this thesis is built on. It introduces the background and provides the overview of the Malaysian taxation system. This chapter further identifies the research problem statements, research objectives, research questions and research significance of this study. The organisation of this thesis into seven chapters is also outlined. The next chapter presents the literature review of taxpayers' compliance costs and compliance behaviour, from which the current state of knowledge and key knowledge gaps are identified.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The previous chapter (Chapter 1) provided background information of the thesis which represents the foundation of this study. This chapter (Chapter 2) presents a literature review of the two main areas of the study, namely tax compliance costs and tax compliance behaviour. The review begins with an overview of the theoretical and empirical literatures of tax compliance costs (Section 2.2), followed by tax compliance behaviour (Section 2.3) research areas. The theoretical aspects discuss the relevant theories underpinning this research, while the empirical literature identifies research findings from both the advanced and emerging economies. Based on the literature review, knowledge gaps are identified in Section 2.4; while the estimation framework, research model and hypotheses of this study are developed in Section 2.5. Finally, Section 2.6 provides the summary of this chapter.

2.2 Tax Compliance Costs Literature

The purpose of this section is to review the literature related to taxation compliance costs, with a focus on the issues pertinent to corporate taxpayers.

2.2.1 Theoretical Foundation

Tax Compliance costs are costs incurred by taxpayers as a result of their obligations to the relevant tax laws in force in a country. It is defined by Sandford (1995a, p. 1)¹² as:

“Costs incurred by taxpayers in meeting the requirements laid on them by the tax law and the revenue authorities. They are costs over and above the actual payment of tax and over and above any distortion costs inherent in the nature of tax; costs which would disappear if the tax was abolished.”

¹² Cedric Sandford (1924 - 2004) is considered to be the authority in the discipline of tax compliance costs by the vast majority of tax researchers, and his ideas exercised great influence on the development of this area of research.

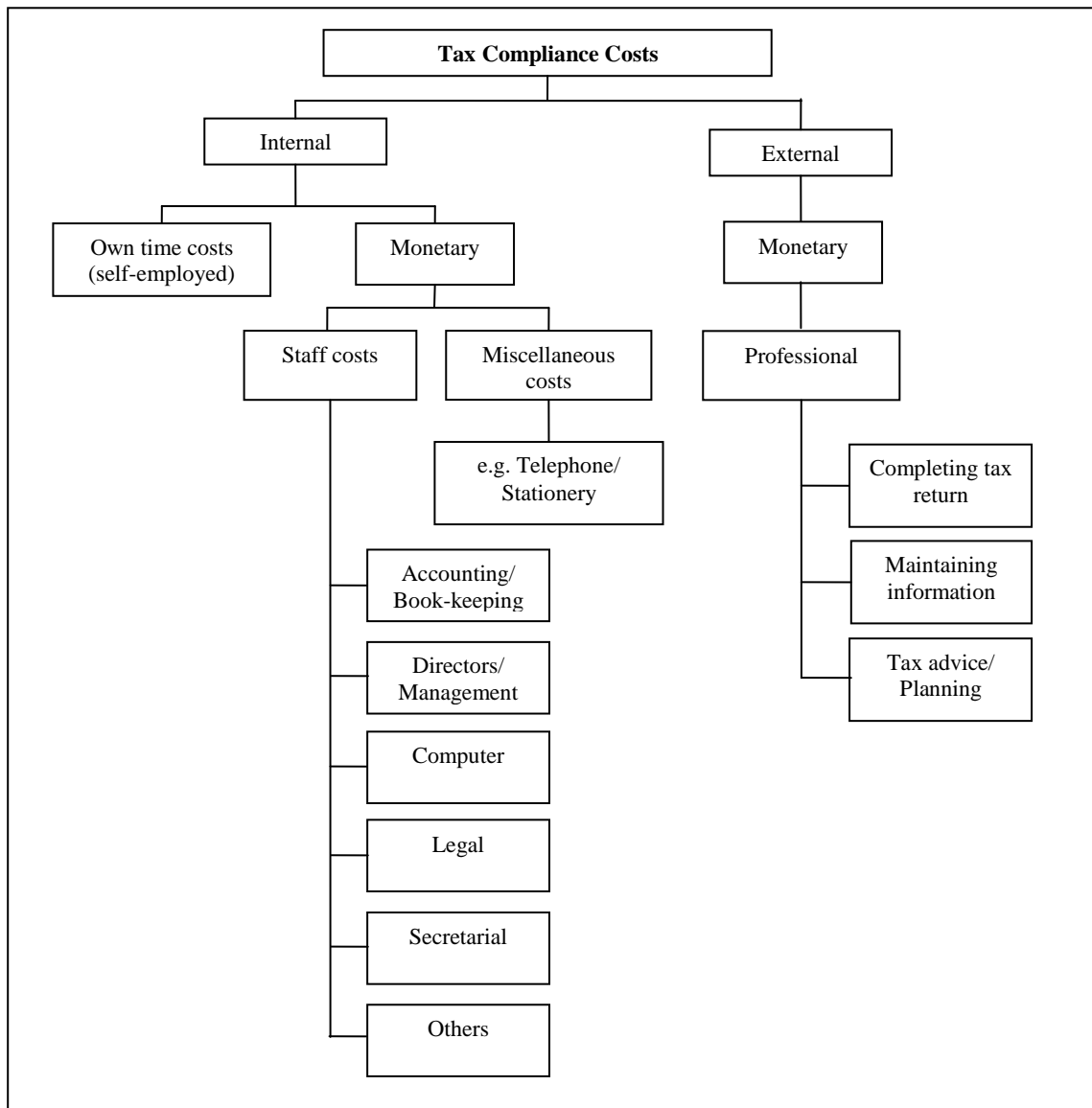
Corporation tax compliance costs refer to the value of resources expended by corporate taxpayers in complying with the tax regulation (Tran-Nam & Glover, 2002a). Tax compliance activities for corporations include completing tax returns, compiling the necessary receipts, maintaining proper records, undertaking tax planning and obtaining sufficient knowledge to enable these obligations to be accurately executed. In situations where companies are selected for audit and investigations by the Inland Revenue Board (IRB), time costs are also incurred in dealing with tax auditors and resolving disputes with tax authorities. Companies that outsource their tax compliance work incur tax fees and may also bear time costs in preparing information required by the external tax professionals. Taxpayers also incur costs in terms of stationery, postage and travelling required for reporting and compliance with tax laws and regulations. These costs are normally known as incidental costs and are also referred to as additional costs.

Sandford et al. (1989) segregated tax compliance costs of corporate taxpayers into time costs of internal staff, external financial costs and psychic costs¹³. The internal time costs are for employing staff, such as tax managers, accountants, account clerks and programmers to handle the company's tax affairs. The external financial costs component comprises payments to tax professionals from outside a company and any incidental costs incurred in relation to the tax work. These payments include the financial costs of professional fees paid to tax agents, accountants, legal advisers and any other external consultants in relation to the corporate income tax (CIT). Psychic costs are negative experiences of taxpayers, such as anxiety and frustration in dealing with the requirements of tax rules and legislations (Sandford et al., 1989). These costs arise because the time spent in adhering to tax laws is normally an unpleasant experience and hence is considered a cost for taxpayers (Vaillancourt & Clemens, 2008).

Ariff and Pope (2002) further distinguished the taxation compliance costs into economic and non-economic costs. They classified economic costs as monetary and time costs which can be estimated (Figure 2.1) and non-economic costs as costs of stress and anxiety caused by tax compliance (psychological costs) which is difficult to quantify. They also identified miscellaneous costs under internal economic costs, which is basically some other costs incurred in complying with the tax laws (incidental costs).

¹³ The term psychological costs is now used.

Figure 2.1 Economic Compliance Costs of Business Taxation



Source: Ariff and Pope (2002)

Within these premises, the theoretical components of tax compliance costs consist of the following:

- (i) internal costs – value of time spent by company staff on tax matters;
- (ii) external costs – fees paid to external tax professionals;
- (iii) incidental costs – other miscellaneous tax costs which may include travel, stationery, computer, telephone, court litigation costs; and
- (iv) psychological costs – negative experiences of taxpayers in complying with tax legislation.

The theoretical recognition of tax compliance costs has been identified in the early eighteenth century by Adam Smith (Evans, 2003a), in his famous work on the ‘Wealth of Nations’. The book which was published in 1776 suggested a set of principles also known as the maxims or canons of taxation for a good tax system. The author proposed that a good tax system is one that satisfies four principles: (i) Equity, (ii) Certainty, (iii) Convenience and (iv) Efficiency.

(i) Principle of Equity

This principle states that a tax system should be fair among taxpayers and taxes should be levied in accordance with ability to pay. A good tax should be proportional to income so that the burden of supporting government is in accordance to benefits received from government. In the words of Smith [1776 (1999 ed.), p. 416]:

“The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state.”

(ii) Principle of Certainty

According to this principle, a good tax system should ensure that taxpayers are clear on their tax compliance obligations, such as the amount of tax that is payable, the method of payment and the deadline for payment. Smith [1776 (1999 ed.), p. 416], in this connection, remarked:

“The tax which each individual is bound to pay, ought to be certain, and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person.”

(iii) Principle of Convenience

The principle of convenience implies that the time and mode of payment of a tax should be the most conducive to taxpayers. People would more conveniently pay tax if it is being deducted at source rather than paying a large amount of tax annually (Lymer & Oats, 2009). In Malaysia, the scheduled monthly tax deduction and e-filing are among the examples of convenience in terms of timing and manner of payment. In the words of Smith [1776 (1999 ed.), pp. 416-417]:

“Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it.”

(iv) Principle of Efficiency

The principle of efficiency (also known as economy or simplicity) is achieved when the cost of administering the tax system is not being excessive. The costs of tax collection should be the lowest possible so that a large fraction of what is acquired from the taxpayers will be available for public spending (Lymer & Oats, 2009). Smith [1776 (1999 ed.), p. 417] recognised these characteristics when he wrote:

“Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible, over and above what it brings into the public treasury of the state.”

Three of these principles of a good tax system (certainty, convenience and efficiency) emphasised the impact of tax operating costs on the tax system (Evans, 2003a). Tax operating costs represent the total of tax administrative and compliance costs. Tax administrative costs are the costs incurred by the revenue authorities in the taxation process while compliance costs are the costs incurred by taxpayers in meeting the requirements of the tax system (Vaillancourt & Clemens, 2008). According to Tran-Nam (2001b), the principle of efficiency includes both tax administrative and compliance costs, while principles of certainty and convenience are concerned wholly with compliance costs. The three principles necessitate compliance costs to be negligible, in order not to violate the principles of a good tax system.

In the context of these principles, the lack of certainty in tax legislation and inconvenience prevalent in a tax system, would expose taxpayers to unnecessary predicament and oppression, thereby increasing their compliance costs burden (Yesegat, 2009). Smith [1776 (1999 ed.), p. 417] recognised this problem when he wrote:

“..... forfeitures and other penalties which those unfortunate individuals incur who attempt unsuccessfully to evade the tax, it may frequently ruin them, and thereby put an end to the benefit which the community might have received from the employment of their capitals.”

In addition, a psychological burden in terms of stress and anxiety, may be imposed on taxpayers as legislation requires them to carry out complex obligations under the threat of legal penalty (Sandford, Godwin, Hardwick & Butterworth, 1981). Smith [1776 (1999 ed.), p. 418] in this connection, remarked:

“ subjecting the people to the frequent visits and the odious examination of the tax-gatherers, it may expose them to much unnecessary trouble, vexation, and oppression; and though vexation is not, strictly speaking, expense, it is certainly equivalent to the expense at which every man would be willing to redeem himself from it”.

Due to changes in economic activities and functions of the government since the Adam Smith era, a few additional principles of taxation, have been introduced by the modern economist. Musgrave, Musgrave and Bird (1987, pp. 207-208) summarised the major important principles of a good tax system:

- The distribution of the tax burden should be equitable. Everyone should be made to pay his or her ‘fair share’.
- Taxes should be chosen so as to minimize interference with economic decisions in otherwise efficient markets. Such interferences impose ‘excess burdens’ which should be minimize.
- Where tax policy is used to achieve other objectives, such as to grant investment incentives, this should be done so as to minimize interference with the equity of the system.
- The tax structure should facilitate the use of fiscal policy for stabilization and growth objectives.
- The tax system should permit fair and non-arbitrary administration and it should be understandable to taxpayer.
- Administration and compliance costs should be as low as is compatible with the other objectives.

These updated and extended canons of good tax practice emphasised more on the impact of tax compliance costs on taxpayers caused by the interferences and arbitrariness in the tax system (Musgrave et al., 1987). The following section presents a review on the measurement and conceptual issues of tax compliance costs.

2.2.2 Measurement and Conceptual Issues

Contention on compliance costs of taxation has moved from an unknown state to a more familiar position over the last decades. Currently, there is an extensive and varied literature available which deals with compliance costs issues (Evans, 2003a). However, the challenges faced in tax compliance costs research, particularly in the definition and measurement of compliance costs burden, remain.

The tax compliance costs term, in itself, is ambiguous (Sandford et al., 1989) and there is a lack of well-built consensus to the precise meaning of compliance costs (Evans, Ritchie, Tran-Nam & Walpole, 1996). There has also been considerable discussion, particularly by Pope (1993a), Sandford (1995b) and Tran-Nam et al. (2000), on the compliance costs measurement and conceptual issues. According to Sandford et al. (1989), complexities and inter-relationships make it challenging to ascertain the miscellaneous compliance costs with absolute precision or in a neat, mutually exclusive way. The main issues include the lack of precisely defined boundaries in allocating costs incurred for accounting or tax compliance costs, computational or tax planning costs, commencement or recurrent costs, as well as differentiating between social compliance costs and taxpayer compliance costs.

(i) Accounting versus Tax Compliance Costs

The allocation of internal costs incurred by businesses, into accounting or tax compliance costs is an important conceptual problem (Tran-Nam, 2001a). Some businesses consider all costs involved in the preparation of accounting records as tax compliance costs, while some might regard tax compliance work as a by-product of normal business accounting activities (Tran-Nam & Glover, 2002a). A few studies, for example, by Gibson and Wallschutzky (1993), entrusted the respondents to decide on how compliance costs are to be apportioned into accounting and tax compliance costs. Turner, Smith and Gurd (1998) however, argued that the definition and recognition of tax compliance costs incurred by taxpayers are complex, even for the experts. Thus they asserted that researchers need to specify in advance what they are trying to measure and how it is to be quantified. Sandford (1995b) recommended few measures to be undertaken to ensure that accounting costs, not due to taxation, are excluded. Their suggestions included careful wording of the survey questions, detailing various categories of tax-related activities and validating by a sample of follow-up interviews.

(ii) Computational versus Planning Costs

The study by Johnston (1963) pioneered the categorisation of tax compliance costs into computational and planning costs. Computational costs arise from mandatory compliance requirements by the tax authorities, and they are unavoidable, while planning costs, on the other hand, are discretionary items related to the tax minimising efforts of a company (Pope, 2003). Tax administrators and policy makers insist that only computational costs constitute legitimate measures of tax compliance costs, as planning costs involve efforts to legally avoid tax, which in turn, will reduce the government revenue (Evans & Tran-Nam, 2001). However, Tran-Nam et al. (2000) argued that both costs are rightfully incurred by taxpayers in complying with tax legislation. They further argued that it would be impossible to fully distinguish between these two costs as both are inherent elements of the tax process. Thus, the preferred approach by most major studies is to include both computational and tax planning costs into the compliance costs estimation.

(iii) Commencement versus Recurrent Costs

Compliance costs can be further divided into commencement and recurrent compliance costs. Commencement costs are transitional expenses that are incurred due to a significant change made to an existing tax system. With major changes in the tax system, taxpayers may incur a sizeable amount of initial irregular costs (Hanefah et al., 2001). One example is an expense incurred for the initial training of staff to deal with a proposed tax change and to become familiar with new regulations (Tran-Nam & Glover, 2002b). Recurrent costs on the other hand, are regular or on-going compliance costs incurred by taxpayers, who are already familiar with the new tax amendments that have been introduced (Sandford et al., 1989; Tran-Nam et al., 2000). According to Evans (2003b), most studies tend to note the distinction but none has empirically estimated the costs separately, especially for analyses on CIT compliance costs.

(iv) Social Compliance Costs versus Taxpayer Compliance Costs

Tax compliance is not only associated with costs as there are potential benefits to be derived as a result of compliance activities (Evans, 2003b; Tran-Nam et al., 2000). These studies identified three main types of offsetting benefits from tax compliance:

- Managerial benefits – businesses may improve their decision-making process as a result of strict record keeping requirement by the tax authorities. Due to compliance obligations, taxpayers have better record keeping and better knowledge of their financial affairs.
- Cash flow benefits - businesses have the use of tax payable for a period before they must be remitted to tax authorities. The benefits arise due to the lapse of time between the derivation of taxable revenue and the time when tax liability on that particular revenue needs to be paid.
- Tax deductibility benefits - business taxpayers are entitled to deductions for some of their compliance costs. This benefit arises when tax compliance activity, such as fees paid to external tax professionals, is a tax deductible expense.

The pioneering work of Sandford et al. (1989) classified compliance costs of taxation into gross and net compliance costs. A net compliance cost is derived after allowing for managerial and cash flow benefits that materialise from compliance obligations (Equation 2.1). This prominent distinction made in Sandford et al. (1989)'s study has become quite established in the literature and has been applied in many empirical studies (see Allers, 1994; Hasseldine, 1995; Pope & Fayle, 1991; Pope, Fayle & Chen, 1994).

Equation 2.1

$\text{Net Compliance Cost} = \text{Gross Compliance Cost} - \text{Managerial benefits} - \text{Cash Flow Benefits}$
--

Tran-Nam (2001a) nevertheless attested that Sandford et al. (1989)'s composition does not clearly distinguish between taxpayer compliance costs (TCC) and social compliance costs (SCC). TCC are directly borne by a taxpayer, whereas SCC represent the total resource costs to the economy (Evans, Ritchie, Tran-Nam & Walpole, 1996, 1997). TCC are derived after deducting cash flow and tax deductibility benefits. These offsetting benefits represent a transfer within the economy as the benefits enjoyed by taxpayers can be viewed as costs to the tax authorities, which reduce the compliance costs to taxpayers, but not to the economy (Evans et al., 1996, 1997). Thus, the Evans et al. (1996, 1997) study, better known as the ATAX study,

extended the tax compliance costs estimation framework by distinguishing between SCC (Equation 2.2) and TCC (Equation 2.3) conceptual frameworks, as follows:

Equation 2.2

$$SCC = \text{Direct monetary outgoings incurred by taxpayers} + \text{Imputed costs of time and resources spent by taxpayers on their tax affairs} - \text{Managerial benefits to taxpayers}$$

Equation 2.3

$$TCC = \text{Social compliance costs} - \text{Cash flow and tax deductibility benefits to taxpayers}$$

In addition, Evans et al. (1997, p. 31) expressed the business taxpayer compliance costs into a general formula, stated as follows:

$$TCC = \sum_{k=1}^3 \sum_{l=1}^5 N_{kl} [EC_{kl} + IC_{kl}] - \sum_{k=1}^3 \sum_{l=1}^5 N_{kl} 0.5 (1 + p_{kl}) t_{kl} [EC_{kl} + IC_{kl}] - \sum \sum CB_{km}$$

where:

TCC = business taxpayer compliance costs;

k = business size based on level of turnover [$k = 1$ (small), 2 (medium), 3 (large)];

l = legal form [$l = 1$ (sole trader), 2 (partnership), 3 (trust), 4 (superannuation fund), 5 (company)];

N = total number of business taxpayers;

EC = average internal labour costs (including time spent by business owners, staff and unpaid helpers on business tax affairs);

p = proportion of taxable business taxpayers;

t = average marginal tax rate;

m = tax types/tax collection mechanisms [$m = 1$ (provisional tax), 2 (tax debit assessments), 3 (tax refunds), 4 (PAYE), 5 (FBT), 6 (WST), 7 (PPS), 8 (company tax instalment) & 9 (superannuation fund tax instalments)]; and

CB = cash flow benefits/costs (if cash flow costs are involved, the values will be negative).

This review highlights main issues complicating the attempt to construct an estimation framework in order to empirically measure tax compliance costs incurred by taxpayers. It is observed that the challenges in the measurement of tax compliance costs for corporations include: (i) insufficient characterisation of what constitutes a comprehensive measure of tax compliance costs; and (ii) the difficulty of measuring some of the components of tax compliance costs, especially on psychological costs and the offsetting benefits of tax compliance. Yesegat (2009) argued that due to problems in the definition and measurements, some studies have reduced their scope of tax compliance costs' operational definitions by confining them to those that were readily available. She further highlighted that given the ambiguity in measuring tax compliance costs, apart from exercising considerable caution in deriving the estimates, the results can only be used as indicative.

The following section provides an overview of the empirical research completed to date on tax compliance costs both internationally and in Malaysia. This overview focuses on compliance costs studies on corporate taxpayers and is organised into two parts; studies in the advanced economies followed by the emerging economies. A tabular overview of the research findings with regards to tax compliance costs is provided in Appendix 2.1.

2.2.3 Empirical Studies in the Advanced Economies

This section summarises the extensive studies on tax compliance costs in the advanced economies. Haig's (1935) study in the US is the first known estimation of tax compliance costs. He found that the estimated costs amounted to 2.3 percent of tax liability, compliance costs varied among different types of taxes and there was transferability between administrative costs and taxpayer compliance costs. The validity of these findings are however questionable because the response rate was low and biased towards large manufacturing companies. In addition, Godwin (1978) argued that the study was conducted during the depths of depression where tax liabilities were abnormally low, which may have distorted the ratios of compliance costs to tax liabilities.

Following Haig's early work, there were a number of tax compliance costs studies in the US, among others: Oster and Lynn (1955), Johnston (1963) and Wicks and Killworth (1967). These studies employed various methodologies, including face-to-face interviews, mail surveys, student surveys and case studies. Similar studies have been conducted in other countries, such

as by Bryden in 1961 in Canada (as cited in Sandford et al., 1981) and Strumple (1966) in Germany. According to Sandford et al. (1989), these early studies were a good attempt to highlight the additional burden of taxation on businesses, but they suffered from a range of weaknesses including small sample size, low response rate and focusing on compliance costs estimation of the entire tax systems.

The first modern study on the estimation of tax compliance costs is by Sandford (1973) in the UK on personal income tax. He used a survey method to collect responses from professional tax advisors and individuals. The survey instruments were better designed and administered and had comparatively higher response rates compared to earlier studies. The study is a starting point to a series of comprehensive and most cited studies (see Godwin & Sandford, 1983; Sandford et al., 1981; Sandford et al., 1989; Sandford, 1995a and 1995b), which landed Sandford the recognition as ‘father of tax compliance costs’.

Similar studies on estimation of tax compliance costs were also conducted in developed countries, especially in the US (Slemrod & Blumenthal, 1996; Slemrod & Sorum, 1984; Slemrod & Venkatesh, 2002) and Australia (Evans et al., 1996, 1997; Pope, 1993a, 1995; Pope & Fayle, 1991; Pope et al., 1994; Tran-Nam & Glover, 2002b). To date, there is at least one study conducted in the Organisation for Economic Co-operation and Development (OECD) countries, for example Erard (1997) in Canada, Sandford and Hasseldine (1992) in New Zealand and Chan, Cheung, Ariff and Loh (1999) in Hong Kong.

Tax compliance costs estimates have been reported in detail for most countries in the advanced economies. These literatures covered several types of taxes, such as personal income tax, CIT and goods and services tax (GST), as well as different types of taxpayers, including individuals and corporate taxpayers. This present study focuses on CIT; hence, the remainder of this review on the advanced economies centres upon tax compliance costs estimation of corporate taxpayers, especially large companies.¹⁴ A summary of the main findings of major CIT compliance costs in the advanced economy is presented in Table 2.1. Some studies which include corporations as only part of a comprehensive study on all types of taxes and/or taxpayers (for example Sandford & Hasseldine, 1992) are not covered in this review.

¹⁴ Refer to related works for a more detailed account of tax compliance costs studies of various types of taxpayers and taxes: Ariff and Pope (2002); Evans (2003a); Evans, Pope and Hasseldine (Eds.) (2001); Pope (2005); Sandford (1995a); Vaillancourt and Clemens (2008).

Table 2.1 Corporate Tax Compliance Costs Studies in Advanced Economies

<i>Author(s);Year</i>	<i>Findings on Tax Compliance Costs</i>
Sandford et al. (1989)	<ul style="list-style-type: none"> Compliance costs of UK corporation tax in 1986-87 were £300m in aggregate or 2.2% of tax revenue. Half were fees paid to external tax professionals.
Pope et al. (1991)	<ul style="list-style-type: none"> Compliance costs of Australian PLCs in 1986-87 were AUD646m - AUD1,341m or 11.4% - 23.7% of tax revenue. 91% used external advisers and 84% used a combination. Computational costs 55% and planning costs 45%.
Pope et al. (1994)	<ul style="list-style-type: none"> Compliance costs of Australian companies in 1990-91 amounted to AUD3,245.9m or 22.9% of tax revenue.
Ariff et al. (1995)	<ul style="list-style-type: none"> Compliance costs of Singaporean PLCs in 1994 were SGD78,396 per company. 6% used entirely internal staff and 94% used a combination.
Slemrod and Blumenthal (1996)	<ul style="list-style-type: none"> Compliance cost of US large corporation for 1992 were USD1.57m per company; USD2.08b in aggregate or 3.2% of revenue yield. Tax reform Act 1986 increased compliance costs.
KPMG (1996)	<ul style="list-style-type: none"> Compliance costs of UK listed companies in 1995-96 were £265m in aggregate, an increase of 33.6% due to complex, uncertain and badly drafted legislation.
Slemrod (1997)	<ul style="list-style-type: none"> The average compliance costs for US large companies increased to USD1.9m in 1996 representing 8.1% percent increased in real terms compared to 1996 study.
Ariff et al. (1997)	<ul style="list-style-type: none"> Compliance costs of Singaporean PLCs in 1995 decreased to SGD54,615 per company. 6% used entirely internal staff and 94% used a combination.
Erard (1997)	<ul style="list-style-type: none"> Compliance costs of top 500 corporations in Canada totalled CAD250m and ranged from 4.6% to 4.9% of revenue yield for 1995.
Chan et al. (1999)	<ul style="list-style-type: none"> Compliance costs of Hong Kong PLCs in 1995-96 were HKD346,483 per company.
Slemrod and Venkatesh (2002)	<ul style="list-style-type: none"> Tax compliance cost of US large and mid-sized business in 2000 were USD254,451; between USD21b and USD22.3b in aggregate; or between 28% and 29.6% of tax revenue. Internal (58.7%), external (24.8%) and incidental (16.5%).

Source: Sapiei and Kasipillai (2010)

Sandford et al. (1989) examined compliance costs of CIT for 1986-87 in the UK through a survey of 3,000 businesses. They estimated the CIT compliance costs to be £300 million, 2.2 percent of CIT revenues collected and 0.24 percent of the GDP. Half of the compliance costs incurred were fees paid to external tax professionals. 'Regressivity'¹⁵ of CIT compliance costs was established where tax compliance costs estimates as a percentage of taxable turnover, ranged from 0.048 percent for the smallest corporation, to 0.01 percent for the largest corporation. A study by KPMG in 1996 (as cited in Evans, 2003a) on UK listed corporations, for the period 1991-96, suggested a 33.6 percent increase in total tax compliance costs. The study concluded that the increase was mainly due to complex, ambiguous and badly drafted legislation.

In Australia, Pope et al. (1991) provided compliance costs estimates of Australian PLCs, utilising the 1986/87 survey data. They found compliance costs estimates of between AUD646 and AUD1,341 million or 11.4 to 23.7 percent of CIT revenue. A subsequent study using survey data of 2,531 Australian companies for 1990/91, found a similar estimate of CIT compliance costs at approximately 22.9 percent of revenue collected (Pope et al., 1994). Evans et al. (1996, 1997) evaluated the compliance costs of all business-related federal taxes for the 1994/95 period. These studies found a considerably lower tax compliance costs estimation of businesses, inclusive of the self-employed, to be approximately 9.4 percent of taxes collected or 1.02 percent of GDP. In spite of dissimilarity in compliance costs estimation, mainly due to differences in population studied, regressivity of tax compliance costs were evidenced in all Australian studies.

In the US, a seminal study based on a sample of 1,329 large corporations, reported estimated compliance costs of CIT totalled USD2.08 billion in aggregate, 2.6 percent of revenues collected with average compliance costs of USD1.57 million per company (Slemrod & Blumenthal, 1996). About a year later, Slemrod (1997) identified higher average compliance costs for large companies (USD1.9 million), indicating 8.9 percent increase in real terms. Slemrod and Venkatesh (2002) analysis on large and mid-sized businesses, estimated the compliance costs in 2001 tax year to be USD254,451 per company, between USD21 and USD22.3 billion in aggregate, or between 28 and 29.6 percent of tax revenue. The study found

¹⁵ Regressivity of CIT compliance costs means they were disproportionately distributed among different size groups of taxpayers, suggesting that relative compliance costs decrease as company size increases (Ariff & Pope, 2002). Larger companies were generally found to have greater total compliance costs than smaller counterparts, but as a percentage of annual sales turnovers, compliance costs were greater for smaller as compared to larger companies.

that companies in the media, communications and technology sectors had the highest average total compliance costs, while those in the retail, food and healthcare sectors had the lowest. Slemrod (2004), who completed a broader study on all corporations and partnerships, estimated the overall cost of compliance for businesses to be approximately USD40 billion for the 2004 tax year. The most recent US study by Moody, Warcholik and Hodge (2005) examined the rising costs of complying with federal income tax regulations, utilising Inland Revenue Service (IRS) data. The study found that in 2005, the majority of tax compliance costs were borne by businesses, totalling nearly USD148 billion. They projected that by year 2015, the compliance costs will grow to USD482.7 billion due to complexity in the tax laws. As with all other existing literatures, the US studies found a regressive relationship between costs of compliance and company size.

Ariff, Loh and Talib (1995) study's furnished CIT tax compliance costs estimation of PLCs in Singapore for year of assessment 1994. The study found average compliance costs of SGD78,396 per PLC, which they considered as 'reasonable' compared to other countries. A similar Singapore estimate, conducted a year later utilising 1995 data, discovered a significant decrease of tax compliance costs to SGD54,615 per PLC due to simplification in the tax system (Ariff, Ismail & Loh, 1997). Regressivity of tax compliance costs per SGD1,000 sales turnover by turnover group ranged from SGD0.083 (largest group) to SGD0.395 (smallest group) due to economies of scale.¹⁶ Comparable findings from a similar CIT tax compliance costs study in Hong Kong were also reported by Chan et al. (1999). The study, which was administered for fiscal year 1995, observed the typical regressivity of tax compliance costs. The CIT compliance costs estimation was approximately 0.126 percent of sales turnover and the study did not find any major industry sector variation in patterns of tax compliance costs.

In Canada, a report for the Technical Committee on Business Taxation by Erard (1997), examined the tax compliance costs of Canadian large companies for the 1995 tax year. The report indicated average tax compliance costs of CAD507,000 per company and CAD250 million in aggregate, representing approximately five percent of taxes paid.¹⁷ The tax compliance costs of Canadian large companies increased with size although less than

¹⁶ Regressivity derives from economies of scale in operation, which favours larger companies, together with the presence of deadweight nondiscretionary component of compliance costs (Ariff & Pope, 2002). They suggested that nondiscretionary component include the costs of setting up records, employing trained personnel and making returns to the tax authorities where every company would incur a certain minimum cost in this regard.

¹⁷ The estimation includes compliance costs of income and capital taxes.

proportionately, portraying regressivity. It was also reported that companies in the mining, oil and gas sectors, as well as those with foreign operations, incurred considerably higher tax compliance costs. Vaillancourt and Clemens (2008) estimated corporate tax compliance costs in Canada, employing a top-down approach, by applying the compliance costs findings of the Canadian Federation of Independent Business (CFIB) survey (2005).¹⁸ The estimated tax compliance costs in 2005 were CAD13.0 billion in aggregate, representing 1.0 percent of GDP. It was concluded that the Canadian CIT imposed higher compliance costs on corporations as compared to other countries, hence suggesting a reform of the tax system in order to preserve competitiveness (Vaillancourt & Clemens, 2008).

The findings from these compliance costs estimation studies can be compared among countries. Australian estimates for example, were much higher in relation to a similar study in the UK due to a number of factors, including legal complexity, self-assessment environment, size distribution of taxpayers and the extent of tax planning activity (Tran-Nam et al., 2000). Chan et al. (1999) suggested tax compliance costs of Hong Kong PLCs were relatively high compared to those incurred in Singapore and Australia due to difficulties with territorial source basis, higher level of external compliance costs, as well as low tax administrative costs. Nevertheless, according to Vaillancourt and Clemens (2008), international comparisons of tax compliance costs estimation need to be interpreted with caution due to huge dissimilarities in the design and nature of tax systems in different countries.

Studies on corporate taxpayers in the advanced economies, especially those listed in Table 2.1, have many important contributions. Apart from establishing many of the measurements and conceptual issues in estimating tax compliance costs, five major aspects of compliance costs have emerged from these studies:

- (i) The compliance costs of changes in the tax system tend to be high and the costs increase with complexity in the tax system.
- (ii) Compliance costs comprise a significant share of tax related costs and is high, either measured in absolute money terms, as a percentage of income tax revenue or as a percentage of GDP.

¹⁸ The top-down approach of estimating tax compliance costs is conducted by deducing from the estimation of earlier studies. Interested readers may refer to Vaillancourt and Clemens (2008) for further details.

- (iii) Compliance costs are influenced by the size of the companies measured in terms of sales turnover. However, compliance costs are regressive as there are economies of scale in complying with tax laws.
- (iv) Compliance costs vary according to industry sectors but not to the amount of tax paid.
- (v) A majority of corporate taxpayers employ external tax professionals to handle tax activities and larger companies spend a greater proportion of their total compliance expenditures on tax planning when compared to their smaller counterparts.

2.2.4 Empirical Studies in the Emerging Economies

This section summarises the limited amount of research on tax compliance costs estimations of corporations in the emerging economies, especially in Malaysia. Studies in these countries are not well established due to a lack of interest in the area of tax compliance costs, aggravated by a lack of co-operation from tax authorities (Klun, 2004). Governments in advanced economies encourage studies on tax compliance costs to the extent that they finance such studies. This is not the case with emerging economies as there is very little pressure on tax authorities to reveal compliance costs (Ariff & Pope, 2002). Despite these obstacles, there have been several studies undertaken on compliance costs of taxpayers in the emerging economies (Table 2.2).

Bertolucci (2002) examined compliance costs of Brazilian listed companies for 1999 tax year. His estimation found that tax compliance costs were BRL7.2 billion in aggregate representing 0.75 percent of GDP. Compliance costs of Indian companies in 2000-01 were around 5.6 to 14.5 percent of tax revenues (Chattopadhyay & Das Gupta, 2002). Net compliance costs were between -0.7 and +0.6 percent of corporate tax revenue after recognising the offsetting benefits of cash flow and tax deductibility.

Klun (2001) administered compliance costs research in value added tax (VAT) and personal income tax in Slovenia and in 2002/03, a similar study was conducted on CIT, social security contributions and excise duties. Compliance costs of Slovenian companies in 2002 were estimated to be SIT1.5 million per company, 4.2 percent of tax revenue and one percent of GDP (Klun, 2004). The estimation included compliance costs incurred by corporate taxpayers on VAT (67 percent), CIT (23 percent) and deducted taxes (10 percent).

Table 2.2 Corporate Tax Compliance Costs Studies in Emerging Economies

<i>Author(s);Year;</i>	<i>Findings on Tax Compliance Costs</i>
Loh, et al. (1997)	<ul style="list-style-type: none"> Compliance costs of Malaysian PLCs in 1995 were MYR68,836 per company. 72% of the costs were paid to external tax advisers.
Bertolucci (2002)	<ul style="list-style-type: none"> Compliance costs of Brazilian PLCs in 1999 were BRL7.2b in aggregate representing 0.75% of GDP. 80% of the costs were internally incurred.
Chattopadhyay & Das Gupta (2002)	<ul style="list-style-type: none"> Compliance costs of Indian companies in 2000-01 were around 5.6 percent to 14.5 percent of tax revenues. Net compliance costs were between -0.7% and +0.6% of corporate tax revenue.
Klun (2004)	<ul style="list-style-type: none"> Compliance costs of Slovenian companies in 2002 were SIT1.5m per company, 4.2% of tax revenue; 1% of GDP.
Blazic (2004)	<ul style="list-style-type: none"> Compliance costs of Croatian companies in 2001-02 were HRK27,113 per company, HRK2,038.6m in aggregate, representing around 1.2% of GDP.
Abdul-Jabbar (2009)	<ul style="list-style-type: none"> Compliance costs of Malaysian SMEs in 2006 were MYR9,295 per company. 41% of the costs were paid to external tax advisers.
Yesegat (2009)	<ul style="list-style-type: none"> Compliance costs of Ethiopian companies in 2005-06 were ETB108m in aggregate, representing 2% of VAT revenue and 0.13% of GDP.

Source: Sapiei and Kasipillai (2010)

Blazic (2004) carried out a broad-based survey into compliance costs covering all Croatian taxes for 2001/02. The study found average tax compliance costs of HRK27,113 per company and HRK2,038.6 million in aggregate, representing around 1.2 percent of GDP. Computed as a percentage of specific tax revenues, tax compliance costs were 11.76 percent for CIT, 4.47 percent for VAT and 2.90 percent for wage taxes.

Yesegat (2009) examined compliance costs incurred by the Ethiopian companies in relation to VAT for 2005/06 fiscal year. Her estimation showed that tax compliance costs were ETB108 million in aggregate, representing two percent of VAT revenue and 0.13 percent of GDP. Most of these studies in the emerging economies (except for the study by Chattopadhyay & Das Gupta, 2002), concluded that the compliance costs are relatively low as compared to the countries in the advanced economies.

Tax studies in Malaysia are very limited especially in the area of tax compliance costs. A review of literature revealed only three published CIT compliance costs studies in Malaysia (Table 2.3). The first study on tax compliance costs incurred by Malaysian taxpayers is by Loh et al. (1997). They examined the costs of complying with income tax among PLCs. The study estimated the average compliance costs to be MYR68,836 per company, which is MYR0.26 per MYR1,000 sales turnover. The second study by Hanefah et al. (2001) estimated the costs of complying with income tax by small and medium enterprises (SMEs). The study observed that the average SME's compliance costs were MYR20,703 amounting to approximately four percent of the tax liability. The third study by Abdul-Jabbar (2009) which evaluated compliance costs estimations for corporate SMEs under the SAS environment, discovered a much lower average of MYR9,295 per company. Regressivity of tax compliance costs which were revealed in the existing studies¹⁹ was also evident in all the three Malaysian studies.

Table 2.3 Average Income Tax Compliance Costs in Malaysia

<i>Compliance Costs</i>	<i>PLCs^a</i> <i>(Loh et al., 1997)</i>	<i>SMEs^b</i> <i>(Hanefah et al., 2001)</i>	<i>SMEs^c</i> <i>(Abdul-Jabbar, 2009)</i>
Internal	MYR19,176 (28%)	MYR15,493 (75%)	MYR5,509 (59%)
External	MYR49,660 (72%)	MYR5,210 (25%)	MYR3,786 (41%)
Total	MYR68,836 (100%)	MYR20,703 (100%)	MYR9,295 (100%)

Source: ^aLoh et al. (1997) ^bHanefah et al. (2001) ^cAbdul-Jabbar (2009)

The study on SMEs by Abdul-Jabbar (2009) revealed that the average compliance costs in the SAS environment was almost 58 percent lower than the pre-SAS study conducted by Hanefah et al. (2001). This finding is contrary to the presumed expectation, where for instance, Sandford (1973) argued that the compliance costs of changes in the tax system tend to be high. Abdul-Jabbar (2009) also observed a notable increase in the proportion of costs relating to external work, which is averaging 25 percent annually during the pre-SAS era, and increasing to almost 41 percent in the post-SAS study, suggesting that tax advisors play a significant role in the SAS regime.

The following discussion presents a review of the theoretical models and measurement of taxpayers' compliance behaviour, together with the relevant empirical studies.

¹⁹ Such results conformed to the findings of nearly all tax compliance costs studies conducted in the past.

2.3 Tax Compliance Literature

Unlike taxpayer compliance costs burden, tax compliance behaviour has always been an area of concern to the tax policy makers. Tax administrators and legislators have a pragmatic interest in determining why some taxpayers do not comply with reporting requirements as it will affect revenue collection and the ability of the government to achieve its fiscal and social goals (Collins, Milliron & Toy, 1990; Tan & Sawyer, 2003). Tax compliance is defined as the accurate reporting of income and claiming of expenses in accordance with the stipulated tax laws (Alm, 1991). Thus, the failure of corporations to report or pay CIT is considered as corporate tax non-compliance (Slemrod, 2004).

2.3.1 Theoretical Models of Tax Compliance

There are two main approaches to tax compliance, namely economic and behavioural approaches (James, Hasseldine, Hite & Toumi, 2001). The economic approach is based on the concept of economic rationality, while the behavioural approach applies concepts from disciplines such as psychology and sociology. The basic theoretical model applied in the economic approach is built upon the work of Becker (1968), who analysed criminal behaviour using an economic framework known as economics-of-crime model. It was first employed in the context of tax compliance study by Allingham and Sandmo in 1972. The model is based on: (i) expected utility theory, and (ii) deterrence theory.

(i) Expected utility theory

A mathematical driven analysis published by Allingham and Sandmo (1972) was based on the assumption that taxpayers will seek to maximise their expected utility as follows:

$$E(U) = (1 - p)U(w - tx) + pU(w - tx - P(w - x))$$

where:

U = cardinal utility

x = reported income

p = probability of detection, constant across x

w = actual income (known only to the taxpayer)

t = tax rate

P = penalty rate (P is assumed > 0)

The expected utility theory views taxpayers as a perfectly amoral utility-maximisers, who choose to evade taxes whenever the expected gain exceeds the cost (Allingham & Sandmo, 1972). The theory predicates that tax non-compliance decisions are based on comparison between the benefits and costs of evasion.

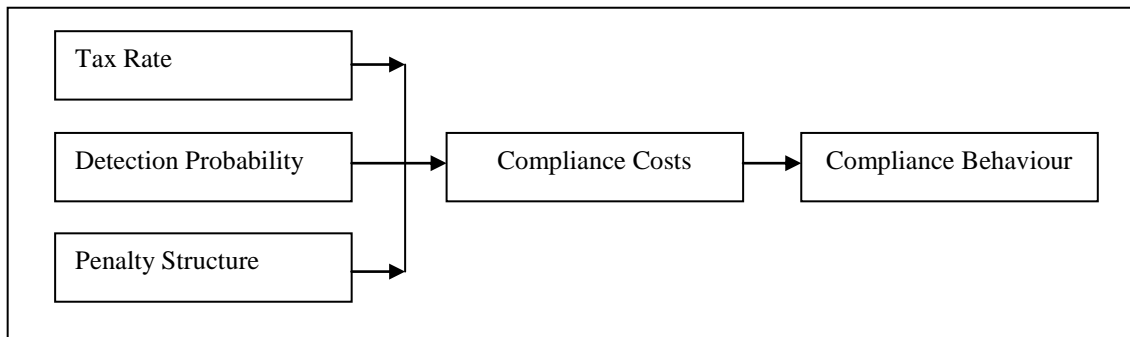
(ii) Deterrence theory

The deterrence theory is concerned with the effects of sanctions and sanction threats on criminal or undesirable behaviour (Cuccia, 1994). The main assumption of the deterrence theory is that individuals are intelligent, well informed and calculate the costs and benefits of undertaking one choice or another (Varma & Doob, 1998). Therefore, an increase in the severity of penalties and certainty of their imposition will discourage illegal behaviour by increasing its perceived or threatened costs (Pate & Hamilton, 1992).

The economic approach assumes that taxpayers will evade tax as long as the benefit of underreporting taxes is greater than the expected cost of being caught and punished (Allingham & Sandmo, 1972). Their theoretical analysis suggested that increase in the penalty rate and greater probability of detection would result in higher income being declared. Hence taxpayer compliance behaviour is determined by punishment and/or sanctions. From thereon, nearly all economic approaches to tax compliance continued with this framework (see Alm & McKee, 2004; Cowell, 1990, 2004; Hanlon, Mills & Slemrod, 2005; Joulfaian, 2000; Slemrod, 1992). Within this framework, the tax rate, detection probability and penalty structure, determine the monetary costs of compliance, which determine taxpayers' compliance behaviour (Fischer, Wartick & Mark, 1992).

The framework is termed as financial self-interest model (see Figure 2.2) and it has become a prominent approach in investigating taxpayer compliance behaviour. Based on this model, compliance behaviour is determined by rational economic consideration of perceived costs and benefits derived from specific action of taxpayers.

Figure 2.2 Financial Self-interest Model



Source: Fischer et al. (1992, p. 3)

There are few modifications and/or extensions to the financial self-interest model in examining taxpayer compliance. Yitzhaki (1974) made a minor adjustment in the form of tax penalty, where he argued that penalties are imposed upon the evaded tax and not upon undeclared income. Beck and Jung (1989) extended the precedent economic model by incorporating uncertainty about taxable income, tax liability and the use of tax agents. Slemrod (1989) broadened the model to include complexity in the tax system and hypothesised that complexity increases the cost of complying with tax laws and as a result, encourages non-compliance. Slemrod (2004) presumed that tax complexity led to non-compliance and focused on how the standard economic approach to tax evasion needs to be modified when applied to public corporations. These modifications and extensions, however were generally derived from the static model of Allingham and Sandmo (1972) which relied on calculus to prove their theories, given a lack of real-life data (McKerchar, Hodgson & Datt, 2008).

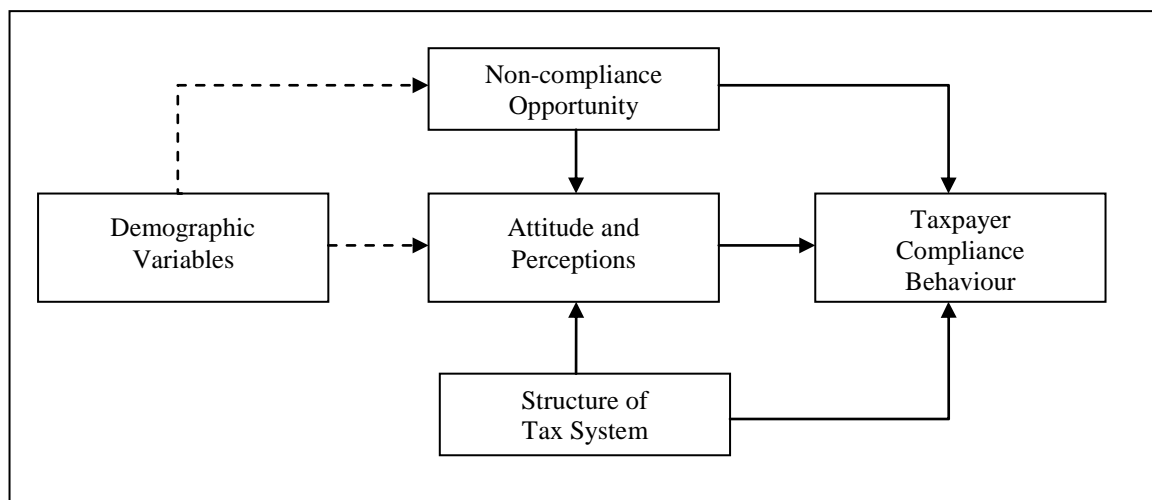
Graetz and Wilde (1985) contended that taxpayers' compliance behaviour cannot be explained entirely by the economic factors, as the individuals' behaviour and psychological factors may also contribute some impact. According to Cullis and Lewis (1997), the economic approach has an obvious appeal but lacks realism and humanity as it appears to take human place in a vacuum. This is due to unrealistic assumptions, such as taxpayers will respond in an identical and predictable manner when exposed to a change in any variable and that all taxpayers seek to maximise utility (McKerchar et al., 2008).²⁰ Behavioural approach, by contrast, assumes that individuals are not simply independent, selfish utility maximisers, but they interact according to differing attitudes, beliefs, norms and roles (Elffers, 1991). The behavioural perspective

²⁰ McKerchar et al. (2008) noted that regardless of these shortcomings, the economic approach has made a valuable contribution to the compliance literature, particularly in respect of the development of theory.

incorporates sociological and psychological factors, such as age, gender, ethnicity, education, culture, institutional influence, peer influence, ethics and tax morale, as factors that may affect compliance behaviour of taxpayers.²¹

Fischer et al. (1992) expanded the financial self-interest model by incorporating the economic, sociological and psychological variables (Figure 2.3). This model predicts that demographic variables indirectly influence tax compliance behaviour through their effects on non-compliance opportunities and attitudes.

Figure 2.3 Expanded Model of Taxpayer Compliance



Source: Fischer et al. (1992, p. 4)

Both economic and behavioural approaches have contributed to the understanding of tax compliance behaviour and could be used to supplement each other. According to Hasseldine and Bebbington (1991), a study designed on a blend of both the approaches seems most appropriate as no one approach is likely to be totally effective in explaining compliance behaviour of taxpayers. In addition, understanding taxpayer behaviour is one that continues to be both complex and challenging, that emanates from a variety of disciplines, including economics, psychology and sociology (McKerchar et al., 2008).

²¹ The behavioural perspective is not discussed in greater detail as the focus of this study is concerning the relationship between taxpayer compliance costs and tax non-compliance behaviour.

2.3.2 Empirical Studies of Corporate Tax Compliance

Empirical literature on tax compliance has mainly been concerned with individual taxpayers; while the analysis of corporate tax compliance has, on the contrary, been rather neglected. According to Rice (1992), despite the evidence that corporations have accounted for an increasingly large portion of total tax evasion, this has not attracted scholarly analysis, as compared to the individual taxpayers.²² He suggested that a possible explanation for such a lack of research concerning corporation tax evasion is due to the difficulty in capturing analytically the non-compliance decisions of corporate taxpayers. Nonetheless, the tax compliance studies on individual taxpayers have provided a formal framework to analyse the corporate taxpayers' compliance decision (Abdul-Jabbar & Pope, 2008b). A review of the extensive literatures on factors affecting individual tax compliance behaviour indicates three main categories, namely, demographic, economic and behavioural determinants. The 'demographic' determinants include age, gender, education and occupation; the 'economic' determinants include income level, income source, tax rates, sanctions; and the 'behavioural' determinants include complexity, fairness, revenue authority contact, peer influence and ethics (Richardson, 2006). Therefore, most corporate tax compliance studies (see Table 2.4) utilised the standard theoretical model of compliance for individual taxpayers to investigate the issue of corporate tax reporting behaviour.

Rice (1992) examined the nature of medium-sized corporations that evade income tax, measured in terms of unreported income. Micro-data from the 1980 Taxpayer Compliance Measurement Program (TCMP)²³ database accessible from IRS were utilised. Employing similar measurement, Joulfaian (2000) focused on the role of managerial preferences on tax compliance behaviour, employing the managers' understatement of their personal income tax as proxies. The study investigated the relationship between independent variables (managerial preferences and corporate characteristics) and the undeclared amount of corporate net income in excess of USD100, as a dependent variable.

²² Tax evasion appears to be an enormous and increasing issue in the US, growing at annual rate of 14 percent since 1973 (Alm, 1988), while the IRS estimated ratio of the corporate tax gap has seen the growth from around 20 percent through the early 1980s to approximately 40 percent in the 1990s (Rice, 1992).

²³ TCMP data were based on studies conducted by IRS to estimate revenue loss as a result of tax evasion through line by line audit of tax returns.

Table 2.4 Main Findings of Corporate Tax Compliance Studies

<i>Author(s)(Year)</i>	<i>Tax Compliance Behaviour of Corporations</i>
Rice (1992)	<ul style="list-style-type: none"> ▪ Investigates the nature of corporations that evade income tax. ▪ Compliance is positively associated with public disclosure. ▪ Profit performance influences tax compliance. ▪ The marginal tax rate is associated negatively with compliance. ▪ No relationship between firm size and tax compliance.
Kamdar (1997)	<ul style="list-style-type: none"> ▪ Examines the nature and determinants of corporate income tax compliance in the US. ▪ Audit act as an effective deterrent to corporate non-compliance. ▪ Increasing penalties and lowering marginal tax rate would not necessarily enhance compliance.
Joulfaian (2000)	<ul style="list-style-type: none"> ▪ Focuses on the role of managerial preferences on tax compliance behaviour. ▪ Firms with managers who have understated their personal taxes experience greater non-compliance. ▪ Marginal tax rates, audit rate, firm size and income level influences upon non-compliance behaviour. ▪ Foreign ownership does not have significant impact on non-compliance.
Hanlon et al. (2005)	<ul style="list-style-type: none"> ▪ Examines the relationship between corporate non-compliance and corporate characteristics in the US. ▪ Corporate non-compliance was 13% of the tax liability. ▪ Non-compliance as a fraction of a scale measure is U-shaped. ▪ Corporate characteristics determine corporate compliance behaviour (size, industry, multi-nationality, being publicly traded, presence of intangible assets and executive compensation).
Abdul-Jabbar (2009)	<ul style="list-style-type: none"> ▪ Examines the compliance behaviour of corporate SMEs in Malaysia using self-reported compliance data. ▪ Tax complexity and probability of tax audit significantly influenced non-compliance behaviour. ▪ Business size, tax level, compliance costs, tax fairness and IRB relationship did not influenced non-compliance behaviour. ▪ Inconclusive findings on the impact of business length, sector, tax rate and incentives on the non-compliance behaviour.

Source: Sapiei and Kasipillai (2010)

Another US study by Kamdar (1997) analysed the nature and determinants of CIT compliance, mainly using data extracted from the IRS annual reports. The author utilised tax deficiencies proposed by the IRS upon audit as a measure of corporate non-compliance and added two new variables, namely penalty structure and probability of detection. The study employed a time series analysis to yield more reliable estimates of the corporations' evasion behaviour. Subsequently, by also utilising the IRS audit data, Hanlon et al. (2005) examined the relationship between corporate non-compliance and corporate characteristics. Corporate non-compliance, as a dependent variable, was measured by tax deficiencies proposed by the IRS upon audit. Corporate characteristics, as independent variables, included firm size, industry, foreign ownership, multi-nationality and public or private companies.

All studies on tax compliance of corporate taxpayers summarised in Table 2.4, except for Abdul-Jabbar (2009), utilised government reported data²⁴ and were conducted in the US. Rice (1992) and Joulfaian (2000) utilised the TCMP data, while the work of Kamdar (1997) and Hanlon et al. (2005) was based on the annual report of IRS reported data. Tax non-compliance of these US studies was either measured through the undeclared amount of corporate net income (Rice, 1992; Joulfaian, 2000) or the tax deficiencies proposed by the IRS upon audit (Kamdar, 1997; Hanlon et al., 2005).

The use of government reported data to examine the determinants of evasion was however, subjected to data limitation due to the confidentiality requirements surrounding taxpayers' returns (Hite, 1988) and the restricted access to compliance micro-data in protecting the confidentiality of IRS audit selection criteria (Kamdar, 1997). Other issues surrounding this data included ambiguity of what is considered as actual non-compliance, possibility of mistakes in characterising legitimate tax planning with non-compliance and some under-reporting of income that may not be detected through tax audits (Slemrod, 2007). The question is whether the government reported data through financial audits will be able to accurately measure the tax compliance decisions of corporate taxpayers.

²⁴ Measuring tax compliance behaviour is a challenging task (De Juan, Lasheras & Mayo, 1994; Hasseldine & Li, 1999). Three approaches most commonly use to measure tax compliance behaviour are government reported data, field observation and self-reported compliance data (Dubin & Wilde, 1988; Hite, 1988; Long & Swingen, 1991). The three approaches are discussed in greater detail in the following Chapter 3 (Section 3.3: Research Method in Tax Studies).

Despite some shortcomings, findings from prior studies have provided evidence on the factors affecting corporations' reporting decisions. Rice (1992) found that profit performance influenced tax compliance but no relationship was observed between firm size and tax compliance. Tax compliance was positively associated with public disclosure and negatively associated with the marginal tax rate. A study by Kamdar (1997) discovered that audit rates and profit performance had a positive and significant impact on tax compliance. No significant relationship was found between tax compliance and true income, marginal tax rates, probability of detections, penalties and other socio-economic factors. The author suggested that greater audit coverage could act as an effective deterrent to corporate non-compliance, resulting in substantial rise in tax revenues.

In another corporate tax compliance study, Joulfaian (2000) ascertained that non-compliant corporations are more likely to be managed by executives who have failed to comply with their individual income tax obligations and vice-versa. The author proposed for future studies to include managerial preferences as one of the tax compliance determinants. Moreover, marginal tax rates, audit rate, firm size and income level, was found to influence non-compliance behaviour, while foreign ownership was found not to have significant impact on non-compliance. The most recent US study by Hanlon et al. (2005) estimated corporate non-compliance to be 13 percent of the tax liability. Non-compliance rate for corporations relative to their size, was U-shaped, where larger companies were observed to be more non-compliant than smaller counterparts, but the medium-sized companies had the lowest non-compliance rate. According to the authors, the unexpected finding was connected with the opportunity for non-compliance. With regards to corporate characteristics: size, industry, multi-nationality, being publicly traded, presence of intangible assets and executive compensation determine corporate compliance behaviour. Two other corporate characteristics, effective tax rates and quality of governance, had no effect on compliance behaviour of corporate taxpayers.

Given the limitation and confidentiality in utilising the government reported data, Abdul-Jabbar (2009) examined tax compliance behaviour of corporate SMEs in Malaysia using self-reported compliance data. The study utilised survey method and adopted hypothetical tax scenarios to measure tax compliance behaviour. Tax complexity and probability of tax audit significantly influenced non-compliance behaviour; while business size, tax level, compliance costs, tax fairness and IRB relationship did not. The author found inconclusive findings on the impact of business length, sector, tax rate and incentives on the compliance behaviour of corporate SMEs.

2.4 Corporate Income Tax Compliance Costs and Compliance Behaviour: Knowledge Gaps

A review of existing tax literatures on compliance costs and compliance behaviour of CIT found evidence of high compliance costs incurred by corporate taxpayers, where this compliance burden may cause resentment and adversely influence their compliance behaviour. Based on these literatures, this section discusses important knowledge gaps that require further investigation with regards to tax compliance costs estimations and their influence on compliance behaviour of large corporate taxpayers.

There are very limited studies on the magnitude and nature of compliance costs borne by taxpayers in Malaysia. No studies have been conducted on tax compliance costs of large corporations since the Malaysian government introduced SAS in 2001. Findings from existing tax compliance costs studies have identified a number of determinants affecting the magnitude of compliance costs for companies. These determinants include complexity of the tax system, business size, the nature of business and the length of time business has been operating. However, the exact relationship between these factors and the magnitude of tax compliance costs, as well as the significance of their relationship, remain unanswered. Thus, there is a need to identify the potential determinants of tax compliance costs of corporate taxpayers, especially under the self-assessment regime. More importantly, for the Malaysian study, where incentives are large in quantity, the fraction of these compliance costs has not been acknowledged.

A review of the literature also found that limited empirical research has been attempted to study the compliance behaviour of corporate taxpayers. No compliance data of large corporate taxpayers has been previously made available in Malaysia and internationally, with the exception of the four US studies: Rice (1992); Kamdar (1997); Joulfaian (2000) and Hanlon et al. (2005). Findings from these limited prior studies provided some evidence on the determinants of corporate taxpayers' compliance behaviour. Some of the main determinants are corporate characteristics (such as firm size, industry sector, multi-nationality and being publicly traded); and economic determinants (such as marginal tax rates, audit rate and penalty rate) which influenced non-compliance behaviour. These existing studies on corporate taxpayer's compliance (Rice in 1992, Kamdar in 1997, Joulfaian in 2000 and Hanlon et al. in 2005) were

based on IRS reported data in the US except for Abdul-Jabbar's (2009)²⁵ study on SMEs, where the researcher utilised a survey method. As the latter study was only limited to Malaysian corporate SMEs, no research so far has attempted to study the determinants of tax compliance behaviour for large corporate taxpayers utilising taxpayers self-reporting approach.

Furthermore, the majority of tax compliance costs and tax compliance literatures investigated tax compliance costs separately from taxpayers' compliance decisions. Tax compliance costs research to date has mainly focused on the estimation and the differences between size and type of businesses. Likewise, tax compliance literatures have mainly focused on the determinants of tax compliance behaviour of individual taxpayers. In addition, the limited literature on compliance decisions of corporate taxpayers were mostly restricted to studies on corporate characteristics determinants utilising government reported data. Therefore, very little is known about the influence of tax compliance costs, economic and behavioural factors on the taxpayers' compliance behaviour.

A few theoretical literatures have suggested tax compliance costs as a possible determinant of tax compliance behaviour (Hasseldine, 2001; Jenkins & Forlemu, 1993; Slemrod, 1989, 2001 & 2004; Tran-Nam, 2003). These literatures proposed that the level of compliance costs could potentially be one of the factors that affected the compliance decisions of corporate taxpayers. Slemrod (1989, 2001) solicited a theoretical analysis between tax compliance costs and compliance behaviour by incorporating compliance costs factor into Allingham and Sandmo's (1972) model. A straightforward relationship was not established between the two variables of interest and Slemrod (2004) suggested studying concurrent analysis of both companies and owners.

Jenkins and Forlemu (1993), Hasseldine (2001) and Tran-Nam (2003) also theoretically analysed the significance of linking the tax compliance costs and compliance behaviour studies. Jenkins and Forlemu (1993) provided an overview of tax compliance determinants focusing on tax compliance costs. Their study suggested that simplification of the tax system and enhanced taxpayer services would reduce compliance costs and correspondingly increase the level of voluntary compliance. Hasseldine (2001) reviewed the general characteristics of compliance costs and taxpayers' compliance studies. He recommended researchers to investigate the

²⁵ Abdul-Jabbar (2009) found attitudinal aspects such as tax complexity and probability of audit influences non-compliance behaviour.

linkages and to act as a bridge over the current gulf between these two streams of research. Similarly, Tran-Nam (2003) featured the role of tax law complexity, compliance costs, tax advisers and administrators towards taxpayers' compliance. However, although the importance of linking tax compliance costs and compliance behaviour was emphasised, these studies did not provide a formal model on how these two research streams could be integrated.

With regards to empirical studies, to date, there are only three studies that have investigated the relationship between the level of compliance costs and taxpayers' compliance decisions. Acknowledging the dearth of knowledge in this area, Chattopadhyay and Das-Gupta (2002) explored the impact of compliance costs on compliance. The linkage was investigated by extending Slemrod's (1989) model that was based on Allingham and Sandmo's (1972) model of income tax non-compliance. The extended model segregated compliance costs into avoidance and mandatory costs, as the latter costs were assumed to have revenue benefits by increasing the probability of detection and punishment for non-compliance. Utilising survey data, the study ascertained that legal monetary compliance costs adversely affected compliance decisions. However, the study by Chattopadhyay and Das-Gupta (2002) has some methodological shortcomings due to data incompleteness, sample representativeness and low response rate (Abdul-Jabbar, 2009). Also using self-reported compliance data, Abdul-Jabbar (2009) examined the relationship between tax compliance costs and compliance behaviour of corporate taxpayers. The study utilised the widely adopted hypothetical tax scenarios to measure tax compliance behaviour. However, no significant relationship was found and hence the author emphasised the need for future studies to consider other types of taxpayers, such as large companies.

Yesegat (2009) aimed to identify if and to what extent tax compliance costs and non-compliance behaviour were related. A mixed method research design was utilised, employing face-to-face interviews of taxpayers and practitioners, as well as experimentation with student subjects. It was discovered that compliance costs adversely affected the intentional reporting compliance decisions, although the relationship was statistically weak. Nevertheless, the correlation between compliance costs and intentional non-compliance behaviour was derived mainly from the experimental data, where the variables used, including compliance costs estimations, were hypothetical in nature (Abdul-Jabbar, 2009).

Chattopadhyay and Das-Gupta (2002) studied personal income taxpayers in India, Yesegat's (2009) study was confined to VAT in the context of Ethiopia and Abdul-Jabbar's (2009) study

was limited to corporate SMEs in Malaysia. To the best of our knowledge, no empirical research has attempted to study the impact of CIT compliance costs upon tax compliance of large corporate taxpayers internationally and in Malaysia. Thus, there is no existing empirical evidence on relationship between the level of compliance costs and tax compliance of large corporate taxpayers.

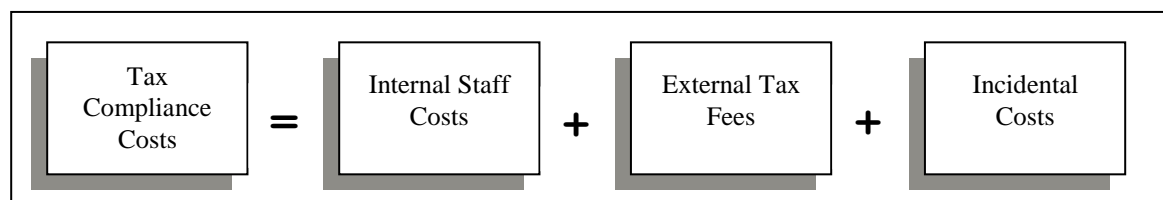
2.5 Estimation Framework and Research Model

Based on the research gaps identified from the literature of tax compliance costs and tax compliance behaviour, an estimation framework of tax compliance costs and a research model of this study were developed. Accordingly, in line with the underpinning theories and past empirical findings on tax compliance costs and taxpayers compliance behaviour, 15 hypotheses were then formulated.

2.5.1 Estimation Framework of Tax Compliance Costs

In order to have consistent tax compliance costs estimate for this study, a compliance costs estimation framework is required. Major research in the field of compliance costs of corporate taxpayers which provide a guide to researchers in developing such a framework include Pope, 1993a; Sandford et al., 1989; and Tran-Nam et al., 2000. The compliance costs estimate should therefore incorporate all costs incurred under the income tax system of corporations, namely internal staff costs, external tax fees and incidental costs as shown in Figure 2.4.

Figure 2.4 Estimation Framework of Tax Compliance Costs²⁶



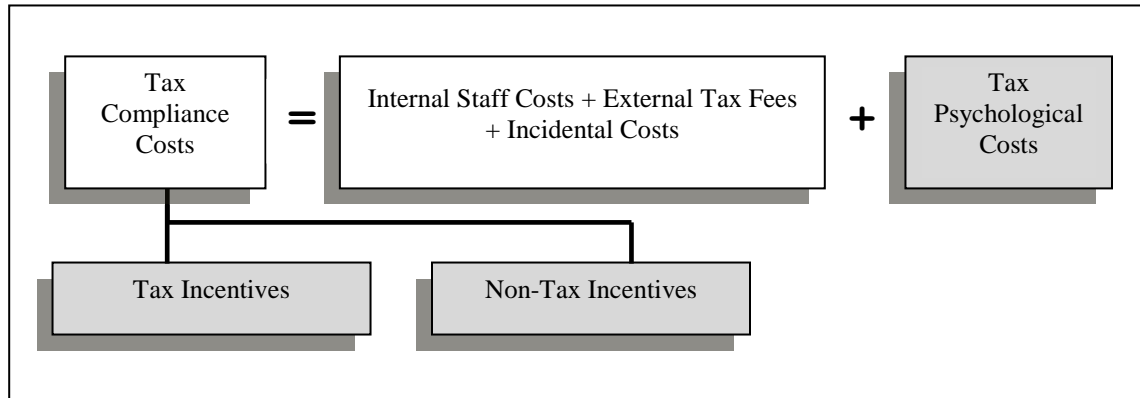
Adapted from Pope (1993a); Sandford et al. (1989); Tran-Nam et al. (2000).

In addition to assessing the magnitude of overall compliance costs and the proportion of computational and planning costs, this study identified the fraction of costs associated with tax

²⁶ The estimation framework refers to gross compliance costs before adjusting for offsetting managerial, cash flow and tax deductibility benefits (see Subsection 2.2.2).

incentives and psychological costs incurred by corporate taxpayers. The estimating model of corporate tax compliance costs with the proposed distinction is shown in Figure 2.5.

Figure 2.5 Estimation Framework with Proposed Distinction



The findings of existing studies on compliance costs estimates established the regressivity of CIT compliance costs incurred by corporate income taxpayers (see especially Ariff et al. 1995; Chan et al. 1999; Erard, 1997; Evans et al., 1996, 1997; Pope, 1993a, 1994; Sandford et al., 1989; Slemrod & Venkatesh, 2002). These studies cited an inverse relationship between company compliance costs as a percentage of revenue and company size, suggesting that compliance costs decreased as company size increased. CIT compliance was disproportionately distributed among different size groups of taxpayers, where as a percentage of annual sales turnovers, compliance costs were greater for smaller as compared to larger companies.

Therefore, Hypothesis 1 (H_1) posits that company's compliance costs as a proportion of company's sales turnover tend to be regressive as they bear more heavily on smaller companies as compared to the larger ones.

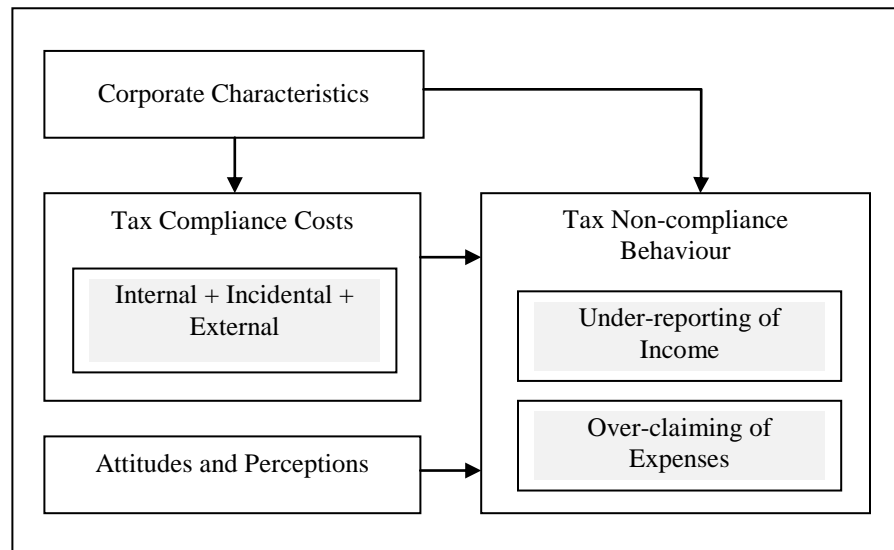
H_1 : The distribution of corporate income tax compliance costs is not fair as smaller companies bear a disproportionately heavier burden of compliance costs.

2.5.2 Development of Research Model of this Study

The purpose of this section is to formulate the research model of this study as depicted in Figure 2.6. Given that this research covers two streams of tax research, namely compliance costs and compliance behaviour, a single research model would be insufficient in order to develop the

hypotheses of this study. Thus, hypotheses for this study are related to two models: Model 1 (Determinants of CIT Compliance Costs) and Model 2 (Determinants of Tax Non-compliance Behaviour).

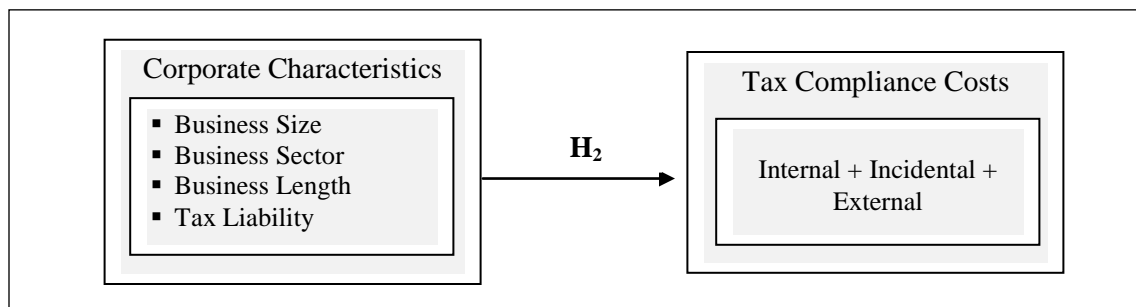
Figure 2.6 Research Model of this Study



2.5.2.1 Model 1: Determinants of Tax Compliance Costs

Model 1 examines the determinants which affected the magnitude of CIT compliance costs burden of Malaysian corporate taxpayers (Figure 2.7). The model focuses on the relationship between corporate characteristics as predictor variables (Size, Sector, Length and Tax Liability) and Tax Compliance Costs as a dependent variable.

Figure 2.7 Model 1: Determinants of CIT Compliance Costs



Hence, the first model of this research substantiates a number of hypotheses on the determinants of taxpayers' compliance costs, namely: (i) Business Size, (ii) Business Sector, (iii) Business Length and (iv) Tax Liability.

(i) Business Size and Tax Compliance Costs

The findings of existing studies on corporate income taxpayers' compliance costs estimates have established that the absolute amount of compliance costs is statistically higher for larger companies (see especially Ariff et al. 1995; Chan et al. 1999; Erard, 1997; Evans et al., 1996, 1997; Pope, 1993a, 1994; Sandford et al., 1989; Slemrod & Venkatesh, 2002). Thus, Hypothesis 2a (H_{2a}) posits that company size, as measured by company's sales turnover, is a predictor of a company's compliance costs.

H_{2a} : There is a positive relationship between company size and the level of a company's compliance costs.

(ii) Business Sector and Tax Compliance Costs

Total compliance costs may vary across different types of industries (Erard, 1997; Slemrod & Venkatesh, 2002). Erard's (1997) study on Canadian corporations found that compliance costs tend to be positively associated with foreign operations and they were substantively larger among corporations in the natural resources sector. In the US, Slemrod and Venkatesh (2002) found that companies in the media, communications and technology industries incurred the highest average total compliance costs while those in retail, food and healthcare groups had the lowest. Nevertheless, Chan et al.'s (1999) study on Hong Kong PLCs found no major industry variations in patterns of compliance costs.

Based on these studies, even though there is no overall consensus on the influence of industry sectors on compliance costs, there is evidence that industry sectors do influence taxpayers' compliance costs. Accordingly the following Hypothesis 2b (H_{2b}) was formulated:

H_{2b} : There is a variation between business sectors and the level of a company's compliance costs.

(iii) Business Length and Tax Compliance Costs

Business length refers to the number of years that a company has been in operation. It is expected for companies that have been in business for a longer period to have lower tax compliance costs as the CIT system has been established for some time. However, no empirical study has identified a significant relationship between business length of corporate taxpayers and their compliance costs.

This study examined the influence of business length on compliance costs of corporate taxpayers. As such Hypothesis 2c (H_{2c}) was formulated:

H_{2c} : There is a negative relationship between business length and the level of a company's compliance costs.

(iv) Tax Liability and Tax Compliance Costs

Tax Liability refers to the amount of estimated tax liability that will be incurred based upon the corporate chargeable income. It is expected that companies with higher tax liability will have greater tax compliance costs due to the amount of tax work involved. However, no empirical study has identified a significant relationship between tax liability of corporate taxpayers and their compliance costs.

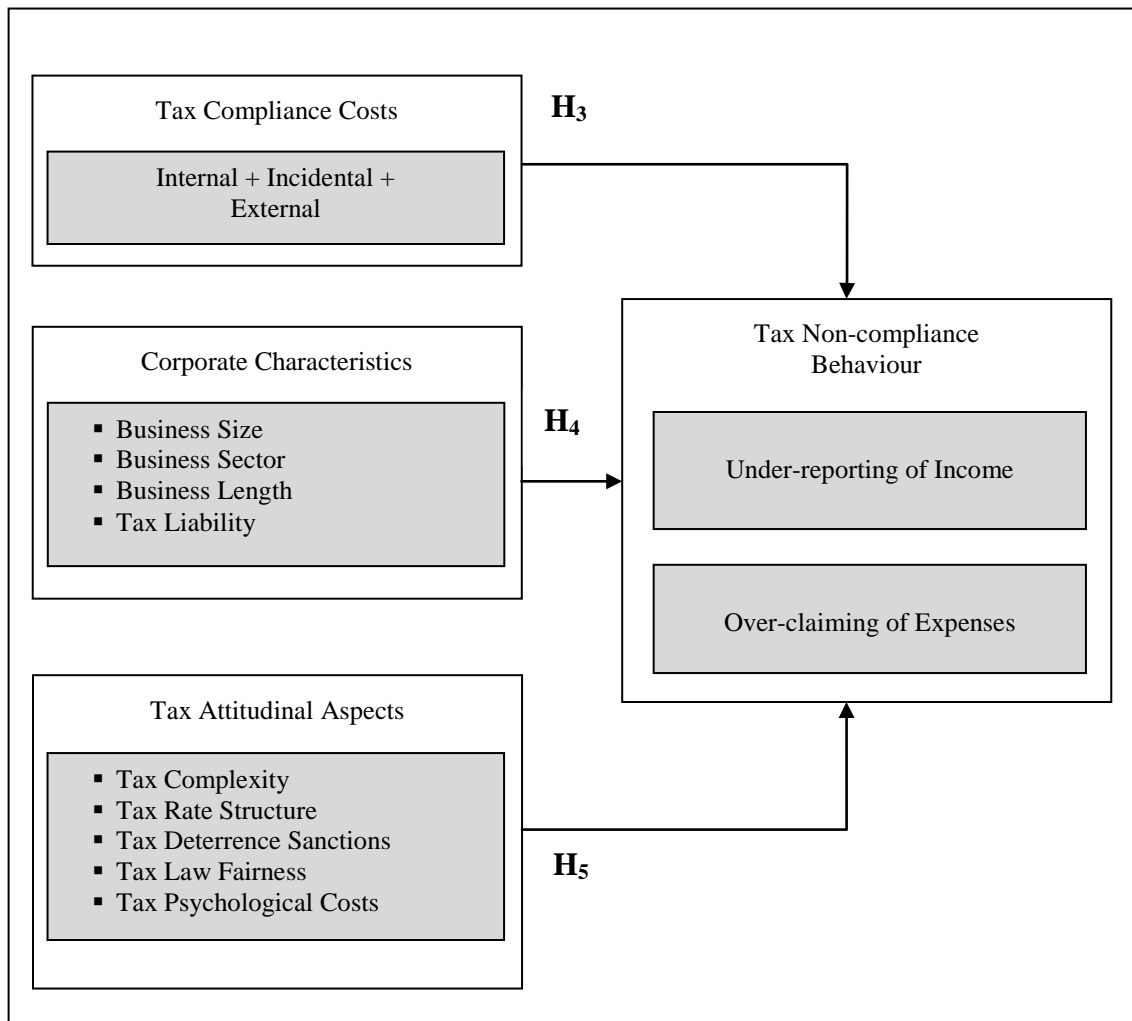
This study examined the influence of tax liability on compliance costs of corporate taxpayers. As such, Hypothesis 2d (H_{2d}) was formulated:

H_{2d} : There is a positive relationship between tax liability and the level of a company's compliance costs

2.5.2.2 Model 2: Determinants of Tax Non-compliance Behaviour

Model 2 was designed to explore the influence of tax compliance costs on compliance decisions of corporate taxpayers, as well as the extent of relationship between the predictor variables (corporate characteristics, tax compliance costs and tax attitudinal aspects) and the dependent variable (tax non-compliance behaviour).

Figure 2.8 Model 2: Determinants of Tax Non-compliance Behaviour



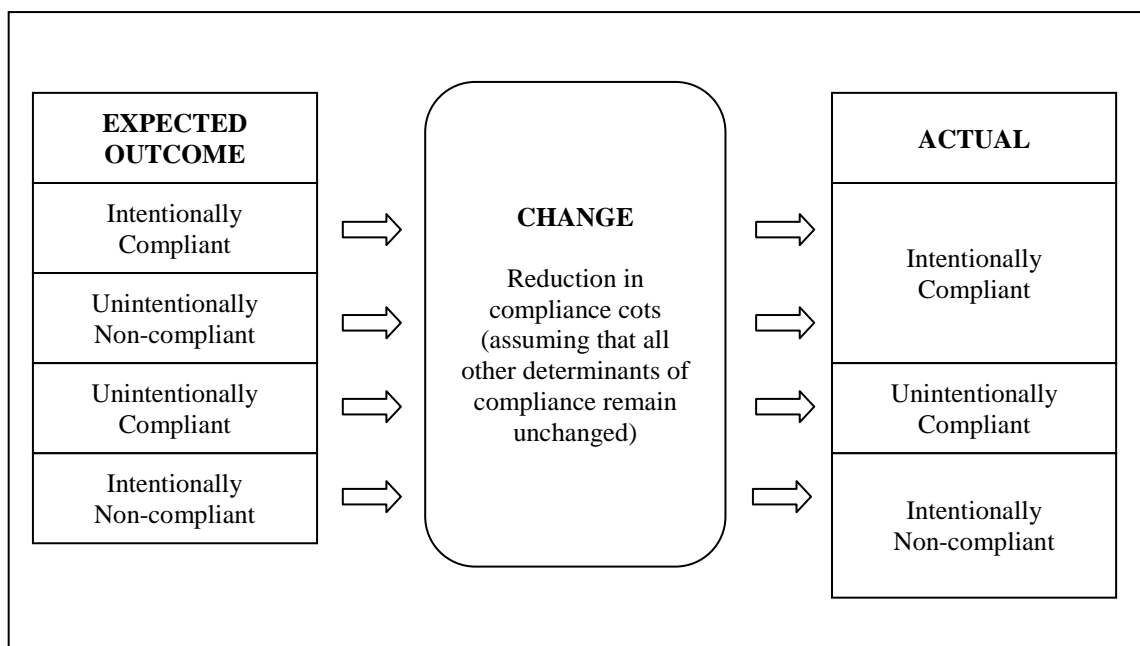
Tax compliance behaviour is a complex issue, consisting of numerous variables, for which no all-embracing explanatory theory has been established (Richardson & Sawyer, 2001). In this regard, the development of research hypotheses of tax compliance behaviour was based on the expanded financial self-interest model as well as past empirical research.

In this model, tax non-compliance is the dependent variable which is the variable of primary interest and the predictor variables include: (i) Tax Compliance Costs (ii) Corporate Characteristics [Business Size, Business Sector, Business Length and Tax Liability] and (iii) Tax Attitudinal Aspects [Tax Complexity, Tax Rate Structure, Tax Deterrence Sanctions, Tax Law Fairness and Tax Psychological Costs].

(i) Tax Compliance Costs and Non-compliance Behaviour

Based upon the theories of tax evasion as well as existing evidence from past empirical research, taxpayers' compliance decisions may, to a certain degree, be caused by the tax compliance costs incurred. The increase in tax compliance costs could result in a higher level of tax non-compliance decisions of both an intentional and unintentional nature. Taxpayers may intentionally opt not to comply with the tax regulations in order to reduce their tax compliance costs burden. Conversely, high compliance costs burden due to complexity in the tax law may result in unintentional non-compliant taxpayers. In this study, a model depicting the relationships between tax compliance costs and compliance behaviour is based on McKerchar's (2002) Tax Complexity – Compliance Model (Figure 2.9).

Figure 2.9 Relationship of Compliance Costs and Compliance Behaviour: A Model



Source: McKerchar's (2002, p. 31) Tax Complexity – Compliance Model

Drawing on McKerchar's (2002) Tax Complexity – Compliance Model and assuming tax compliance costs as the only determinant of taxpayers' compliance behaviour, the relationship between compliance costs and compliance decisions could be predicted. As illustrated in Figure 2.9, taxpayers who are expected to be intentionally and unintentionally compliant would remain the same with reduction in the tax compliance costs. On the contrary, taxpayers who are expected to be unintentionally non-compliant would respond positively with reduction in tax

compliance costs. Therefore, a reduction in compliance costs would increase the level of compliance and its elimination would result in zero unintentional non-compliant taxpayers. Those who were expected to be intentionally non-compliant would remain the same but if tax compliance cost is the reason for their non-compliance, a positive response is anticipated.

This study examined the relationship between the CIT compliance costs and corporate non-compliance behaviour, through under-reporting of income and over-claiming of expenses. As such Hypothesis 3 (H_3) was formulated:

H_3 : *A reduction in tax compliance costs reduces the level of non-compliance among corporate taxpayers*

(ii) Corporate Characteristics and Non-compliance Behaviour

With regards to tax compliance behaviour of corporations, the review of past literature identified some corporate characteristics as determinants of corporate taxpayers' compliance decisions. Even though there are still mixed results from the limited study of corporate taxpayers' compliance behaviour (Abdul-Jabbar, 2009; Hanlon et al., 2005; Joulfaian, 2000; Rice, 1992), the empirical findings found some characteristics do influence taxpayer compliance.

Nevertheless, the results also suggested that the significance of the relationship between the determinants and tax compliance behaviour should be confirmed through empirical work in other tax jurisdictions and/or other types of taxpayers. As such, Hypothesis 4 (H_{4a} , H_{4b} , H_{4c} , and H_{4d}) were formulated as follows:

H_{4a} : *There is a relationship between business size and non-compliance of corporate taxpayers.*

H_{4b} : *There is a relationship between business sectors and non-compliance of corporate taxpayers.*

H_{4c} : *There is a relationship between business length and non-compliance of corporate taxpayers.*

H_{4d} : *There is a relationship between tax liability and non-compliance of corporate taxpayers.*

(iii) Tax Attitudinal Aspects and Non-compliance Behaviour

There are propositions in the literature that compliance behaviour of taxpayers was also influenced by their attitudes and perceptions (Ajzen & Fishbein, 1977). In order to comprehensively address the research problem, this study attempted to validate a number of propositions that were tested in earlier tax compliance behaviour studies. The propositions are grouped into tax attitudinal aspects variables which consist of perceptions on tax law complexity, fairness in the tax rate structure, tax deterrence sanctions, tax law fairness and tax psychological costs.

▪ Complexity in the Tax System

With increasingly complex tax legislations, complexity has been identified as a potential determinant for tax non-compliance (Jackson & Milliron, 1986). Complex tax legislation may add to the taxpayers' compliance burden and encourage non-compliance behaviour. According to Long and Swingen (1988), tax complexity weakens taxpayers' ability to comply by making the task more onerous and costly, and at the same time, reduces taxpayers' willingness to comply by impairing the moral force of the law. Furthermore, Slemrod (2004) argued that tax complexity led to non-compliance because a more complex system would be more difficult to enforce which would reduce the probability of taxpayers being audited. Findings from the studies on compliance behaviour of individual taxpayers have shown that complexity of the tax system significantly impacts their compliance decisions (Clotfelter, 1983; Milliron, 1985; Richardson, 2006). As such, the following hypothesis was formulated:

H_{5a} : There is a relationship between perceived tax complexity and non-compliance of corporate taxpayers.

▪ Tax Rates structure

The theoretical model of tax compliance also identified perceived unfairness in the tax rate structure as a determinant of compliance behaviour. If the tax rate structures are perceived to be irrationally unfair, there will be more tax evasion. Empirical evidence on the effect of fairness in tax rate structure of individual taxpayers showed that perceived unfairness of tax rate structure affected non-compliance decisions. For example, Clotfelter (1983) discovered that

progressive versus flat tax rate was the significant tax rate structure variable in relation to tax compliance decisions. As such, the following hypothesis was formulated:

H_{5b} : There is a relationship between perceived fairness in the tax rate structure and non-compliance of corporate taxpayers.

▪ **Tax Deterrence Sanctions**

This study also investigates the corporate taxpayers' perceptions towards the IRB enforcement strategies, particularly on tax deterrence sanctions. Most tax authorities have commonly relied on legal sanctions as primary deterrents to taxpayers' non-compliance behaviour. The tax deterrence enforcement strategies consist of three sanctions variables, namely audit likelihood, detection likelihood and penalty severity. In line with the deterrence theory, perceived higher audit probabilities and detection likelihood, as well as stricter penalty structures, would deter taxpayers from being non-compliant.

Audit Likelihood

Under the self assessment environment, tax audit is one of the main tools used to deter non-compliance (Kasipillai, 2005). This is based on the assumption that taxpayers would be encouraged to comply with the law more readily if there is a credible likelihood that their tax returns may be audited (Song & Yarbrough, 1978). The general deterrent effects of tax audit likelihood have been widely acknowledged (Beron, Tauchen & Witte, 1992; Dubin, 2007).

Findings from empirical studies have also shown that tax audit could be an important stimulant to tax compliance (Abdul-Jabbar, 2009; Joulfaian, 2000; Kamdar, 1997). However, most of the studies administered to investigate the influence of tax audit on compliance behaviour of corporate taxpayers have commonly relied on the actual audit rates. According to Andreoni et al. (1998), taxpayers views on the probability of being selected for audit may be more suitable for understanding their compliance behaviour as in practice they may not have information on actual audit rates.

Detection Likelihood

Detection likelihood refers to the probabilities that tax non-compliance activity will be discovered by the tax authorities. Increasing the likelihood of detection will increase tax compliance and tax audit acts as one of the effective deterrent measures used by tax authorities (Alm, 1991). Past empirical studies on individual taxpayers have found the perceived probabilities of detection to be a significant determinant of tax compliance (Franzoni, 1998).

Penalty Severity

Another important deterrence factor for tax non-compliance behaviour is the severity of penalties. It is based on a theory that fear of severe penalties is an important measure to encourage tax compliance. Empirical studies have shown that non-compliance decisions of individual taxpayers were found to be indirectly related to the severity of penalties (Grasmick & Scott, 1982; Schwartz & Orleans, 1967; Tittle, 1980). In an experimental study conducted by Hasseldine, Hite, James and Toumi (2007) on sole proprietors, there was evidence of a significant effect on tax compliance behaviour. A study on CIT compliance, however, found no significant effect between the two variables examined (Kamdar, 1997).

In general, higher audit probabilities, detection likelihood and severe penalties discourage tax compliance. Drawing on the financial self-interest model of tax compliance and findings from past empirical studies between tax deterrence sanctions determinants and tax non-compliance, the following hypothesis was formulated:

H_{Sc} : There is a relationship between perceived tax deterrence sanctions and non-compliance of corporate taxpayers.

▪ Fairness of the Tax System

Research investigating the relationship between perception of fairness and compliance is drawn from equity theory (Cuccia & Carnes, 2001). Tax non-compliance decisions may be seen as a measure by which taxpayers try to restore equity in their terms of trade with the government,

where a taxpayer would increase the amount of taxes evaded if inequity is perceived (Sia, Salleh, Sambasivan & Kasipillai, 2008).

Taxpayers' perception towards fairness in the tax systems affects compliance behaviour (Jackson & Milliron, 1986; Roth, Scholz & Witte, 1989), but the findings from past studies are mixed. Some studies observed a significant negative association (Hite & Roberts, 1992; Song & Yarbrough, 1978; Spicer & Becker, 1980), while others found no significant relationship between fairness and non-compliance (Kaplan & Reckers, 1985; Mason & Calvin, 1984). Based on equity theory and findings from the past empirical studies between perception of fairness and tax compliance, the following hypothesis was formulated:

H_{5d} : There is a relationship between perceived fairness of the tax system and non-compliance of corporate taxpayers.

▪ Tax Psychological Costs

Tax psychological costs come about because dealing with tax affairs is usually an unpleasant experience and hence imposes a cost on taxpayers (Vaillancourt & Clemens, 2008). Tran-Nam and Glover (2002a) endeavoured to study the perceived level of psychological costs, when they examined the transitional compliance costs of GST in Australia. Brunton (2005) explored the perceived level of psychological costs in estimating the tax compliance costs incurred by New Zealand's SMEs and self-employed individuals. More recently, Yesegat (2009) investigated whether the psychological costs of VAT compliance in Ethiopia were perceived to be high.

Past empirical studies conducted to examine the influence on compliance decisions found that perceived psychological costs deserve due consideration, particularly for SMEs. As such the following hypothesis was formulated:

H_{5e} : There is a relationship between perceived level of psychological costs and non-compliance of corporate taxpayers.

2.6 Chapter Summary

This chapter provides an overview of tax compliance costs and tax compliance literatures from which an estimation framework for tax compliance costs and a research model of this study are derived. Accordingly, hypotheses of this study are developed. The review commenced with an elaboration of taxation compliance costs, followed by compliance behaviour and the linkage between the two streams of research. From the literature review, it was discovered that there is a scarcity of research on the corporate sector, especially regarding the impact of tax compliance costs on compliance behaviour. Despite several limitations, empirical evidence suggests that tax compliance costs amounted to a significant share of tax revenue and GDP of a particular tax administration, regressive in nature with regards to company size, and may influence the compliance decisions of taxpayers. The next Chapter (Chapter 3) describes and explains the methodology deployed in this study.

CHAPTER 3

RESEARCH METHOD

3.1 Introduction

The preceding chapter (Chapter 2) presented the literature review of the two main areas of this study, namely tax compliance costs and tax compliance behaviour. This chapter (Chapter 3) outlines the research method and procedures employed in examining the research problem of the study. The research method adopted is based on the experience of previous researchers with modifications to suit specific characteristics of Malaysian tax compliance requirements. Section 3.2 provides a discussion on the research paradigm adopted in this study. Section 3.3 presents an overview of the research methods in tax research and the justification for choosing the survey research method. This is followed by research sampling design (Section 3.4); research instruments (Section 3.5); measurement of variables (Section 3.6) and an outline of the data collection method (Section 3.7). In Section 3.8, an overview of the data analysis techniques is provided, including detailed descriptions of data screening and validation, descriptive analysis of the sample, as well as development of tax compliance costs estimation formula and regression models. Finally, Section 3.9 provides the summary of this chapter.

3.2 Research Paradigm

An effective research requires the selection of a suitable research paradigm in order to answer the research questions of the study (Guba & Lincoln, 1994). According to McKerchar (2010), the underlying paradigm utilised by a researcher plays an important role as it delineates:

- the researcher's view of the world (*ontological*);
- how researchers' believe that knowledge is created (*epistemological*); and
- the most applicable research methods to further knowledge and understanding of reality (*methodological*).

Healy and Perry (2000) and Neuman (2000) categorised alternative research paradigms into four groups: positivism, critical realism, interpretivism and critical theory. The majority of research conducted in the taxation domain is based upon positivist research paradigm, as evidenced by the preference for questionnaire-based survey, hypothesis testing and quantitative research designs (Evans, 2003a). He argued that the dominance of positivist paradigm within

tax compliance costs research was due to the ability of quantitative methods to produce statistically rigorous and focused studies. As outlined in Chapter 1 of this thesis, the main research questions of this study involve the estimation of tax compliance costs, identification of the determinants of tax compliance costs and investigation of the relationship between tax compliance costs and compliance behaviour. These types of questions are best answered through quantitative analysis.

The other three paradigms were considered but were found to be unsuitable for this study. Positivism differs from the other paradigms because it believes that a social reality is waiting to be discovered (Neuman, 2000). By contrast, critical realism argues that reality is subjective rather than objective, and dependent upon the values, meaning and interpretation that individuals attach to the world they live in (socially constructed) (Neuman, 2000, p. 65). Under the interpretivist paradigm, the purpose of research is to develop an understanding of social life and discover how people construct meaning in natural settings (Neuman, 2000, p. 71). The purpose of research guided by the critical theory paradigm is to critique and transform social relations by revealing the underlying sources of social relations and empowering people, especially less powerful people (Neuman, 2000, p. 76). Thus, for the purpose of this study, the positivism paradigm is deemed most appropriate.

3.3 Research Approach in Tax Studies

There are three broad types of approaches that have been employed in tax compliance costs and compliance behaviour research streams: experimental, survey and tax auditing approaches (Elffers, Robben & Hessing, 1992; Evans, 2003a; Richardson & Sawyer, 2001).²⁷

- The experimental approach uses field observation which necessitates respondents to make tax compliance decisions in an experimental or a laboratory setting. Experimental research is commonly employed in order to discover relationships, to refine theories and to build theoretical models (Hasseldine & Li, 1999), and is considered as the best means for establishing causality (Trivedi, Shehata & Mestelman, 2005).

²⁷ For a comprehensive discussion on the consequences of different strategies in measuring tax compliance behaviour such as government reported data, field observation and self reports, also refer to Elffers, Weigel and Hessing (1987); Hite (1988); Long and Swingen (1991).

- The survey approach utilises self-reported data by asking taxpayers directly (first person) and/or indirectly (third person) about their tax compliance burden and filing behaviour. This approach is utilised to study beliefs, opinions, attitudes, motivations and behaviour in order to discover interrelationships among variables of interest (Jackson & Milliron, 1986).
- The tax auditing approach analyses the actual taxpayer compliance from government reported data that are available within and/or compiled through audit activities (Long & Swingen, 1991). While experimental and survey approaches are taxpayer-oriented, tax auditing relies on actual facts or is returns-oriented. Although government data offer the opportunity for researchers to examine actual non-compliance, Cuccia (1994) argued that data of non-filers would be excluded from the analysis.

Each of these approaches has been employed in tax research with its own merits and limitations. The selection of a particular research approach depends on factors such as the research objectives and data availability (Evans, 2003a; Richardson & Sawyer, 2001). For this study, tax auditing approach was not possible, given the confidentiality requirements surrounding the corporate tax returns and the limitation in utilising IRB data. An experimental approach was unsuitable for this study because students were normally used as experimental subjects, which is only appropriate for studies related to individual taxpayers.

As this study focuses on compliance costs and behaviour of corporate taxpayers, a survey was deemed as the most appropriate approach to be utilised in this study due to its suitability in answering the research questions. Furthermore, it has been employed in most studies in estimating tax compliance costs (Evans, 2003a) and measuring tax compliance behaviour (Richardson & Sawyer, 2001). More specifically, the survey approach was used for the following reasons:

- **Tax Compliance Costs Studies**

Researchers in Malaysia are still in the initial phase of developing taxation compliance costs issues in the tax policy area (Pope & Abdul-Jabbar, 2008). As suggested by Sandford (1995b), a large scale survey is the best starting point for the process of convincing the government on the importance of recognising the compliance costs incurred by taxpayers. Through a survey research, a description of trends, attitudes or opinions of a population is

provided by studying a sample of that population (Creswell, 2003). Based on the findings from the sample, the researcher would then be able to make generalisations for a broader taxpayers' population.

▪ **Tax Compliance Behaviour Studies**

Earlier studies on corporate taxpayers' compliance (Hanlon et al., 2005; Joulfaian, 2000; Kamdar, 1997; Rice, 1992) adopted a tax auditing approach by utilising data from the US tax authority (Inland Revenue Service: IRS) to measure compliance behaviour. However, in Malaysia there is no data that is publicly available to measure compliance behaviour unless full cooperation from the IRB is obtained. Section 138 of the ITA 1967 lays out the confidentiality requirement surrounding tax data which is categorised as 'classified material'. Two earlier studies that utilised IRB official data (Abdul, 2003; Sia et al., 2008) were both conducted by IRB officers and limited to individual taxpayers.

3.4 Research Sampling Design

Population in statistical terms refers to the collection of units such as people, things or events to which we want to generalise a set of findings (Field, 2009). In this study, the target population is the large corporate taxpayers registered with the IRB. The population of corporate taxpayers registered with the IRB as at 31st December 2009 totalled to 451,488 companies (IRB, Annual Report, 2009),²⁸ while there were 4,582 large companies in Malaysia (Department of Statistics Malaysia, 2011).²⁹ As the large corporate taxpayer population is too large to study in its entirety, a sample was utilised. A sample is a smaller collection of units³⁰ from a population used to determine truths about that population (Field, 2005).

According to Lapin (1994), an ideal sample size should be identified to obtain the most desirable balance between the chances of making errors, the costs of these errors and the costs of sampling. As a guideline, Roscoe (1975) suggested a sample size should be larger than 30 and less than 500 with a minimum of 30 samples for each sub-sample and favourably 10 times larger than the number of variables. In practice, however, Fowler (1993) argued that a random

²⁸ This study's tax compliance costs estimates are based on 2009 tax year.

²⁹ Census of Establishment and Enterprises by Department of Statistics, Malaysia.

³⁰ The unit of analysis for this study is corporate taxpayers as this study estimates the compliance costs and investigates the compliance behaviour of corporations.

sample size of 150 would describe a population of 15,000 or 15 million with equivalent degree of accuracy. The sample size of this study was determined by considering views proposed by these authors.

There were two categories of respondents surveyed in this study, namely corporate taxpayers and external tax professionals. In this research, the sampling frame for corporate taxpayers and external tax professionals are as follows:

- **Corporate Taxpayers**

The corporate taxpayers sample was drawn from the 'Malaysian Top 500 Largest Listed Corporations 2008-2009' published directory.³¹ Companies in Eastern Malaysia, namely Sabah and Sarawak were excluded from the main sample due to budgetary and time constraints.³² Sectors with less number of companies were also excluded due to low number of representations: infrastructure project companies, hotels, closed end fund and mining. After excluding these companies and sectors, the final sample numbered 473 companies.

- **External Tax Professionals**

The external tax professionals sample was drawn from a list of tax agents from the IRB's website. As this study requires responses on tax fees incurred by PLCs, external tax professionals who are attached to or have been attached to accounting firms with large companies as their tax clients, were deliberately selected. According to Morse and Richards (2002), a sample may be purposively selected based upon its ability to address the questions being asked in a study. Purposive sampling enable researchers to apply their own judgement to identify cases that will best enable them to meet their research objectives (Saunders, Lewis & Thornhill, 2000). By utilising purposive sampling, a total of 200 external tax professionals from the tax agents list of the IRB's website were identified for this study.

³¹ Sampling frame from the IRB's database of registered corporate taxpayers would provide a better sample but this researcher was not able to obtain the information due to confidentiality reasons.

³² Data collection for this study utilises a self-administered questionnaire survey method where researchers distribute questionnaires personally which require more time and financial resources.

3.5 Research Instruments

The development of research instruments for this study comprised two sequential steps involving questionnaire design and pre-testing. As two groups of respondents' were involved in this study, two sets of questionnaires were constructed. The instruments were pre-tested on a group of academics and practitioners to ensure that the questionnaires were both clear and understandable. The questionnaires on corporate taxpayers and external tax professionals employed in this study are available in Appendices 3.1 and 3.2, respectively.

3.5.1 Corporate Taxpayers Questionnaire

In designing the research instruments, available questionnaires on both tax compliance costs (Abdul-Jabbar, 2009; Evans et al., 1996; Pope, 1993a; Sandford et al., 1989; Slemrod & Venkatesh, 2002) and compliance behaviour (Abdul-Jabbar, 2009;³³ Christensen, Weihrich & Newman, 1994; Roberts, 1994) were mainly considered. The questions focused on factors that were considered relevant to this study of large corporate taxpayers,³⁴ with some innovations and modifications caused by specific characteristics of the Malaysian corporate tax system.

The corporate taxpayers' questionnaire comprised four parts, referred to as Parts A to D.

- Part A of the questionnaire consisted of six questions regarding internal and incidental costs of complying with the income tax law relating to companies.
- Part B of the questionnaire consisted of seven questions regarding external costs of complying with the income tax law relating to companies.
- Part C elicited information on respondents' perceptions and opinions towards a number of tax attitudinal aspects³⁵ and compliance behaviour of corporate taxpayers.
- Part D of the questionnaire consisted of questions regarding economic characteristics of companies, general comments and suggestions regarding tax compliance burden.

³³ Abdul-Jabbar (2009) covers both tax compliance costs and compliance behaviour areas of studies focusing on Malaysian SMEs.

³⁴ The questions were designed mainly to acquire information on tax compliance costs, perceptions on tax attitudes, tax compliance behaviour and corporate characteristics of large corporate taxpayers.

³⁵ Tax attitudinal aspects investigated were related to perceptions of tax complexity, tax rate structure, tax deterrence sanctions, tax law fairness and tax psychological costs.

A table of contents was provided in the beginning of the questionnaire as a reference in order to avoid any misunderstanding of the tax compliance costs and compliance behaviour concepts (refer to Appendix 3.1). Table 3.1 provides the details on questionnaire of corporate taxpayers.

Table 3.1 Corporate Taxpayers Questionnaire

<i>Part</i>	<i>Questionnaire Items</i>
A	<p>Internal costs of complying with the income tax law relating to company:</p> <ul style="list-style-type: none"> ▪ Time spent by staff in handling tax activities ▪ Incidental costs and nature of expenses ▪ Percentage of computational and planning costs ▪ Percentage of costs associated with applying for tax incentives ▪ Area of difficulties in the corporate income tax system ▪ Internal psychological costs
B	<p>External costs of complying with the income tax law relating to company:</p> <ul style="list-style-type: none"> ▪ Engage external tax professional – Yes/No ▪ Source of external advice ▪ External tax fees ▪ Percentage of computational and planning costs ▪ Percentage of costs associated with applying for tax incentives ▪ Reason for engaging external tax professionals ▪ External psychological costs
C	<p>Investigate the respondents' attitude towards compliance:</p> <ul style="list-style-type: none"> ▪ Perceptions on tax attitudes ▪ Hypothetical tax scenarios
D	<p>Economic characteristics of companies and suggestions:</p> <ul style="list-style-type: none"> ▪ Main business activity ▪ Size by sales turnover ▪ Estimated tax liability ▪ Business length ▪ Tax refund ▪ Compliance burden comparisons ▪ Compensation ▪ Suggestions for reducing tax compliance costs of companies

3.5.2 External Tax Professionals Questionnaire

There is an important trend in the literature of tax compliance costs study towards utilising a separate survey on external tax professionals who handle tax affairs of corporate taxpayers (see Abdul-Jabbar, 2009; Green, 1994; Sandford et al., 1989; Slemrod & Venkatesh, 2002). Questionnaire items related to external tax professionals' services which were developed by these authors were adopted for this study.

Table 3.2 External Tax Professionals Questionnaire

<i>Part</i>	<i>Questionnaire Items</i>
A	General information of external tax professionals: <ul style="list-style-type: none"> ▪ Place of practice ▪ Current position ▪ Professional accountant/lawyer ▪ Years of experience ▪ Percentage of corporate tax clients ▪ Percentage of client's size by sales turnover ▪ Percentage of client's main business activity
B	Taxpayers' compliance burden: <ul style="list-style-type: none"> ▪ Average tax fees ▪ Percentage of computational and planning costs ▪ Percentage of costs associated with applying for tax incentives ▪ Reason for engaging external tax professionals ▪ Area of difficulties in the corporate income tax system
C	Investigate the respondents' attitude towards compliance: <ul style="list-style-type: none"> ▪ Perceptions on tax attitudes ▪ Hypothetical tax scenarios
D	Comments and suggestions: <ul style="list-style-type: none"> ▪ Level of compliance burden ▪ Compensation ▪ Suggestions for reducing tax compliance costs of companies ▪ Suggestions for improving the income tax system

The external tax professionals' questionnaire for this study consisted of four parts, referred to as Parts A to D (Table 3.2).

- Part A of the questionnaire consisted of seven questions on the demographic information of external tax professionals.
- Part B of the questionnaire consisted of five questions regarding external costs of complying with the income tax law relating to companies. The questions were designed mainly to acquire information to enable estimation of external tax compliance costs as a reference value for the information provided by the corporate taxpayers.
- Part C elicited information on perceptions and opinions towards a number of tax attitudinal aspects and compliance behaviour of corporate taxpayers from the external tax professionals' perspective.
- Part D elicited external tax professionals' views and suggestions on tax compliance costs of companies and Malaysian income tax system.

3.6 Measurement of Variables

This study is unique in that it combined the tax compliance costs and compliance behaviour research streams into a single study, as well as integrated the tax attitudes of large corporate taxpayers. The measurements of these variables are based on established sources and are presented in Table 3.3.

Table 3.3 Variables and Sources of Reference

<i>Variables</i>	<i>Main Sources of Reference</i>
Tax Compliance Costs	Evans et al. (1996); Pope (1993a); Sandford et al. (1989); Slemrod and Venkatesh (2002)
Tax Attitudinal Aspects	Abdul-Jabbar (2009), Christensen et al. (1994); Christensen and Hite (1997); Roberts (1994); Yesegat (2009)
Tax Non-compliance Behaviours	Chan, Troutman and O'Bryan (2000) ; Kaplan, Newberry and Reckers (1997)

3.6.1 Measures for Estimating Tax Compliance Costs

In this study, the measurement of tax compliance costs estimate applied most of the techniques employed by established researchers who have carried out studies in this field (Pope, 1993a; Sandford et al., 1989; Slemrod & Venkatesh, 2002; Tran-Nam et al., 2000). Consistent with these studies, sources of compliance costs for corporate taxpayers included all measurable components, namely internal, incidental and external costs for tax compliance activities.³⁶ Tax psychological costs were also one of the tax compliance costs components but these costs were excluded from tax compliance costs estimation, as they are incapable of reliable measurement (Evans et al., 1997). The relevant cost components and the costs computations for the compliance costs estimates of this study are as shown in Table 3.4.

Table 3.4 Cost Components and Cost Computations

<i>Cost Components</i>	<i>Cost Computations</i>
Internal Staff Costs	Computed by multiplying annual time spent on tax activities to their respective hourly wage rate.
Incidental Costs	Computed by adding costs incurred within companies and by external tax professionals. ³⁷
External Tax Fees	Money cost charged by external tax professionals solely on tax activities.

Adapted from Evans et al. (1997); Pope (1993a); Sandford et al. (1989).

A description of each component follows, along with explanation on the primary sources and method used to derive the compliance costs estimates.

▪ Internal Costs

Internal costs measurement is based on the time spent by the company staff in handling tax matters and the value of time spent. This study categorised staff into five groups: (i) Finance Director/Chief Financial Officer (CFO)/Chief Financial Controller (CFC); (ii)

³⁶ The operational definitions of tax compliance costs components in terms of what to include or exclude from compliance costs estimation mainly depend on data availability (Evans, 2003a; Sandford et al. 1989).

³⁷ For external incidental costs it is common for external tax professionals to reimburse these costs from their tax client which is detailed separately from tax fees amount (Abdul-Jabbar, 2009, p. 122).

Accountant/Tax Manager; (iii) General/Non-Financial Manager; (iv) Accounting Staff and (v) Other Staff. The estimates of time spent (total hours/month) by these categories of staff on tax activities were provided by the survey respondents. In this study, the respondents' estimates of time spent and the published wage rate of the relevant categories of staff were utilised to derive the internal tax compliance costs incurred by the respective companies.

In valuing the time spent (hourly wage rate) by these categories of staff, two approaches are normally practiced for studies on corporations: taxpayers' own valuation and published wage rates.³⁸ The first approach is to value the internal time costs of corporate taxpayers by utilising the respondents' estimate of the hourly wage rate of various management levels (see for example, Pope et al., 1994).³⁹ The second approach is to use published wage rates in valuing the internal time costs (see for example, Evans et al., 1997). This study followed the latter approach by utilising the published wage rates. Published wage rates are suitable for this study as for large corporations, respondents normally would not have information on the wage rates of other categories of staff. Furthermore, a few available sources of published wage rates could be identified to provide a cross check on the value of time selected.

▪ **Incidental Costs**

Incidental costs include other non-staff costs incurred in meeting tax compliance requirements. These costs may consist of stationery, forms, postage, telephone, utility bills, seminars, travel costs, office space, software maintenance and any other relevant costs. The common problem is with regards to apportionment of tax costs with non-taxation accounting costs, to ensure that only the relevant portion of tax compliance costs is included. Most cited literature on tax compliance costs undertook an intermediate approach,

³⁸ Variations on the approaches chosen to value internal time spent may lead to considerably different tax compliance costs estimates. For example, two studies in the United States (US), Slemrod (2004) and Moody et al. (2005), estimated tax compliance costs to be around USD40 billion and USD148 billion, respectively. Vaillancourt and Clemens (2008) argued that the differences in findings between these studies are due to dissimilarity in the value used to monetize taxpayer time: Slemrod (2004) applied a rate of \$25 per hour while Moody et al. (2005) applied a rate of \$47.96 per hour.

³⁹ Pope (1995) provide a list of method to be employed in valuing the internal time spent which includes taxpayers' own valuation, median of the reported value, before or after tax hourly wage rate and the amount that taxpayer would pay to get rid of all compliance costs.

where pure overhead costs,⁴⁰ such as office space and lighting were rejected (see for example, Sandford, 1995b; Sandford et al., 1989). According to Tran-Nam and Glover (2002a), suitable questions can be directed to taxation compliance costs which are distinct from other overhead costs. Likewise, in this study, the respondents were given one catch-all question concerning the amount of incidental costs incurred, followed by an open ended sub-question for details of such costs.

▪ **External Costs**

External tax compliance costs component consists of fees paid to external tax professionals. Compared to the earlier two components, external costs are more easily recognisable and quantifiable. This study employed the same method as all earlier relevant studies⁴¹ by requesting from respondents the tax fees incurred by their company for the corporate income activities in tax year 2009.

▪ **Tax Psychological Costs**

Tax psychological costs are negative experiences of taxpayers, such as anxiety and frustration arising from complying with tax legislation (Sandford et al., 1989). These costs are normally excluded from tax compliance costs estimation as they are incapable of reliable measurement (Evans et al., 1997). However, there are few studies on individual taxpayers (Blazic, 2004; Sandford, 1973; Slemrod & Sorum, 1984) which attempted to get some insight into the psychological costs of tax compliance. These studies have applied the classical direct method by requesting response on how much taxpayers would be willing to pay to get rid of all the concerns and inconvenience of preparing the income tax returns. In addition, Blazic (2004) also applied the indirect method by asking the taxpayers how they felt after having submitted their income tax returns. This study explored tax psychological costs incurred by the corporate taxpayers in complying with tax legislation using the direct method as applied by Sandford (1973); Slemrod and Sorum (1984); and Blazic (2004).

⁴⁰ Pure overhead costs are costs that would exist even without undertaking tax activities such as purchases of computer and/or software for all other tasks inside a business. However, if these items are bought specifically for tax work then the yearly linear depreciation were included as tax compliance costs (Sandford, 1995b; Sandford et al., 1989).

⁴¹ See Pope (1993a), Sandford et al. (1989), Slemrod and Venkatesh (2002) and Tran-Nam et al. (2000).

3.6.2 Measures for Estimating Benefits of Tax Compliance

The potential benefits to be derived as a result of compliance activities include managerial, cash flow and tax deductibility benefits.

- **Managerial benefits**

Managerial benefits involve improved business decision-making brought about by the need to have stringent record keeping to comply with tax legislations (Tran-Nam et al., 2000). These benefits are normally excluded from the corporate tax compliance costs studies. According to Sandford et al. (1989), managerial benefits derived from tax compliance activities for large companies are less considerable because they have already undertaken record keeping activities predominantly for financial purposes.⁴² Thus, in this study, tax managerial benefits were not considered.

- **Cash Flow Benefits**

Cash flow benefits arise when businesses have the use of tax revenues for a period before they must be remitted to tax authorities (Evans, 2003a). In Malaysia, CIT is charged on a current year basis and companies are required to furnish an estimate of their tax liability. Based on this estimate, taxes are payable in 12 monthly instalments with the final instalment to be paid within seven months after the end of the accounting period. No cash flow benefits are presumed for the 11 monthly advanced tax payments as they are related to their relevant profit period. The value of cash flow benefits is therefore solely dependent on the amount of final tax payment but the information required is too detailed for participants to respond (Abdul-Jabbar, 2009). Hence, in this study, the cash flow benefits were not estimated as the final tax payment amount was not available.

- **Tax Deductibility Benefits**

Tax deductibility benefits arise when tax compliance activity such as fees paid to external tax professionals is a tax deductible expense. The measure for tax deductibility benefits of corporate taxpayers follows Evans et al. (1997) who considered the compliance activities

⁴² PLCs are required to furnish audited financial statements to their shareholders annually.

which are directly associated with taxable profits as tax deductible benefits. Thus, in this study, the three tax compliance costs components (internal, incidental and external costs) were all regarded to derive tax deductibility benefits.

3.6.3 Measures for Tax Attitudinal Aspects

Tax attitudinal aspects measure the managerial attitudes of respondents towards some features of taxation. Sources referred to for developing attitudinal aspects questions were based on a number of earlier tax compliance studies (Table 3.5).

Table 3.5 Sources of Reference for Tax Attitudinal Variables

<i>Variables</i>	<i>Item Source</i>
Tax Complexity	Christensen et al. (1994)
Tax Rate Structure	Christensen et al. (1994)
Tax Deterrence Sanctions	Christensen and Hite (1997)
Tax Law Fairness	Roberts (1994)
Tax Psychological Costs	Yesegat (2009)

Measures for each tax attitudinal aspect adopted in this study were as follows:

- **Tax Complexity**

Tax complexity measures the perception on the presence of complexity in the Malaysian tax system amongst corporate taxpayers. It was measured in relation to three dimensions, comprising the complexity in income tax returns, income tax law and for different groups of taxpayers. The questions on complexity in the tax system were adapted from Christensen et al. (1994). Respondents were requested to indicate their agreement or disagreement with three statements using a six-point Likert scale ranging from (1) ‘Strongly Disagree’ to (6) ‘Strongly Agree’.

- **Tax Rate Structure**

Tax rate structure measures perception on the fairness in the Malaysian corporate tax structure amongst corporate taxpayers. It was measured in relation to three rate structures,

namely flat (Rate 1), proportional (Rate 2) and progressive (Rate 3). The questions on fairness in tax rate structure were adapted from Christensen et al. (1994). Respondents were requested to indicate their agreement or disagreement with three statements using a six-point Likert scale ranging from (1) 'Strongly Disagree' to (6) 'Strongly Agree'.

- **Tax Deterrence Sanctions**

Tax deterrence sanctions perception refers to three sanction variables, namely audit likelihood, detection likelihood and penalty severity. It was measured in relation to three dimensions, comprising respondents' perception on the chances of their company being audited; discrepancy being identified during compulsory tax audit and severity of penalty. The questions on deterrence sanctions perception were adapted from Christensen and Hite (1997). Respondents were asked to indicate their perceptions of audit and detection likelihood with three statements, measured on a six-point Likert scale ranging from (1) 'Very Unlikely' to (6) 'Very Likely'. With regards to penalty severity, the six-point Likert scale ranged from (1) 'Not Very Severe' to (6) 'Very Severe'.

- **Tax Law Fairness**

Perception of tax law fairness measures the respondents' perceptions on fairness of the corporate tax system in Malaysia. In this study, it was measured in relation to three dimensions which comprised respondents' perception on company officers' moral obligations, fairness under the SAS environment and amount of taxes paid over the years. The questions on tax law fairness perception were adapted from Roberts (1994). Respondents were requested to indicate their agreement or disagreement with three statements: two statements using a six-point Likert scale ranging from (1) 'Much Less Fair' to (6) 'Much More Fair' and one statement ranging from (1) 'Much Fewer Taxes' to (6) 'Much More Taxes'.

- **Tax Psychological Costs**

Tax psychological costs measure the respondents' perceptions on the level of stress and anxiety caused by the income tax system. The question on tax psychological costs was adapted from Yesegat (2009). Respondents were requested to indicate their agreement or

disagreement with one statement, using a six-point Likert scale ranging from (1) 'Not Very Stressful' to (6) 'Very Stressful'.

3.6.4 Measures for Tax Compliance Behaviour

In this study, tax compliance behaviour was measured by responses gathered from hypothetical tax scenarios. This approach has been widely adapted to measure compliance behaviour of taxpayers (see for example Webley, Cole & Eidjar, 2001; Shafer & Simmons, 2008). Hypothetical scenarios were introduced to mitigate the sensitive nature of the questions involved so that respondents would be more likely to provide truthful responses (Kaplan, Reckers & Roark, 1988). According to Rice (1992), as most corporations would have strong incentives to avoid revealing their non-compliance decisions, any direct measures will invariably suffer from substantial measurement errors. Moreover, Abdul-Jabbar (2009) suggested the use of hypothetical scenarios in order to increase realism in a survey study by incorporating one of the key elements of experimental approach. The use of different tax scenarios is emphasised in tax literatures (Richardson & Sawyer, 2001) and most studies employed tax non-compliance scenarios about under-reporting of income and over-claiming of expenses (Table 3.6).

In this study, a modified version of the non-compliance scenarios developed by Chan, Troutman and O'Bryan (2000) was utilised to gather data on hypothetical non-compliance behaviour of corporate taxpayers. Chan et al. (2000) asked the respondents to indicate the likelihood of the individual evading tax if s(he) was the person described in the case. However, corporate behaviour is the behaviour of an organisation when considered as a single body and is influenced by the arrangements for its ownership and control (Yesegat, 2009). Thus, with regard to corporations, one possibility is to consider the response of company executives towards corporate taxpayers' compliance behaviour. Joulfaian (2000) introduced the concept of managerial preferences as a proxy to measure corporate compliance behaviour. According to him, this concept assumes that corporation compliance behaviour is influenced by the actions and preferences of their executives.

Table 3.6 Specific Types of Non-compliance in Prior Tax Compliance Studies

<i>Researcher(s)</i>	<i>Specific Behaviour Measured</i>	
	<i>Under-reporting of Income</i>	<i>Over-claiming of Deductions</i>
International Studies :		
Mason and Calvin (1978; 1984) ^a	✓	✓
Wallschutzky (1984)	✓	
Elffers, Weigel and Hessing (1987)	✓	✓
Hite (1988)	✓	
Porcano (1988) ^a	✓	✓
Klepper and Nagin (1989)	✓	✓
Violette (1989)	✓	
Collins, Milliron and Toy (1990)	✓	✓
Elffers, Robben and Hessing (1992)	✓	✓
Hite and McGill (1992)		✓
Fischer (1993)	✓	✓
Hasseldine, Kaplan and Fuller (1994)	✓	✓
Reckers, Sanders and Roark (1994)	✓	
Kaplan, Newberry and Reckers (1997)	✓	
Hasseldine (1999)	✓	✓
Chan, Troutman and O'Bryan (2000)	✓	✓
Kirchler and Maciejovsky (2001)	✓	✓
Webley, Cole and Eidjar (2001)	✓	✓
Wenzel (2002)	✓	✓
Hasseldine and Hite (2003)	✓	
Wenzel (2005a)		✓
Wenzel (2005b)	✓	✓
Malaysian Studies:		
Ramasamy <i>et al.</i> (2003)	✓	✓
Kasipillai, Mat-Udin and Zainol-Arifin (2003)	✓	✓
Kasipillai and Abdul-Jabbar (2006)	✓	✓
Abdul-Jabbar (2009)	✓	✓

^a The study also measured failure to submit a tax return as specific non-compliance behaviour.

Source: Abdul-Jabbar (2009)

As proposed by Joulfaian (2000) and successfully applied in earlier studies (Slemrod, 2004; Abdul-Jabbar, 2009), the managerial preferences concept was utilised in this study. The respondents were requested to read two tax non-compliance scenarios about under-reporting of income and over-claiming of expenses (refer to Appendices 3.1 and 3.2). Kaplan et al. (1997) recommended a combination of both direct (first person) and indirect (third person) responses from the hypothetical scenarios. In this study, each scenario expected three responses; referred to as sub-questions (a) to (c). Sub-questions (a) and (c) required indirect responses, while sub-question (b) required a direct response. Each respondent was then asked to respond to both scenarios by indicating their perceptions on probability scales for sub-question (a) and on six-point Likert scales for sub-questions (b) and (c).

3.7 Data Collection Method

Data collection for this study comprised two sequential steps; a pre-testing and final survey implementation.

3.7.1 Pre-testing

Almost all of the questionnaire items have been validity-tested in previous studies, where it was administered over several years and countries (see for example, Abdul-Jabbar, 2009; Evans et al., 1997; Pope, 1993a; Sandford et al., 1989; Slemrod & Venkatesh, 2002). Nonetheless, pre-testing was conducted in this study to ensure their suitability in the context of Malaysian PLCs. The pre-testing of survey instruments took place in January and February 2010 and was performed on three different groups: corporate taxpayers, external tax professionals and academic researchers. The corporate taxpayers and external tax professionals as prospective respondents were chosen to ensure the understandability and applicability of the survey questions. The academic researchers were also included because with their similar training, they would be able to identify whether the questionnaires met the research objectives (Frazer & Lawley, 2000; Mustamil, 2010). The final drafts of the questionnaires were distributed to 30 corporate tax officers attending tax seminars, 20 external tax professionals training during students' industrial training visits and five academic staff from Malaysian public universities. According to Zikmund (2003), although it is not necessary to get a statistical sample in selecting respondents for pre-testing, the group selected for pre-testing should not be too divergent from the actual respondents, which was satisfied in this study.

Eleven (11) responses were gathered from this pre-testing exercise consisting of corporate taxpayers (five responses), external tax professionals (three responses) and academic researchers (three responses). Overall, positive responses were received especially regarding the understandability of questions, the format of questionnaire and the applicability of the terms used. Nevertheless, there were a few valuable suggestions made to improve the questionnaires. As the aim of conducting pre-test in this study was to examine the suitability and appropriateness of the survey instruments, no further detailed analysis was conducted.

Based on the feedback obtained from each pre-test conducted, the questionnaires went through a few amendments. The first amendment was made in relation to the question on internal time spent and the corresponding wage rates for relevant staff categories. The respondents were unwilling to disclose their own wage rate; over and above this, they were also requested to provide the wage rates for other categories of staff, which some respondents had no knowledge off. Thus, the sub-question on wage rates was taken out and the information was replaced with the published rates available. Secondly, following the recommendation from the external tax professionals, the amount for the first tax scenarios for both corporate taxpayers and external tax professional questionnaires was increased from MYR10,000 to MYR100,000 to make it more realistic for PLCs. Finally, several minor amendments were made for ease of response such as order of questions, highlighting of key terms and rewording of questions.

3.7.2 Survey Implementation

Data collection for this study utilised a self-administered questionnaire survey method.⁴³ This method was chosen as the reliability of tax compliance costs estimates are greatly dependent on the accuracy of the data acquired from survey respondents. According to Sandford et al. (1981), the quality of survey data relies considerably on the accuracy of the respondents' recollection of the time spent on tax related matters as well as their honesty. The incorrect recall of the amount of time spent is considered as unintentional errors while exaggerating on the hours taken in handling of tax matters is considered as intentional errors.⁴⁴ Estimation of tax compliance costs has generally relied on self reports using postal survey (Evans, 2003a) which raises the question

⁴³ The questionnaires used have been formally approved by the Human Ethics Committee at the Monash University (Appendix 3.3).

⁴⁴ However, Sandford et al. (1981) further suggested that the intentional errors are only prevalent in the case of small businesses where there is an inclination to exaggerate the amount of time spent to impress researchers and/or as a result of resentment at an arduous task of tax compliance obligations.

of accuracy and reliability. In addition, a survey using postal questionnaires would likely result in a low response rate (Sandford, 1995b) and in Malaysia, this rate could be even lower. A self-administered survey method can address these shortcomings. According to Hanefah et al. (2001), a representative population using personal data collection will yield a higher response rate as well as result in more reliable responses.

The self-administered survey method of data collection was employed as a measure to obtain more reliable survey responses and a higher response rate (Oppenheim, 1992), thus improving the validity of this study. By utilising this method, questionnaires can be personally distributed which provides the opportunity for researchers to emphasise verbally on the importance of the study and the appreciation for the individuals' collaboration. When required, the researchers may cautiously provide some clarifications and/or examples with respect to certain difficult, sensitive or important questions.⁴⁵ Although this method of data collection may be criticised for allowing biases to influence the directions of research findings and conclusions, Yin (2003) suggested that this can be minimised by using standard research protocol, coupled with expertise of the researcher. In this study, the researcher only got involved when respondents sought clarification and the completed questionnaire was inserted into a sealed envelope by respondents to protect anonymity of response.

The survey period spanned over seven months, from May 2010 to November 2010. This survey period was considered most appropriate as the deadline for corporate tax returns in Malaysia is within seven months after the financial year-end. Companies in Malaysia mostly have a December year-end, hence they will have to furnish their tax returns in June or September in case of revised estimates of tax liability. Both the corporate taxpayers and external tax professionals' surveys were carried out simultaneously over the 7-month period. The surveys were pre-planned and were relatively independent of each other. During the research process, findings from each surveys complemented one another. The conclusions from each survey were drawn together to develop an overall conclusion (meta-inferences).

In most cases, the potential respondents of each firm and the external tax professionals were contacted by telephone to outline the purpose of the survey, to confirm whether the firm satisfied the selection guidelines and to ascertain the person's willingness to participate in this

⁴⁵ According to Robson (2002), this method of data collection can facilitate a good quality of data as the researcher has the advantage of clarifying survey questions to respondents if needed.

study. Prior to the meeting,⁴⁶ a covering letter and explanatory statements specifying the purpose of the research and assuring anonymity of the respondent (see Appendices 3.4 and 3.5), as well as the questionnaire, were e-mailed to respondents. This was to prepare them for the survey and to establish the authenticity of the person meeting the respondents (Hanefah et al, 2001). The target respondents were the chief financial officer or tax director of PLCs in Malaysia and the external tax professionals.⁴⁷ It was deemed acceptable as these groups appeared to possess significant work experience and appropriate professional qualifications which would enable them to provide reasonable information for the purposes of this study.

3.8 Data Analysis Techniques

This section provides the overview of data analysis undertaken in this study, specifically concerning response rate, data screening, descriptive analysis of the sample, estimation formula and regression models employed. The detailed data analyses are discussed in the subsequent chapters: Chapter 4 (Results on Tax Compliance Costs Estimates) and Chapter 5 (Results on Tax Compliance Behaviour).

Survey data were mainly analysed using the Predictive Analytics Software for Windows (PASW) (Release 19).⁴⁸ An initial analysis was conducted to obtain some descriptive statistics (frequency, mean and standard deviation) to analyse the profile of respondents. Estimation of corporate income tax (CIT) compliance costs were conducted for both the social and taxpayer levels. Factor analysis was carried out in order to assess for construct validity of tax attitudinal aspects analysed in this study. Subsequently, correlation and multiple regression analyses were performed to identify relationships between variables and to test the hypotheses formulated in this study. Finally, responses to open-ended questions were analysed using content analysis. Content analysis is a systematic, reliable and replicable technique for condensing many words of text into fewer content categories based on explicit rules of coding (Krippendorff, 2004; Steve, 2001; Weber, 1990).

⁴⁶ Data collection was conducted primarily through self-administered survey, although due to time constraint some of the surveys were administered via ordinary mail, e-mail or telephone.

⁴⁷ Responses from external tax professionals were sought as large companies commonly contracted out their tax work.

⁴⁸ PASW is previously known as Statistical Package for Social Science (SPSS).

3.8.1 Response Rate

As discussed earlier in Subsection 3.4, 473 companies listed on the Bursa Malaysia Main Board were selected from the ‘Malaysian Top 500 Largest Listed Corporations 2008-2009’ published directory.⁴⁹ Out of the 473 companies approached, 101 responses were obtained which represented an overall response rate of 21.4 percent. However, after removing three incomplete responses, the usable response rate was 20.7 percent (Table 3.7).

Table 3.7 Sample Description and Response Rate

<i>Description</i>	<i>Sample</i>	<i>Response Rate</i>
Total number of companies approached	473	100%
Total number of responses received	101	21.4%
Less: Incomplete response	(3)	
Total number of useable response	98	20.7%

This study was conducted on a fairly representative population although quite a large number of companies were not able to respond due to time constraints. Nevertheless, an effective response rate of more than 20 percent acquired in this study through self-administered survey is comparable to the prior tax compliance costs literatures. The overall response rates obtained in these areas of studies range from nine to 33 percent in the advanced economies, while in the emerging economies, the variation is quite large, from as low as one percent to the highest of 64 percent (see Appendix 2.1 for a tabulated summary of related studies). According to Abdul-Jabbar (2009), the usual response rate for business studies, international and Asian tax studies was around 10 to 20 percent, 25 to 35 percent and 14 to 26 percent, respectively.

Based on the rate of response achieved in similar existing studies and due to small population size of PLCs, the rate of response achieved in this study was considered acceptable in the context of tax compliance costs, business and other tax studies universally. In addition, analysis of non-response bias was conducted by comparing responses received from the early and late respondents as commonly undertaken in the social sciences studies (see for example, Beattie, Goodacre & Thomson, 2006). The analysis indicated fairly similar responses between the two groups of respondents, hence eliminating the likelihood of significant non-response bias in this study.

⁴⁹ Bursa Malaysia is formerly known as Kuala Lumpur Stock Exchange (KLSE).

Due care was exercised in conducting the self-administered survey to ensure that the participants were suitably qualified tax executives, who were handling corporate tax matters. The respondents involved in this study were finance and tax managers (53.1 percent), followed by accountants (33.7 percent) and chief financial officer (13.3 percent) (Table 3.8). Thus, the survey data acquired were considered acceptable as the responses were obtained from the persons with knowledge and experience in handling tax matters of their respective companies.

Table 3.8 Respondents' Designation

	<i>Number of Respondents</i>	<i>Percentage</i>
Chief Financial Officer	13	13.3
Finance/Tax Manager	52	53.1
Accountant	33	33.6
Total	98	100

3.8.2 Data Screening and Validation

Prior to data entry, all completed questionnaires were examined for accuracy of data and missing values. Follow-up telephone calls and e-mails were made to address missing items and to clarify matters of perceived incorrect responses. There were six missing items with 16 cases having missing values (Table 3.9).

Table 3.9 Questionnaire Response with Missing Items

<i>Question Number</i>	<i>Description</i>	<i>Responses</i>		<i>Missing Percentage</i>
		Total	Missing	
1(2) ^a	Internal Time Spent	74 ^b	1	1.4
2(3) ^a	Incidental Tax Costs	74 ^b	2	2.7
14(3) ^a	Perceptions on Tax Complexity	98	2	0.02
15	Perceptions on Under-reporting of Income	98	1	0.01
15	Perceptions on Over-claiming of Expenses	98	1	0.01
23	Compensation Amount	98	9	9.2

^a Refers to sub-question based on the position of the question in the questionnaire.

^b Based on 74 cases of companies with internal cost components.

The missing items were compensation amount (9.18 percent), incidental tax costs (2.7 percent), internal time spent (1.4 percent) and perceptions on tax complexity (0.02 percent), under-reporting of income (0.01 percent) and over-claiming of expenses (0.01 percent). Since the average missing percentage was less than five percent, the imputed mean value was used to substitute for missing values for analysis purposes as recommended by Tabachnick and Fidell (2007). Responses to questions on tax compliance costs that involved estimation were further scrutinised for validity. These estimations included internal time spent on tax activities, incidental tax costs, external tax fees and psychological costs incurred. Normal probability plots and box-plots were utilised to identify outliers in the data set. The respective respondents with outlier response(s) were contacted for clarification. The explanation sought from respondents provided the following reasons for the outlier responses.

First, respondents provided compliance costs estimation for the whole group of companies as opposed to a single entity. This study, however, employed the definition of an organisation as a single entity. Thus, follow-up calls were made and respondents were requested to provide estimation for a single company. The second reason for the outlier responses was due to the inclusion of audit and investigation costs in the external tax fees incurred by taxpayers. Despite the importance of these costs, the inclusion of audit and investigation costs, in some cases, affected the entire tax compliance costs estimation. The IRB statistics indicate that only a small percentage of corporate taxpayers has been audited and investigated (IRB Annual Reports, 2008, 2009). The exact rate of corporate tax audit is not publicly available; nevertheless Pope and Mohd Isa (2009) suggested that the rate appears to be rather low at around 0.5 percent.

3.8.3 Descriptive Statistics of the Sample

Descriptive statistics of the sample were conducted to understand the respondent's demographic background in this study. Descriptive information about the respondents based on the 98 usable survey data in this research, are presented in Table 3.10 to Table 3.15. Overall, respondents exhibited reasonable variations in terms of their corporate characteristics such as industry classification, annual sales turnover, length of business, estimated tax liability, tax refunds and sources of income tax work.

3.8.3.1 Companies by Business Sector

The distributions of the sample respondent companies in terms of business sector were comparable to the population distribution (Table 3.10), except for a slightly higher representation from the services and plantation sectors. The highest response was gathered from the services sector (33.7 percent), followed by the manufacturing (31.6 percent) and the property and construction (21.4 percent) sectors. The services and manufacturing sectors accounted for more than 65 percent of the sample population, while only one response was received from the technology sector. Therefore, it can be concluded that there was an adequate indication on representativeness of the survey responses as compared to the sample population.

Table 3.10 Companies by Business Sector

<i>Sector</i>	<i>Total Companies</i>	<i>Sample Frequency</i>	<i>Distribution Population (Percent)</i>	<i>Sample Population (Percent)</i>
Manufacturing	188	31	39.8	31.6
Services	115	33	24.3	33.7
Property and Construction ^a	107	21	22.6	21.4
Finance and Banking ^a	30	6	6.4	6.1
Plantation and Agriculture ^a	20	6	4.3	6.1
Technology ^a	13	1	2.8	1.1
Total	473	98	100	100

^a These categories are merged into a single category of 'other sectors' for the remainder of this thesis due to very low responses to some of the sector category.

3.8.3.2 Companies by Business Size

As for the size of business⁵⁰ (Table 3.11), the highest response was from companies with annual sales turnover level of between MYR100 and MYR500 million (36.7 percent); followed by the annual sales turnover level of less than MYR100 million (31.6 percent). The remaining respondents were in the top two levels of annual sales turnover, with almost equal representation in each category (15.3 and 16.3 percent, respectively). Considering PLCs that were involved in this study were limited to a single tax-paying entity, it can be expected that the

⁵⁰ For this type of study, annual sales turnover value was normally used as a general proxy for size (Chan et al., 1999) as the use of alternative measure of size such as profit/loss and tax payable would cause problems since loss-making companies would be excluded (Ariff et al., 1995).

responses in the last two levels of sales turnover would be small. Tax compliance costs analyses in the remainder of this thesis were conducted by combining the last two levels of sales turnover responses (n=31) into a turnover level of more than MYR500 million.

Table 3.11 Companies by Business Size

<i>Sales Turnover (Million)</i>	<i>Frequency</i>	<i>Percentage</i>
Less than MYR100	31	31.6
MYR100 to MYR500	36	36.7
MYR500 to MYR1,000 ^a	15	15.3
More than MYR1,000 ^a	16	16.3
Total	98	100.0

^aThese categories are merged into a single category of more than MYR500 million for the remainder of this thesis due to low responses to some of the size category.

3.8.3.3 Companies by Business Length

Respondents were also requested to indicate the length of time their company has been in operation. The majority of companies (55.1 percent) had been in operation for at least 15 years and 23.5 percent had been in operation for more than 30 years, while only 21.4 percent of companies were in the ‘Less than 15 years’ category (Table 3.12). This signified that the sample respondent companies had adequate experience in dealing with tax related issues.

Table 3.12 Companies by Business Length

<i>Business Length</i>	<i>Frequency</i>	<i>Percentage</i>
Less than 15 years	21	21.4
15 to 30 years	54	55.1
More than 30 years	23	23.5
Total	98	100

3.8.3.4 Companies by Tax Liability

As for the tax liability (Table 3.13), 9.2 percent of companies had a nil tax liability for the year of assessment 2009. Nearly one-half of companies (48 percent) estimated their tax liability to be less than MYR5 million. For analysis purposes, the ‘Nil’ and ‘Less than MYR5 million’

categories were merged into a single category of ‘Less than MYR5 million’ category (57.2 percent). Similarly, the remaining categories were merged into a single category of MYR5 million or more (42.8 percent).

Table 3.13 Companies by Tax Liability

<i>Estimated tax liability (Million)</i>	<i>Frequency</i>	<i>Percentage</i>
Nil ^a	9	9.20
Less than MYR5 ^a	47	48.00
MYR5 to MYR10 ^b	24	24.50
More than MYR10 ^b	18	18.30
Total	98	100

^a These categories are merged into a single category of ‘Less than MYR5 million’ for the remainder of this thesis due to low responses.

^b These categories are merged into a single category of ‘MYR5 million or more’ for the remainder of this thesis due to low responses.

3.8.3.5 Tax Refunds

Under the SAS, companies are required to estimate their tax liability in advance and pay their tax liability in equal monthly instalments. Companies will be refunded by the IRB if the actual tax liability is less than the total instalments paid. The survey found that 46 respondent companies expected a refund from the tax authorities for the year of assessment 2009 (Table 3.14). The refunded amount varied widely from as low as MYR5,000 to almost MYR7 million, with a mean of MYR1,553,604.

Table 3.14 Tax Refunds

	<i>Mean^a (MYR)</i>	<i>Minimum (MYR)</i>	<i>Maximum (MYR)</i>	<i>Standard Deviation</i>
Tax Refund	1,553,604	5,000	6,939,932	2,071,693

^a Based on 46 cases of companies with expected tax refund.

3.8.3.6 Sources of Income Tax Work

With respect to sources of income tax work, some companies handled their tax affairs internally, some completely outsourced their tax-related activities and a large proportion of corporate taxpayers made use of both sources (Table 3.15). Almost 95 percent of the respondent

companies employed external tax professionals and more than 70 percent utilised both the internal resources and the external tax professionals to deal with their income tax matters. Twenty-four (24) companies completely outsourced their tax-related activities and only five companies were totally dependent on their internal tax expertise.

Table 3.15 Sources of Income Tax Work

<i>Sources</i>	<i>Number of companies</i>	<i>Percentage</i>
Internal only	5	5.1
External only	24	24.5
Internal and External	69	70.4
Total	98	100

3.8.4 Estimation Formula and Regression Models

The specific estimation formula and equation models employed in this study are as follows:

- **Compliance Costs Estimates**

An overall corporate taxpayer compliance costs was estimated using the general formula adapted from the study of Evans et al. (1997):

$$TCC = \sum_{k=1}^3 \sum_{i=1}^4 N_{ki} \bar{X}_{ki} - \sum_{k=1}^3 \sum_{i=1}^3 [0.5(1 + p)t]CC$$

where:

- TCC = total corporate income tax compliance costs estimate;
- k = company size based on level of annual sales turnover;
- i = sector in which respondents were engaged;
- N = total number of public listed companies;
- \bar{X} = sample mean of corporate income tax compliance costs;
- p = percentage of taxable business;
- t = average marginal tax rate; and
- CC = aggregate of companies compliance costs.

▪ Multiple Regression Analysis

In order to investigate the determinants of tax compliance costs, the following multiple regression equation (Equation 3.1) similar to Mathieu, Price and Antwi (2010) was adopted.

Equation 3.1

$$\text{Tax Compliance Costs} = \beta_0 + \beta_1 \text{Size} + \beta_2 \text{Sector} + \beta_3 \text{Year} + \beta_4 \text{Tax} + e$$

Concerning the determinants of tax non-compliance behaviour, the multiple regression equation employed is depicted in Equation 3.2.

Equation 3.2

$$\begin{aligned} \text{Non-compliance Behaviour} \\ = \beta_0 + \beta_1 \text{Size} + \beta_2 \text{Sector} + \beta_3 \text{Year} + \beta_4 \text{Tax} + \beta_5 \text{Costs} + \beta_6 \text{Complex} + \beta_7 \text{Rate} + \\ \beta_8 \text{Sanction} + \beta_9 \text{Fair} + \beta_{10}(\text{Psychology}) + e \end{aligned}$$

3.9 Chapter Summary

This chapter provides a review of the research methods used in this study. Based on this study's research questions, a quantitative research method within the positivist paradigm was adopted. This study utilised the survey approach and the justification for using this approach has been discussed. Next, the sampling design and research instruments for both types of respondents are provided. The measurement of variables for tax compliance costs, tax attitudinal aspects and tax compliance behaviour are based on established sources and are addressed at great length in this chapter. Data collection method of this study utilises self-administered survey in order to increase reliability and response rate. Finally, the overview of the data analysis techniques is provided. Detailed descriptions of data screening and validation, as well as the descriptive analysis of the sample in order to understand the respondents' demographic background are exhibited. Survey data will be analysed using the tax compliance costs estimation formula, descriptive statistics, correlation, multiple regression and content analysis, mainly using the PASW programme. The following Chapters 4 and 5 present the data analyses on tax compliance costs and tax compliance behaviour, respectively.

CHAPTER 4

TAX COMPLIANCE COSTS ANALYSIS

4.1 Introduction

The previous chapter (Chapter 3) presented the research method employed for this study. This chapter (Chapter 4) presents the findings of this study with regards to the compliance costs of corporate taxpayers. Data from both the main corporate taxpayers' and supplementary external tax professionals' surveys were analysed. After introducing this chapter in Section 4.1, Section 4.2 examines CIT compliance costs estimates in terms of internal, incidental, external, psychological and overall mean costs. The estimation of aggregate total CIT compliance costs, in terms of social compliance costs (SCC), tax deductibility benefits (TDB) and taxpayer compliance costs (TCC) are also presented in this section. Next, Section 4.3 presents the tax compliance costs ratio analysis in terms of internal-external, computational-planning and tax incentives costs ratio, while Section 4.4 presents the distributions of tax compliance costs in relation to the company's business size. Section 4.5 presents the incidence of tax compliance costs based on specific characteristics of companies and multiple regression analysis of factors affecting CIT compliance costs. Section 4.6 exhibits respondents' views on tax-related difficulties faced by companies, reasons for engaging external tax professionals and suggestions on how to reduce tax compliance costs of companies. Following this, Section 4.7 provides the findings on corporate taxpayers' compliance costs from the perception of external tax professionals. Finally, Section 4.8 provides the summary of this chapter.

4.2 Tax Compliance Costs Estimates

This study on tax compliance costs of Malaysian corporations provides estimation for year of assessment 2009. The method employed for estimating compliance costs incurred by corporate taxpayers follows the common practice in the empirical measurements of prior tax compliance costs studies.⁵¹ In this study, estimate of corporate taxpayers' compliance costs are the summation of the measureable time and monetary costs incurred in complying with tax legislation for each company. Accordingly, the internal staff costs, incidental costs and external tax fees were included in the tax compliance costs estimation.

⁵¹ Refer to Subsection 2.5.1 and 3.6.1 for the estimation framework and detailed reviews on the measurement of tax compliance costs, respectively.

4.2.1 Internal Staff Costs

The internal staff costs estimation was based on the time spent by a company's internal staff in handling tax matters and the value of time spent. The cost was estimated using a mathematical formula adapted from the study by Evans et al. (1997), stated as follows:

$$IC = \sum T_n W_n$$

where:

- IC = internal costs;
 T_n = average number of hours spent by type n staff on corporate tax affairs;
and
 W_n = average hourly wage rate of type n staff [n =1(Finance Director / CFO/ CFC), 2(Accountant / Tax Manager), 3(General / Non-Financial Manager), 4(Accounting Staff) and 5(Other)].

▪ Internal Staff Time (T_n)

The survey respondents were requested to provide the number of staff who handled tax matters in their company and the estimated time spent entirely on income tax purposes. Staff categories mainly involved in corporate tax affairs are the accountant/tax manager and the accounting staff (Table 4.1).

Table 4.1 Number of Staff Involved in Tax Affairs by Staff Categories

<i>Staff Categories</i>	<i>Number of Staff</i>	<i>Total</i>
Finance Director / CFO ^a / CFC ^b (Director) ^c	0 to 2	52
Accountant / Tax Manager (Tax Manager) ^c	0 to 15	120
General / Non-Financial Manager ^d	0	0
Accounting Staff	0 to 15	190
Other	0 to 2	6

^a CFO denotes chief financial officer.

^b CFC denotes chief financial controller.

^c The categories are renamed throughout the remainder of this thesis for easy reference.

^d This staff category is taken out from the analysis throughout the remainder of this thesis due to no staff involvement in corporate tax affairs.

Table 4.2 exhibits the corresponding average time spent in relation to the four different staff categories. The tax manager and accounting staff categories spent the most number of hours on tax matters. The average internal time spent on income tax activities was 914 hours, ranging from zero to 10,080 hours.

Table 4.2 Hours Spent on Tax Activities by Staff Categories

<i>Staff Categories</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard</i>
		<i>Number of Hours</i>	<i>Number of Hours</i>	<i>Deviation</i>
Director	53	0	960	161
Tax Manager	365	0	5,400	822
Accounting Staff	486	0	3,360	794
Other	10	0	360	51
Overall ^a	914	0	10,080	1,828

^a Based on 74 cases of companies with internal cost components.

The average time spent by each company was 942 hours, ranging from as low as 48 hours to a maximum of 5,200 hours with a standard deviation of 1,142 (Table 4.3).

Table 4.3 Hours Spent on Tax Activities at Company Level

	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard</i>
		<i>Number of Hours</i>	<i>Number of Hours</i>	<i>Deviation</i>
Hours Spent	942	48	5,200	1,142

▪ Time Valuation (W_n)

A standard wage rate approach was utilised in this study to value the internal time spent (see Evans et al., 1997).⁵² The standard wage rate of relevant staff categories was obtained from published sources, namely Salary and Fringe Benefits Survey 2009, conducted by the Malaysian Employers Federation (2010) and Jobstreet Salary Report (2011)⁵³.

⁵² Refer to Chapter 3 (Subsection 3.6.1) on different types of approaches in valuing internal time spent and the reason for choosing the standard wage rate approach.

⁵³ Jobstreet Salary Report is available at <http://myjobstreet.jobstreet.com/career-enhancer/basic-salary-report.php> accessed on 13th April 2011. The report is utilized in this analysis as it provides more detailed information on the equivalent position of the relevant staff categories compared to other reports.

The published monthly wage rates were converted into hourly wage rates⁵⁴ by dividing the rate by monthly working hours (208 hours). The monthly working hours of 208 hours (see Table 4.4) was derived by multiplying monthly normal working days (26 days) with daily normal working hours (eight hours), as stipulated by the Malaysian Employment Act 1955 (Section 601). Table 4.4 presents the hourly wage rates for all the relevant staff categories.

Table 4.4 Hourly Wage Rates by Staff Categories

<i>Staff Categories</i>	<i>Monthly Wage Rates (MYR)</i> <i>A</i>	<i>Monthly Working Hours</i> <i>B</i>	<i>Hourly Wage Rates (MYR)</i> <i>A/B</i>
Director	15,000	208	72.12
Tax Manager	6,000	208	28.85
Accounting Staff	3,100	208	14.90
Business Executive	3,000	208	14.42
Clerk	1,300	208	6.25

The internal staff costs were computed by multiplying the mean internal time spent on tax activities in Table 4.2 with the wage rates of the relevant staff categories in Table 4.4. Accordingly, the internal staff costs estimation for each company is the summation of all staff costs on tax activities for all relevant staff categories. As presented in Table 4.5, the internal staff costs of Malaysian PLCs ranged from MYR888 to MYR155,790, with an average cost of MYR22,088.

Table 4.5 Internal Time Staff Costs

<i>Cost Categories</i>	<i>Mean (MYR)</i>	<i>Minimum (MYR)</i>	<i>Maximum (MYR)</i>	<i>Standard Deviation</i>
Internal Staff Costs ^a	22,088	888	155,790	28,665

^a Based on 74 cases of companies with internal cost components.

⁵⁴ The conversion into hourly wage rates are essential for analysis purposes as the mean internal time spent on tax activities is in an hourly basis.

4.2.2 Incidental Tax Costs

Only 35 percent of respondents (34 companies) incurred incidental costs of complying with tax law during year of assessment 2009. The mean incidental tax compliance cost was MYR2,701 and the costs ranged widely from MYR100 to MYR15,000 (Table 4.6).⁵⁵

Table 4.6 Incidental Tax Compliance Costs

<i>Cost Categories</i>	<i>Mean (MYR)</i>	<i>Minimum (MYR)</i>	<i>Maximum (MYR)</i>	<i>Standard Deviation</i>
Incidental Costs ^a	2,701	100	15,000	4,130

^aBased on 34 cases of companies with incidental costs components.

Respondents were also requested to briefly describe the nature of the incidental tax compliance costs incurred. Responses to the open-ended questions are summarised in Table 4.7.

Table 4.7 Descriptions of Incidental Tax Compliance Costs

<i>Cost Descriptions ^a</i>	<i>Frequency</i>	<i>Percentage</i>
Printing, stationeries and photocopy charges	24	37.5
Travelling, despatch and delivery service costs	24	37.5
Telephone and internet charges	8	12.5
Training costs	6	9.4
Service tax on tax agent fee	2	3.1
Total	64	100

^aBased on 32 cases of companies with descriptions of incidental costs components.

The two broad cost items were: (i) ‘printing, stationeries and photocopy charges’ and (ii) ‘travelling, despatch and delivery service costs’. The charges listed in (i) were normally out-of-pocket expenses or disbursements charged by the company’s external tax professionals.⁵⁶ As for the travelling costs, two respondents noted that with e-filing, these costs are reduced and incurred only when certain issues, for example back-log cases, needed to be settled urgently.

⁵⁵ The maximum of MYR15,000 is due to training costs incurred by companies on tax-related matters.

⁵⁶ In Malaysia, the amount of any incidental costs will be shown separately from the tax fees in the client’s tax invoice (Abdul-Jabbar & Pope, 2008a).

4.2.3 External Tax Fees

External tax fees are payments made to acquire services of external tax professionals⁵⁷ on tax related matters from outside the company. A large proportion of PLCs (94.9 percent) engaged external tax professionals in handling their corporate income tax affairs.⁵⁸ The fees charged by external tax professionals represent the external tax compliance costs component for companies.⁵⁹ In this study, the tax fees paid by PLCs on external tax work ranged from MYR9,110 to MYR100,000 with an average of MYR31,097 per company (Table 4.8).

Table 4.8 External Tax Fees

<i>Cost Categories</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard Deviation</i>
Tax fees (MYR) ^a	31,097	9,110	100,000	23,482

^a Based on 93 cases of companies with external tax fees components.

Audit and investigation costs were omitted⁶⁰ from the external tax compliance costs estimation as only three companies incurred these costs which ranged from MYR130,000 to MYR350,000. With regards to these companies, the respective compliance costs accounted for around one third of the external tax fees incurred. This result suggests that audits and investigations are a major source of compliance costs. A separate survey of external tax professionals provided comparative values of external tax fees charged to corporate taxpayers (see Subsection 4.7.3).

4.2.4 Tax Psychological Costs

This study explores the tax psychological costs estimates incurred by corporate taxpayers in complying with tax legislation. Both internal and external psychological costs were investigated because some corporate taxpayers may not have either internal or external compliance costs component (see Table 3.15).

⁵⁷ In this study, external tax professionals include tax agents, accountant, lawyers, investment advisors and any other external person who handle tax matters of companies.

⁵⁸ See Subsection 3.8.3.6 on the sources of income tax work.

⁵⁹ These costs are more easily recognisable and quantifiable compared to the internal costs component (Loh et al., 1997) and in Malaysia, tax fees are normally charged separately from other fees such as fees on financial audit (Abdul-Jabbar & Pope, 2008a).

⁶⁰ Reasons for the omission have been discussed in Subsection 3.8.2. Tax audit and investigation only affected a small percentage of companies and the costs appeared to be relatively high. As a result their inclusion will likely misstate the magnitude of compliance costs incurred by corporate taxpayers.

- **Internal Psychological Costs**

Corporate taxpayers with internal costs component were requested to respond to the following statement:

“If your company could have avoided all the paper work and inconvenience in the past twelve months by paying someone else to attend to your company’s tax affairs, how much more would your company have been prepared to pay?”

Only 39 companies responded to this question and the finding is shown in Table 4.9. The mean internal psychological costs incurred by corporate taxpayers was MYR5,628, with a minimum of MYR500, a maximum of MYR30,000 and a standard deviation of 7,801.

Table 4.9 Internal Tax Psychological Costs

<i>Cost Categories</i>	<i>Mean (MYR)</i>	<i>Minimum (MYR)</i>	<i>Maximum (MYR)</i>	<i>Standard Deviation</i>
Internal Psychological Costs ^a	5,628	500	30,000	7,801

^a Based on 39 cases of companies who responded to the internal psychological costs question.

- **External Psychological Costs**

Corporate taxpayers with external costs component were requested to respond to the following statement:

“In addition to any amount your company may have paid for tax advice, how much more would your company have been prepared to pay to relieve your company of all the inconvenience of having to attend to your company’s tax affairs, including any time you may have had to spend with your adviser?”

Based on 37 responses, corporate taxpayers incurred mean external psychological costs of MYR4,484 with a minimum of MYR500 and a maximum of MYR 12,500 (Table 4.10).

Table 4.10 External Tax Psychological Costs

<i>Cost Categories</i>	<i>Mean (MYR)</i>	<i>Minimum (MYR)</i>	<i>Maximum (MYR)</i>	<i>Standard Deviation</i>
External Psychological Costs ^a	4,484	500	12,500	4,241

^a Based on 37 cases of companies who responded to the internal psychological costs question.

4.2.5 Mean Compliance Costs Estimates

In this study, the estimation of tax compliance costs for each company was the summation of its measurable internal, incidental and external costs components. The tax psychological costs estimated in Subsection 4.2.4 were not included, due to a low number of responses. In addition, as suggested by Evans et al. (1997), these costs are commonly excluded from tax compliance costs estimation as they are incapable of reliable measurement.

Accordingly, the estimated mean compliance costs by costs components were based on the estimation conducted in Subsections 4.2.1 to 4.2.3 (Table 4.11), as only measureable costs were included in the tax compliance costs estimation⁶¹. The largest share of the average costs was related to external costs (57.1 percent), followed by internal costs (38.2 percent) and only a small portion (4.7 percent) was related to incidental costs in complying with the tax laws. The overall mean compliance cost for each company by cost components was MYR55,886.

Table 4.11 Estimated Mean Compliance Costs by Components

<i>Cost Components^a</i>	<i>Mean Costs (MYR)^b</i>	<i>Cost Breakdown (%)</i>
Internal Costs (Subsection 4.2.1)	22,088	38.2
Incidental Costs (Subsection 4.2.2)	2,701	4.7
External Costs (Subsection 4.2.3)	31,097	57.1
Overall	55,886	100

^a The relevant subsections of costs estimation are given in parentheses.

^b Based on number of cases with relevant cost components.

The estimates of tax compliance costs at the company level ranged from a low of MYR10,506 to a high of MYR155,790, with a mean of MYR47,126 (Table 4.12).

Table 4.12 Estimated Compliance Costs at Company Level

<i>Cost Categories</i>	<i>Mean^a</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard Deviation</i>
Compliance Costs (MYR)	47,126	10,506	155,790	36,003

^a Based on total number of cases of 98 respondents.

⁶¹ Following major earlier studies for example Sandford et al. (1989); Pope & Fayle (1991); Pope et al. (1994) and Evans et al. (1997).

As a measure to increase the reliability of data derived from the survey, a reliability check for compliance costs estimation was embedded in the questionnaire (Appendix 3.1, Question 23).⁶² A general question, similar to earlier tax compliance costs studies,⁶³ was utilised. The specific question was as follows:

“If your company could claim from the government for the time and money spent in dealing with corporate income tax for the financial year 2009, how much would you claim as fair compensation?”

The design of this question was to capture an overall tax compliance costs estimate in terms of possible compensation that taxpayers would wish to claim from the IRB. Findings in this study reveal an average compensation of MYR51,483 per company, with a minimum of MYR9,000 and a maximum of MYR150,000 (Table 4.13). The mean compensation cost estimate was within the range of compliance costs estimate at company level of MYR47,126 (see Table 4.12) and compliance costs estimate by cost components of MYR55,886 (see Table 4.11). Thus, these findings suggest that the compliance costs estimate in this study appear reasonable and reliable.

Table 4.13 Possible Compensation Amount

	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard Deviation</i>
Compensation (MYR) ^a	51,483	9,000	150,000	42,098

^a Based on total number of cases of 89 respondents.

4.2.6 Aggregate Total Compliance Costs Estimates

In order to gauge the total compliance costs estimate of both PLCs’ and large companies’ population, the sample’s mean tax compliance costs was grossed-up to the whole population. However, the use of mean estimate by itself does not appear to be very meaningful due to the wide variations in compliance costs incurred between different types of taxpayers, such as in terms of their sizes and sectors (Evans et al., 1997).

⁶² Apart from the direct questions regarding estimation of tax compliance costs, one question was included in the questionnaire as a consistency check on the costs measurement. Prior studies utilised similar question to reflect on any other costs which are not covered by the direct questions such as the psychological costs of compliance (refer to Sandford et al., 1981).

⁶³ See mainly Abdul-Jabbar, 2009; Evans et al., 1997; Sandford et al., 1989; Vaillancourt, 1989; and Yesegat, 2009. Yesegat (2009) also used this question to elicit some insight into the element of psychological costs in tax compliance.

According to Sandford et al. (1981), the manner in which companies are distributed by different sizes and business activities is important as it provides a more reliable basis for determining the total CIT compliance costs estimates. The established practice⁶⁴ is to multiply the sample mean tax compliance costs estimate to a disaggregated population data to obtain the aggregate for each compliance cost category and the overall total. This weighting technique is also employed to improve the reliability of tax compliance costs estimates in terms representativeness of the sample data (see for example Slemrod & Sorum, 1984). Disaggregation is normally undertaken for each category of corporate taxpayers' population to ensure that the sample estimates closely reflect the companies' population. Based on this principle, the total aggregated compliance costs for corporation is a function of the number and type of businesses multiplied by the actual costs encountered, appropriately adjusted for the offsetting benefits derived from certain aspects of the tax system.

In order to extrapolate the compliance costs estimation from sample results of this study to the entire PLCs population, the corporate taxpayers' population was divided into nine size-sector strata. This study utilised annual sales turnover to represent the size of companies and industry sectors in categorising the corporate taxpayers' population. The composition of PLCs by sales turnover and industry sector category was derived from the Bursa Malaysia Website. To facilitate analysis and comparison, certain size and sector categories were merged into a single category due to low number of responses.⁶⁵ This was to ensure that an adequate number of observations represented each size-sector stratum as suggested by Sandford et al. (1981).

Based on previous studies (see for example Loh et al., 1997; Chan et al., 1999), and for analysis purposes, the sample companies were grouped into a few categories. Size of companies was grouped into three categories in accordance with their annual sales turnover. Category one contained smaller companies with annual sales turnover of less than MYR100 million, category two contained the medium-sized companies with annual sales turnover of between MYR100 to MYR500 million, while category three contained larger companies with annual sales turnover in excess of MYR500 million. The sample companies were further categorised into three groups in accordance with their main business activities. Category one comprised manufacturing companies, category two were companies from the services sector and category three were

⁶⁴ See especially Sandford et al. (1989); Pope (1995) and Evans et al. (1997).

⁶⁵ Concerning business size, the last two sales turnover levels are merged into a single category of 'More than MYR500 million'. With regards to business sectors, companies in other than manufacturing and services sectors are merged into a single category of 'Other Sectors'.

companies in the remaining sectors, whose main business activities were in the property and construction, finance and banking, plantation and agriculture and technology sectors.

The aggregate total SCC, TDB and TCC, in this study, were estimated using the general formula adapted from Evan's et al. (1997) study, stated as follows:⁶⁶

▪ **Estimation of Social Compliance Costs**

$$SCC = \sum_{k=1}^3 \sum_{i=1}^3 N_{ki} \bar{X}_{ki}$$

where:

- SCC = aggregate total social compliance costs estimate;
- k = company size based on level of annual sales turnover:
[$k = 1$ (small), 2 (medium), 3 (large)];
- i = sector in which respondents were engaged:
[$i = 1$ (manufacturing), 2 (services), 3 (other sectors)];
- N_{ki} = number of corporate taxpayers for size k and sector i in PLCs population ; and
- \bar{X}_{ki} = sample mean of corporate income tax compliance costs for size k and sector i .

▪ **Estimation of Tax Deductibility Benefits**

As discussed in Subsection 2.2.2, offsetting benefits of tax compliance costs are managerial, cash flow and tax deductibility benefits. Managerial benefit is not relevant to PLCs because it measures improved business decision-making due to stringent record keeping for tax compliance (Tran-Nam et al., 2000).⁶⁷ The value of cash flow benefits to taxpayers arises when they are able to use the taxable income before it is remitted to the IRB. Although the benefit is relevant for PLCs, this study was unable to measure cash flow benefits due to

⁶⁶ Refer to Subsection 3.8.4 for the Evan's et al. (1997) general formula used for aggregate total compliance costs estimate. The term TCC represents the aggregate total compliance costs after offsetting benefits have been considered.

⁶⁷ According to Evans et al. (1996), the value of managerial benefit would only be prominent for small businesses.

unavailability of data (refer Subsection 3.6.2). TDB are derived when some taxpayer compliance activities, such as fees paid to external tax professionals, are allowable expenses to be deducted against companies' income. Several tax compliance costs studies have estimated the value of tax deductibility benefits (see Allers, 1994; Evans et al., 1997; Abdul-Jabbar, 2009). In the context of PLCs and data availability, TDB was the only relevant offsetting benefits for this study.

$$TDB = \sum_{k=1}^3 \sum_{i=1}^3 [0.5(1 + p)t]CC$$

where:

- TDB = value of tax deductibility benefits;
 k = company size based on level of annual sales turnover
 $[k = 1 \text{ (small), } 2 \text{ (medium), } 3 \text{ (large)}]$;
 i = sector in which respondents were engaged:
 $[i = 1 \text{ (manufacturing), } 2 \text{ (services), } 3 \text{ (other sectors)}]$;
 p = percentage of taxable business;
 t = average marginal tax rate; and
 CC = aggregate of companies compliance costs.

Apart from the size and sector categorisation discussed earlier, TDB estimation required information regarding percentage of taxable business, average marginal tax rate and aggregate of company's compliance costs. In this study, the percentage of taxable companies was 91 percent (see Table 3.13), the tax rate for year of assessment 2009 was 26 percent (IRB Website) and the aggregate of companies compliance costs was derived from the SCC estimates (see Table 4.14).

Extrapolation from the sample results to the entire PLCs' population⁶⁸ indicates a total aggregate TCC of MYR23,943,456, after subtracting the total aggregate TDB of MYR7,908,955 from the total aggregate SCC of MYR31,852,411. Table 4.14 exhibits the estimates of aggregate compliance costs in terms of SCC, TDB and TCC by the nine size-sector strata as well as in total.

⁶⁸ The PLCs population is derived from the 'Malaysian Top 500 Largest Listed Corporations 2008-2009' directory (see Section 3.4).

Table 4.14 Total Aggregate Compliance Costs Estimates for PLC's Population

Size (Sales turnover)	Size-sector strata	Population Frequency ^a	Compliance Costs (MYR)			
			Mean	SCC	TDB	TCC
Small (Less than MYR100 million)	Manufacturing	34 (7)	25,635	871,590	216,416	655,174
	Services	23 (12)	23,941	550,643	136,725	413,918
	Other	78 (12)	35,511	2,769,858	687,756	2,082,102
Medium (Between MYR100 and MYR500 million)	Manufacturing	130 (15)	37,085	4,821,050	1,197,067	3,623,983
	Services	64 (10)	49,680	3,179,520	789,475	2,390,045
	Other	116 (11)	57,015	6,613,740	1,642,192	4,971,548
Large (Above MYR500 million)	Manufacturing	75 (9)	62,984	4,723,800	1,172,920	3,550,880
	Services	57 (11)	68,259	3,890,763	966,076	2,924,687
	Other	67 (11)	66,141	4,431,447	1,100,328	3,331,119
Total PLCs population		644 (98)		31,852,411^b	7,908,955^c	23,943,456^d

SCC: Social Compliance Costs TDB: Tax Deductibility Benefits TCC: Taxpayer Compliance Costs

^a The population frequency is derived from the 'Malaysian Top 500 Largest Listed Corporations 2008-2009' directory (see Section 3.4). The number of sample respondents are given in parentheses.

^b The total aggregate SCC incurred by PLCs in Malaysia for the year of assessment 2009 amounted to MYR31,852,411.

^c The total aggregate tax deductibility benefits of PLCs in Malaysia for the year of assessment 2009 is amounted to MYR7,908,955.

^d The total aggregate TCC incurred by PLCs in Malaysia for the year of assessment 2009 amounted to MYR23,943,456 after subtracting the total aggregate of TDB.

With regards to aggregate compliance costs for the whole large corporate taxpayers' population, details on the size of companies and the industry sectors in categorising the population were not available. As such, this study followed the assumption of Abdul-Jabbar (2009), where the extrapolation was administered by assuming that all large companies were in a single category.

Equation 4.1 Estimation of Social Compliance Costs (SCC)

$$\begin{aligned}\text{SCC} &= \text{Mean Compliance Costs} \times \text{Number of Large Companies} \\ &= \text{MYR}47,126 \times 4,582^{69} \\ &= \text{MYR}215,931,332\end{aligned}$$

Equation 4.2 Estimation of Tax Deductibility Benefits (TDB)

$$\begin{aligned}\text{TDB} &= [0.5(1+p)t]\text{SCC} \\ &= [0.5(1+0.91)0.26] \text{MYR}215,931,332 \\ &= \text{MYR}53,615,750\end{aligned}$$

Equation 4.3 Estimation of Taxpayer Compliance Costs (TCC)

$$\begin{aligned}\text{TCC} &= \text{SCC (Equation 4.1)} - \text{TDB (Equation 4.2)} \\ &= \text{MYR}215,931,332 - \text{MYR}53,615,750 \\ &= \text{MYR}162,315,582\end{aligned}$$

Based on the computation in Equations 4.1 to 4.3, extrapolation from the sample results to the entire large companies' population estimated an aggregate total TCC amounting to MYR162,315,582, after subtracting the TDB of MYR53,615,750 from the SCC of MYR215,931,332.

Table 4.15 highlights aggregate compliance costs for PLCs as well as large companies' population in relation to corporate tax revenue and gross domestic product (GDP). With regards to PLCs' population, the percentages of SCC and TCC, in relation to corporate tax revenue, were 0.106 and 0.080, respectively; while in relation to GDP, the percentages were 0.006 and 0.005, respectively. As for the large companies' population, the percentages of SCC and TCC in relation to corporate tax revenue were 0.715 and 0.537, respectively; while in relation to GDP,

⁶⁹ The population number of large corporate taxpayers is derived from Census of Establishment and Enterprises by Department of Statistics, Malaysia.

the percentages were 0.041 and 0.031, respectively. The finding in this study also indicated that the offsetting benefits for Malaysian PLCs in terms of TDB accounted for almost 25 percent of the gross tax total compliance costs in the year of assessment 2009.

Table 4.15 Aggregate Compliance Costs Relative to Tax Revenue and GDP

<i>Companies Population</i>	<i>Aggregate Compliance Costs</i>		
	<i>SCC</i>	<i>TDB</i>	<i>TCC</i>
PLCs (MYR million)	31.9	7.9	24.0
Relative to (%):			
▪ Corporate Tax Revenue ^a	0.106	0.026	0.080
▪ GDP ^b	0.006	0.001	0.005
Large companies (MYR million)	215.9	53.6	162.3
Relative to (%):			
▪ Corporate Tax Revenue ^a	0.715	0.178	0.537
▪ GDP ^b	0.041	0.010	0.031

SCC: Social Compliance Costs TDB: Tax Deductibility Benefits TCC: Taxpayer Compliance Costs
GDP: Gross Domestic Products

^a The 2009 Corporate Tax Revenue amount of MYR30,199 million is derived from the Economic Report 2011/12 (Treasury Malaysia, 2011, Statistical Table 4.3). The total corporate tax revenue has been used as a separate amount of tax revenue for PLCs and large companies are not available.

^b The 2009 GDP amount of MYR521,095 million is derived from the Economic Report 2011/12 (Treasury Malaysia, 2011, Statistical Table 2.2).

4.3 Tax Compliance Costs Ratio Analysis

This section examines the tax compliance costs in terms of sources of costs (internal-external ratio), components of costs (computational-planning ratio) and tax incentives ratio.

4.3.1 Compliance Costs Analysis by Internal-External Ratio

Internal-external ratio is derived by dividing the means of internal and external compliance costs respectively (Pope et al., 1994; Ariff et al., 1997). Adapting the approach of similar previous studies, incidental costs were included under internal costs component. In this study, the internal-external compliance costs ratio was 37:63, indicating that tax compliance activities were mainly handled by external tax professionals. The internal-external costs ratio was further analysed by PLCs characteristics, namely sales turnover, business sector and length of business.

The internal-external compliance costs ratio analysed by turnover level indicated a heavy reliance on external tax professionals for PLCs in the lowest and highest levels (Table 4.16). Companies in the middle range of sales turnover between MYR100 and MYR500 million however seemed to have almost an equal proportion of dependence on internal staff (52 percent) and external tax professionals (48 percent). The findings may suggest that the smallest PLCs are highly dependent on the external tax professionals due to lack of expertise to handle their company's tax affairs. While the largest PLCs might require greater services from the external tax professionals for tax planning purposes such as regarding tax impact of company's merger and/or acquisition plan. However, the result from an ANOVA test did not reveal any significant mean differences ($f=2.195$, $p=0.117$) of internal-external compliance costs ratio by sales turnover.

Table 4.16 Internal-External Compliance Costs Ratio by Sales Turnover

<i>Turnover Level (Million)^a</i>		<i>Compliance Costs Ratio (%)</i>	
		<i>Internal^b</i>	<i>External</i>
Less than MYR100	(31)	29	71
MYR100 - MYR500	(36)	52	48
More than MYR500	(31)	29	71
Overall	(98)	37	63

^a Number of respondents is given in parentheses. ^b Internal costs are inclusive of incidental costs.

The findings of internal-external compliance costs ratio by business sector are presented in Table 4.17.

Table 4.17 Internal-External Compliance Costs Ratio by Business Sector

<i>Business Sector^b</i>		<i>Compliance Costs Ratio (%)</i>	
		<i>Internal^c</i>	<i>External</i>
Manufacturing	(31)	39	61
Services	(33)	38	62
Property and Construction ^a	(21)	17	83
Finance and banking ^a	(6)	51	49
Plantation and agriculture ^a	(6)	58	42
Technology ^a	(1)	22	78
Overall	(98)	37	63

^a These categories are merged into a single category of 'other sectors' for ANOVA test analysis.

^b Number of respondents is given in parentheses. ^c Internal costs are inclusive of incidental costs.

These findings show that the construction sector was highly dependent on external tax professionals to handle the company's tax matters (83 percent). As suggested by Abdul-Jabbar (2009), this may perhaps be due to the differences in the accounting practices of the construction sector, especially in terms of the revenue-recognition. To a lesser degree, technology (78 percent), services (61 percent) and manufacturing (60 percent) sectors also depended more heavily on external sources. In contrast, finance and banking (49 percent) sectors, along with plantation and agriculture (42 percent) sectors, had a lower reliance on external sources, where these companies entrusted tax matters more on their internal staff. An ANOVA test conducted, however did not find any significant mean differences ($f=1.226$, $p=0.301$) of internal-external compliance costs ratio by business sector.

With regards to business length, the internal-external compliance costs ratio increased with the length of time that a business had been operating (Table 4.18). The longer the PLCs had been in business, the higher the internal-external compliance costs ratio, suggesting a greater reliance on internal sources. Similar with the earlier findings of sales turnover level and business sector, the ANOVA tests suggested no statistical mean differences ($f=0.404$, $p=0.669$) for business length.

Table 4.18 Internal-External Compliance Costs Ratio by Business Length

<i>Business Length^a</i>		<i>Compliance Costs Ratio (%)</i>	
		<i>Internal^b</i>	<i>External</i>
Less than 15 years	(21)	29	71
15 to 30 years	(54)	35	65
More than 30 years	(23)	48	52
Overall	(98)	37	63

^a Number of respondents is given in parentheses. ^b Internal costs are inclusive of incidental costs.

4.3.2 Compliance Costs Analysis by Computational-Planning Ratio

Tax compliance costs were further analysed in terms of computational and planning activities.⁷⁰ Similar to the approach adopted by Pope et al. (1991) and Abdul-Jabbar (2009), the respondents were requested to state the estimated percentage for activities involving routine income tax returns, income tax planning or any other nature of income tax work. The breakdown of these costs were requested in the questionnaire for both the internal and external tax compliance costs

⁷⁰ Computational costs arise from compulsory routine work in relation to furnishing a yearly tax return. Planning costs relate to voluntary tax minimizing efforts in order to reduce the company's tax liability.

components (See Appendix 3.1, Questions 3 and 10). Based on the findings of this study, the nature of tax compliance costs for internal and external tax compliance components were quite similar although there was a slightly higher proportion of computational work for external tax compliance costs components (Table 4.19).

Table 4.19 Percentages of Computational-Planning Costs Ratio

<i>Source</i>	<i>Computational (%)</i>	<i>Planning (%)</i>	<i>Other (%)</i>
Internal	67	29	4
External	75	23	2
Overall	71	26	3

The overall percentages of computational, planning, and other costs ratio were 71, 26, and three percent, respectively. The ‘other’ component consists of ‘Tax Estimates, Revision and Refund’. Based on theory, these costs are normally considered as computational costs as they are closely related to ‘tax returns’ work. The analysis henceforth included the ‘other’ costs into computational component. The internal and external components were also combined as the percentages were very similar between the two components. Thus, the overall computational and planning ratio was 74 and 26 percent, respectively. This finding therefore suggests that most tax compliance costs burden for Malaysian PLCs was related to routine income ‘tax returns’ work. The computational and planning ratio was further examined in terms of PLCs’ characteristics, namely sales turnover, business sector, business length and estimated tax liability. The computational-planning costs ratio decreased with increasing sales turnover levels (Table 4.20). The smaller company, by annual sales turnover, incurred more compliance costs on tax computational work compared to planning work. This finding was confirmed by way of an ANOVA analysis ($f=3.221, p=0.044$) at the five percent significance level.

Table 4.20 Mean Computational-Planning Costs Ratio by Sales Turnover

<i>Turnover Level (Million)^a</i>		<i>Computational</i>		<i>Planning</i>	
		<i>MYR</i>	<i>Percent</i>	<i>MYR</i>	<i>Percent</i>
Less than MYR100	(31)	26,400	83	5,304	17
MYR100 to MYR500	(36)	31,864	68	14,809	32
More than MYR500 ^b	(31)	43,424	61	27,229	39
Overall	(98)	33,792	68	15,731	32

^a Number of respondents is given in parentheses.

^b This is a merged category (refer to Table 3.11).

A Bonferroni post-hoc test showed that there is a significant difference between the lowest and highest sales turnover levels. The sales turnover level of ‘Less than MYR100 million’ had the highest computational cost breakdown (83 percent) and the ratio was significantly different from the ‘More than MYR500 million’ level (61 percent). There were some variations of computational-planning ratio with regards to business sector (Table 4.21). For example, services sector had the highest planning costs breakdown (43 percent), while the technology sector did not incur any tax planning costs. However, some caution is necessary in interpreting these ratios due to the low responses from some of the sectors. Nevertheless, an ANOVA test at the five percent significance level ($f=2.195$, $p=0.117$) did not show any significant differences.

Table 4.21 Mean Computational - Planning Costs Ratio by Business Sector

<i>Business Sector^a</i>		<u>Computational</u>		<u>Planning</u>	
		<i>MYR</i>	<i>Percent</i>	<i>MYR</i>	<i>Percent</i>
Manufacturing	(31)	30,860	69	13,797	31
Services	(33)	26,743	57	20,178	43
Property and Construction ^b	(21)	39,065	77	12,600	23
Finance and Banking ^b	(6)	50,683	87	7,547	13
Plantation and agriculture ^b	(6)	45,678	72	18,146	28
Technology ^b	(1)	12,762	100	0	0
Overall	(98)	33,792	68	15,731	32

^a Number of respondents is given in parentheses.

^b These categories are merged into a single category of ‘other sectors’ for ANOVA test analysis.

There were also some differences in the PLCs’ computational-planning cost ratio with respect to business length (Table 4.22). These differences were supported by an ANOVA test at the five percent significance level ($f=3.493$, $p=0.034$). A Bonferroni post-hoc test showed that there was a significant difference between the youngest PLCs category (Less than 15 years) and the more matured PLCs (More than 30 years). Companies that have been in operation for more than 30 years had higher computational costs breakdown and the ratio was significantly different from those that have been business for less than 15 years. This finding can be partly explained by the need of younger companies to enhance knowledge on some tax planning aspects, such as matters pertaining to availability and suitability of tax incentives.⁷¹

⁷¹ Refer to Section 1.2.2 with regards to Malaysian incentives provided through the tax system and Section 2.5.1 for the proposed distinction of tax incentive costs.

Table 4.22 Mean Computational-Planning Costs Ratio by Business Length

<i>Business Length^a</i>		<u>Computational</u>		<u>Planning</u>	
		<i>MYR</i>	<i>Percent</i>	<i>MYR</i>	<i>Percent</i>
Less than 15 years	(21)	22,605	74	7,998	26
15 – 30 years	(54)	33,751	63	19,491	37
More than 30 years	(23)	44,104	76	13,904	24
Overall	(98)	33,792	68	15,731	32

^a The number of respondents is given in parentheses.

With respect to tax liability, the findings suggest that the computational-planning ratio was higher for the lower estimated tax liability (Table 4.23). Results from a statistical t-test supports this pattern at the five percent significance level ($t=2.218$, $p=0.029$), which identified a significant difference between the lower and the higher groups of estimated tax liability.

Table 4.23 Mean Computational-Planning Costs Ratio by Tax Liability

<i>Estimated Tax liability (Million)^a</i>		<u>Computational</u>		<u>Planning</u>	
		<i>MYR</i>	<i>Percent</i>	<i>MYR</i>	<i>Percent</i>
Less than MYR5 ^b	(56)	40,140	75	12,154	25
MYR5 and more ^b	(42)	82,798	64	22,787	36
Overall	(98)	33,792	68	15,731	32

^a Number of respondents is given in parentheses.

^b These are merged categories (refer to Table 3.13).

4.3.3 Compliance Costs Analysis by Tax Incentives Ratio

This study endeavoured to identify the fraction of the tax compliance activities and the respective costs associated with tax incentives. The insight into the share of tax incentives in the tax compliance costs incurred was elicited through questions in both the internal and external costs components:

“Of the time spent and costs incurred internally [externally] on routine income tax returns work and income tax planning work (if appropriate), state approximately how much (in percentage) was related to the qualification costs for government incentives provided through the tax system”

The mean compliance costs in relation to tax incentives was approximately MYR3,251 and represented no more than seven percent of the tax compliance costs burden. The overall fraction of tax compliance activities associated with government incentives provided through the tax system is relatively small (see Table 4.24 for details).

Table 4.24 Breakdown of Tax Incentives Costs

<i>Tax Incentives^a (Percentage)</i>		<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>
Internal	Computational	4.70	0	25
	Planning	4.21	0	20
External	Computational	6.84	0	25
	Planning	2.83	0	30

^a The number of respondents is 98.

The mean percentage of tax incentives costs ranged from 2.83 percent to 6.84 percent. The tax incentives maximum fraction ranged from 20 to 30 percent with a minimum of zero percent. The reason for this marginal finding may be that most of the survey responses received were from mature companies, where tax incentives may no longer be applicable for these businesses. In this study, more than 78 percent of the sample respondents consisted of companies which have been in operation for 15 years or more (see Table 3.12).

The corresponding tax incentive activities in terms of computational and planning work for both internal and external costs components are shown in Table 4.25. Consistent with earlier findings on computational-planning costs ratio (see Subsection 4.3.2), the computational portion for internal and external mean tax incentives (64.5 and 70 percent) were higher than the tax planning work (35.5 and 30 percent), respectively.

Table 4.25 Mean Internal and External Tax Incentives Costs

<i>Nature of tax work^a</i>	<i>Internal</i>		<i>External</i>	
	<i>MYR</i>	<i>Percent</i>	<i>MYR</i>	<i>Percent</i>
Computational	718	64.5	1,496	70.0
Planning	396	35.5	641	30.0
Total	1,114	100	2,137	100

^a The number of respondents is 98.

4.4 Distribution of Tax Compliance Costs

This section examines the distribution of tax compliance costs in terms of business size. Compliance costs analysis by sales turnover was conducted for the overall mean compliance costs estimates and also for the three main cost components, specifically internal, incidental and external costs, as well as on the compensation amount expected by taxpayers.

The tax compliance costs distribution by size, expressed as a percentage of annual sales turnover, was regressive (Table 4.26). The mean compliance costs, as percentage of annual sales turnover for companies with turnover level of less than MYR100 million, was 0.057 percent. For the next category level of sales turnover of between MYR100 to MYR500 million, the percentage fell to 0.016 percent and it further decreased to 0.001 percent for sales turnover of more than MYR500 million. The mean percentage showed that the tax compliance costs of PLCs fell remarkably in relation to the companies' annual sales turnover. For comparison, the mean compliance costs percentage in the lowest turnover level was almost four times higher than the middle category and as much as 57 times higher than the highest level of turnover. The overall mean compliance costs of Malaysian PLCs as a percentage of the average weighted turnover level was 0.01 percent.

Table 4.26 Mean Compliance Costs as a Percentage of Sales Turnover

<i>Turnover Level (Million)^a</i>	<i>Compliance Costs</i>	
	<i>Mean (MYR)</i>	<i>Percentage of Turnover</i>
Less than MYR100 (31)	28,802	0.057 ^b
MYR100 to MYR500 (36)	46,673	0.016 ^b
More than MYR500 (31)	65,978	0.001 ^c
Overall (98)	47,126	0.010 ^d

^a Number of respondents is given in parentheses.

^b Denominator used is the midpoint of the turnover level.

^c Denominator of MYR1,000 million is used for the turnover level of more than MYR500 million.

^d Denominator used is MYR450 million, derived by weighing all the midpoints of the turnover level.

The compliance costs distribution was further analysed in terms of internal, incidental and external costs components and the compensation amount. As a percentage of annual sales turnover, a similar regressive pattern towards smaller PLCs was also observed in these costs components and compensation amount (Tables 4.27 to 4.30). As shown in Table 4.27, the internal costs of PLCs in the lowest sales turnover level (Less than MYR100 million) was 2.1

times higher than the middle level (MYR100 - MYR500 million) and 10.5 times higher than the highest level (More than MYR5,000 million). The middle level was five times higher than the highest level. Results from an ANOVA test indicate a significant mean difference between sales turnover levels of internal compliance costs ($f=3.275$, $p=0.042$). A further analysis using a Bonferroni post hoc test showed that differences existed between the sales turnover of the lowest and middle levels.

Table 4.27 Mean Internal Compliance Costs by Sales Turnover

<i>Turnover Level (Million)^a</i>		<i>Compliance Costs</i>	
		<i>Mean (MYR)</i>	<i>Percentage of Turnover</i>
Less than MYR100	(23)	10,360	0.021 ^b
MYR100 - MYR500	(29)	29,782	0.010 ^b
More than MYR500	(22)	24,207	0.002 ^c
Overall	(74)	22,088	0.005 ^d

^a Number of respondents is in parentheses, based on 74 companies with internal costs component.

^b Denominator used is the midpoint of the turnover level.

^c Denominator of MYR1,000 million is used for the turnover level of more than MYR500 million.

^d Denominator used is MYR450 million, derived by weighing all the midpoints of the turnover level.

As for the regressivity of incidental compliance costs (Table 4.28), PLCs in the lowest sales turnover level was 11.7 times higher than the middle level and seven times higher than the highest level. The middle sales turnover level was however 0.6 times lower than the highest level. Results from an ANOVA test indicate a significant mean difference between sales turnover levels of incidental compliance costs ($f=4.600$, $p=0.012$). A further analysis using a Bonferroni post hoc test revealed that significant differences existed between the sales turnover of the middle and the highest levels.

Table 4.28 Mean Incidental Compliance Costs by Sales Turnover

<i>Turnover Level (Million)^a</i>		<i>Compliance Costs</i>	
		<i>Mean (MYR)</i>	<i>Percentage of Turnover</i>
Less than MYR100	(10)	1,750	0.0035 ^b
MYR100 to MYR500	(11)	814	0.0003 ^b
More than MYR500	(13)	5,031	0.0005 ^c
Overall	(34)	2,701	0.0006 ^d

^a Number of respondents is in parentheses, based on 34 companies with incidental costs component.

^b Denominator used is the midpoint of the turnover level.

^c Denominator of MYR1,000 million is used for the turnover level of more than MYR500 million.

^d Denominator used is MYR450 million, derived by weighing all the midpoints of the turnover level.

A similar regressive trend was also observed for the mean external compliance costs (Table 4.29). The lowest range sales turnover level was 5.1 times higher than the middle range level and 8.1 times higher than the highest range level. The middle range sales turnover level was 1.6 times higher than the highest level. Results from an ANOVA test indicate a significant mean difference between sales turnover levels of external compliance costs ($f=15.421$, $p=0.000$) at a one percent significance level. A further analysis using a Bonferroni post hoc test exhibited that differences existed between the sales turnover of the lowest and the highest sales turnover levels and between the middle and the highest sales turnover levels.

Table 4.29 Mean External Compliance Costs by Sales Turnover

<i>Turnover Level (Million)^a</i>	<i>Compliance Costs</i>	
	<i>Mean (MYR)</i>	<i>Percentage of Turnover</i>
Less than MYR100 (31)	20,552	0.041 ^b
MYR100 to MYR500 (33)	24,473	0.008 ^b
More than MYR500 (29)	49,907	0.005 ^c
Overall (93)	31,097	0.007 ^d

^a The number of respondents is in parentheses, based on 93 companies with external costs component.

^b Denominator used is the midpoint of the turnover level.

^c Denominator of MYR1,000 million is used for the turnover level of more than MYR500 million.

^d Denominator used is MYR450 million, derived by weighing all the midpoints of the turnover level.

A regressivity of compliance costs was also found for compensation amount expressed in terms of sales turnover levels (Table 4.30).

Table 4.30 Compensation by Sales Turnover

<i>Turnover Level (Million)^a</i>	<i>Compliance Costs</i>	
	<i>Mean (MYR)</i>	<i>Percentage of Turnover</i>
Less than MYR100 (29)	48,241	0.100 ^b
MYR100 - MYR500 (34)	35,853	0.010 ^b
More than MYR500 (26)	75,538	0.001 ^c
Overall (89)	51,483	0.010 ^d

^a Number of respondents is in parentheses, based on 89 companies indicating possible compensation.

^b Denominator used is the midpoint of the turnover level.

^c Denominator of MYR1,000 million is used for the turnover level of more than MYR500 million.

^d Denominator used is MYR450 million, derived by weighing all the midpoints of the turnover level.

Overall, the increase in compliance costs of PLCs were not proportional to the increase in size, either measured by internal, incidental, external and total compliance costs. Smaller PLCs, in

terms of annual sales turnover, catered for a disproportionate tax compliance costs burden. Similar findings of regressivity of tax compliance costs were also reported by almost all existing tax compliance costs studies (refer to Appendix 2.1 for a tabulated summary of related studies).

4.5 Determinants of Tax Compliance Costs

The analysis so far has focused on the estimation of CIT compliance costs incurred by Malaysian large corporate taxpayers. Thus, compliance costs were further analysed in terms of the specific characteristics of companies, namely sales turnover as a measure of size, business sector, length of business and tax liability.

4.5.1 Incidence of Tax Compliance Costs

This section describes how the tax compliance costs burden of corporate taxpayers are distributed among firms of different sizes, types of business activities, number of years they have been in business and their estimated tax liability. Examination of corporate taxpayers' compliance costs by annual sales turnover revealed that the mean compliance costs increased with turnover levels (Table 4.31). Results from an ANOVA test ($f=9.759$, $p=0.000$) supported the compliance costs' differences among turnover levels. A Bonferroni post hoc test revealed that significant differences existed between companies in the lowest range sales turnover level of 'Less than MYR100 million' with the highest range level of 'More than MYR500 million'.

Table 4.31 Mean Compliance Costs by Sales Turnover

<i>Sales Turnover (Million)</i>	<i>Frequency</i>	<i>Mean Costs (MYR)</i>
Less than MYR100	31	28,802
MYR100 to MYR500	36	46,673
More than MYR500	31	65,976
Overall	98	47,126

As for sectors, mean compliance costs of the plantation and agriculture as well as finance and banking sectors, were markedly higher compared to the other sectors (Table 4.32). However, an ANOVA test ($f=0.849$, $p=0.536$) did not reveal any significant mean differences within these business sectors.

Table 4.32 Mean Compliance Costs by Business Sector

<i>Business Sector</i>	<i>Frequency</i>	<i>Mean Costs (MYR)</i>
Manufacturing	31	42,019
Services	33	46,513
Property and Construction ^a	21	46,307
Finance and Banking ^a	6	58,230
Plantation and Agriculture ^a	6	60,492
Technology ^a	1	12,762
Overall	98	47,126

^a These categories are merged into a single category of 'other sectors' for ANOVA test analysis.

Regarding length of business (Table 4.33), those that have been in business longer appeared to have higher compliance costs compared to the younger companies. Similar to the business sector, results from an ANOVA test ($f=1.080$, $p=0.388$) did not reveal any significant mean differences with business length.

Table 4.33 Mean Compliance Costs by Business Length

<i>Business Length</i>	<i>Frequency</i>	<i>Mean Costs (MYR)</i>
Less than 15 years	21	30,214
15 – 30 years	54	49,876
More than 30 years	23	56,113
Overall	98	47,126

Finally, with respect to estimated tax liability, the findings revealed that mean compliance costs increased with tax liability (Table 4.34). Results from a statistical t-test support this pattern at the five percent significance level ($t=28.431$, $p=0.000$), which identified a significant difference between the lower and the higher groups of estimated tax liability.

Table 4.34 Mean Compliance Costs by Tax Liability

<i>Estimated tax liability (Million)</i>	<i>Frequency</i>	<i>Mean Costs (MYR)</i>
Less than MYR5 ^a	56	26,654
MYR5 and more ^a	42	64,305
Overall	98	47,126

^a These are merged categories (refer to Table 3.13).

4.5.2 Correlation Analysis

A correlation analysis was undertaken to examine the relationship between each corporate characteristic and the taxpayer compliance costs burden. Business size and tax liability were found to be significantly correlated with the mean tax compliance costs estimates (Table 4.35).

Table 4.35 Corporate Characteristics and Compliance Costs: Correlation Analysis

<i>Corporate Characteristics</i>	<i>Compliance Costs</i>
Business Size	+ 0.413 ***
Business Sector	+ 0.090
Business Length	+ 0.184
Tax Liability	+ 0.338 ***

Positive (+) sign denotes a direct relationship respectively. *** Significant at the 0.01 level (2-tailed).

A positive relationship between business size and compliance costs suggests that an increase in the sales turnover level increased the compliance costs of corporate taxpayers. Compliance costs' positive association with business size indicated that companies with higher level of sales turnover incurred higher compliance costs. A coefficient value of 0.413 indicated a moderate correlation between the two variables. The correlation between business length and compliance costs is significant at the one percent level. A similar positive association was observed between estimated tax liability and tax compliance costs. Compliance costs' positive association with the tax liability signified that companies with greater estimated tax liability incurred higher compliance costs. The strength of correlation of 0.338 between tax liability and compliance costs indicated a medium relationship. The correlation between tax liability and compliance costs was significant at the one percent level.

The analysis conducted also reveals positive correlations of tax compliance costs with business sector and business length. Compliance costs' positive association with these two corporate characteristics demonstrated a variation regarding corporate sectors and that those companies which have been in business longer incurred higher compliance costs. However, there was a very weak association between business sector and compliance costs with a correlation coefficient of 0.090. Similarly, a weak association was also observed between business length and compliance costs with a correlation coefficient of 0.184. Furthermore, the correlation between these two variables and compliance costs was not significant.

4.5.3 Multiple Regression Analysis

The analysis conducted so far, separately identified the association between tax compliance costs and the explanatory variables. In this section, multiple linear regression method⁷² was utilised to identify the factors influencing the compliance costs estimates, simultaneously in a single model (Model 1: Determinants of CIT Compliance Costs)⁷³.

4.5.3.1 Regression Model of Tax Compliance Costs

Three regression analyses were undertaken separately to determine the relationship between compliance costs as dependent variables (Table 4.36) and the predictor variables (Table 4.37). Separate regression analyses were conducted on internal compliance costs [DV1], external compliance costs [DV2] and total compliance costs [DV3], to permit exploration of the differences in response to different components of compliance costs. The predictor variables for the regression analysis were four main corporate characteristics, specifically business size, business sector, business length and tax liability.

Table 4.36 Regression Model 1: Dependent Variables

<i>Tax Compliance Costs</i>	<i>Measurement</i>
Internal Compliance Costs [DV1]	Tax compliance cost estimates were based on internal and incidental costs components. Internal compliance costs estimates were logarithmically transformed into log10 to reduce skewness of variable for regression purposes.
External Compliance Costs [DV2]	Tax compliance cost estimates were based on the tax fees paid to external tax professionals. External compliance costs estimates were logarithmically transformed into log10 to reduce skewness of variable for regression purposes.
Total Compliance Costs [DV3]	Tax compliance cost estimates were based on three main components: internal, incidental and external costs. Total compliance costs estimates were logarithmically transformed into log10 to reduce skewness of variable for regression purposes.

⁷² Multiple linear regression method is a general statistical technique employed to determine the relationship between a single dependent variable and several predictor variables (Hair, Black, Babin & Anderson, 2010).

⁷³ Model 1 identifies factors affecting the magnitude of compliance costs. Refer to Subsection 2.5.2.1 regarding details of this model.

Table 4.37 Regression Model 1: Predictor Variables

<i>Predictors</i>	<i>Measurement</i>
Business Size [Size]	The four levels of annual sales turnover were reclassified into three levels due to low number of responses in the last two categories. For regression purposes, two dummy variables were created with a sales turnover level of less than MYR100 million as the reference level.
Industry sector [Sector]	The six industry sectors were reduced into three (manufacturing, services, and other) due to low number of responses of a few sectors. The ‘other sectors’ include all the remaining sectors: ‘property & construction’, ‘finance & banking’, ‘plantation & agriculture’ and technology. Two dummy variables were created with services as the reference sector.
Business length [Year]	The number of years companies have been in business was identified from the actual survey responses. Higher score indicate companies have been in operation for longer number of years.
Tax Liability [Tax]	The four levels of estimated tax liability were reduced into two due to the low number of responses. The ‘nil’ and ‘Less than MYR5 million’ categories were merged in a single category of ‘Less than MYR5 million’. The ‘MYR5 to MYR10 million’ and ‘More than MYR10 million’ were merged in a single category of ‘MYR5 million and more’. For regression purposes, one dummy variable was created with tax liability of less than MYR5 million as the reference level.

Taking into account the dependent and predictor variables of Model 1, a four predictor multiple linear regression analysis was performed as depicted in Equation 4.4.

Equation 4.4:

$$Y = \beta_0 + \beta_1(D_1) + \beta_2(D_2) + \beta_3(D_3) + \beta_4(D_4) + \beta_5(X_1) + \beta_6(X_2) + e$$

where:

- Y = Tax Compliance Costs;
- β = Coefficients;
- D_1 = Medium-sized Company;
- D_2 = Large-sized Company;
- D_3 = Manufacturing Sector;
- D_4 = Other Sectors;
- X_1 = Business Length;
- X_2 = Tax Liability;

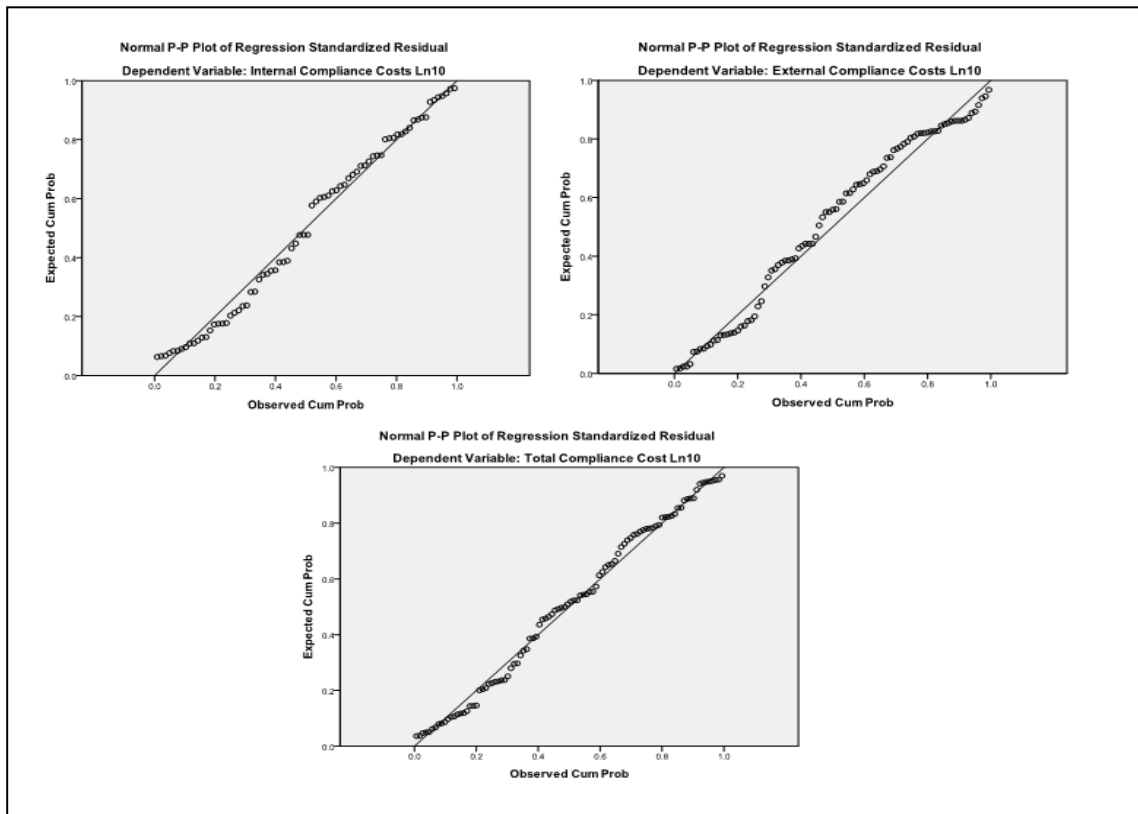
4.5.3.2 Appropriateness of Regression Models

Assessment on appropriateness of regression models employed was undertaken before conducting the multiple regression analysis. Assessment based on annual sales turnover, as a company size measure, found that all four underlying assumptions for multiple regressions were not violated. The details on the four assumptions underlying regression analysis, namely normality, linearity, homoscedasticity and multicollinearity assumptions are as follows:

(i) Normality assumption

Normal probability (P-P) plots were used to investigate the normality of the independent variables data set. These plots compared the observed distribution of residuals to the expected distribution under the assumption of normality (Hair, Black, Babin & Anderson, 2010). Utilising this approach, plots that closely followed a straight diagonal line supported the normality assumptions.

Figure 4.1 Normal Probability Plot: Model 1



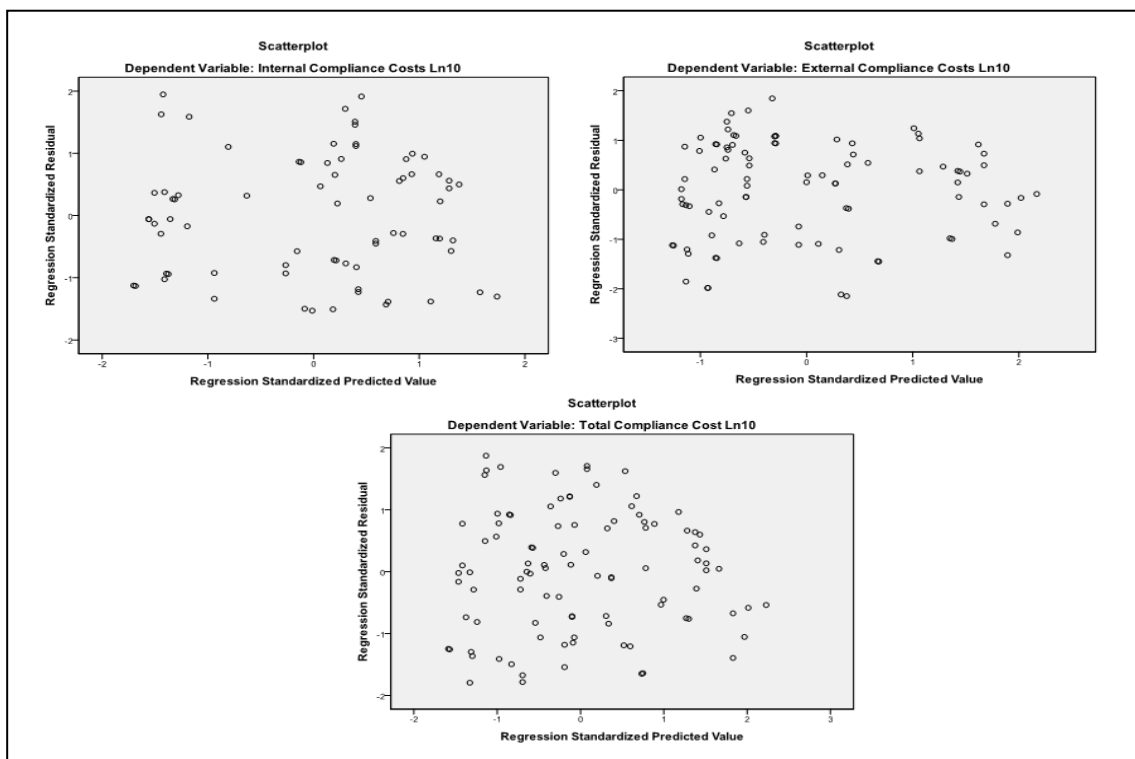
Source: PSAW output of this study.

Figure 4.1 provides the normal probability plots for all the three dependent variables, namely internal, external and total compliance costs. All the three plots showed no significant departures from this straight diagonal line, indicating no violation of the normality assumptions. Hence, the dependent variables used in this study on determinants of tax compliance costs are normally distributed.

(2) Linearity assumption

Linearity is achieved when the mean values of dependent variable for each increment of independent variable(s) lie along a straight line (Field, 2005, p. 170). In this study, linearity assumption is investigated through a scatter plot of standardised residual values (ZRESID) against standardised predicted values (ZPRED). The graph of standardised residual values should look like a random array of dots evenly dispersed around zero (Field, 2005, p. 220). The scatter plot of residuals graphs for all the three dependent variables showed no evidence of linearity as the dots were evenly dispersed around zero (Figure 4.2). Hence, linearity assumption is not violated.

Figure 4.2 Scatter Plot Diagram of Residual versus Predicted Values: Model 1



Source: PSAW output of this study.

(3) Homoscedasticity assumption

Homoscedasticity refers to an assumption in regression analysis that residuals at each level of the independent variable(s) exhibits similar variances (Field, 2005, p. 170). According to Field (2005, p. 202), there is heteroscedasticity⁷⁴ in the data if the scatter plot of residuals graphs funnel out. In this study, the assumption of homoscedasticity is assessed using the same scatter plots as in Figure 4.2. Scatterplot diagrams as exhibited in Figure 4.2 did not show any clear patterns, thus exhibiting homoscedasticity.

(4) Multicollinearity assumption

Multicollinearity occurs when there is a strong correlation between two or more predictor variables in the regression model (Field, 2005). Collinearity diagnostics using variance inflation factor (VIF) and tolerance value⁷⁵ measures were utilised for this study. VIF value of more than 10 which corresponds to tolerance value of below 0.1, indicates a high degree of multicollinearity (Field, 2005; Hair et al., 2010; Myers, 1990).

Table 4.38 Collinearity Test of Predictor Variables: Model 1

<i>Variable</i>	<i>Colinearity Statistics</i>	
	<i>Tolerance</i>	<i>VIF</i>
Tax Complexity	0.764	1.308
Tax Rate Structure	0.845	1.184
Tax Deterrence Sanctions	0.813	1.230
Tax Law Fairness	0.806	1.240
Tax Psychological Costs	0.865	1.156

Source: PASW output of this study

In this study, the VIF and tolerance values in relation to compliance costs regression ranged from 1.2 to 1.3 and 0.8 to 0.9 respectively; thus multicollinearity assumption was not violated (Table 4.38).

⁷⁴ Heteroscedasticity is the opposite of homoscedasticity, which occurs when the residuals at each level of independent variable(s) have unequal variances (Field, 2005, p. 170).

⁷⁵ Tolerance value is reciprocal of VIF and it measures the amount of variability of selected independent variable not explained by other independent variables (Hair et al., 2010).

4.5.3.3 Results of Multiple Regression Analysis

Regression analyses undertaken on the three dependent variables found statistically significant results. ‘External Compliance Costs’ and ‘Total Compliance Costs’ were significant at the one percent level, while ‘Internal Compliance Costs’ was significant at the 10 percent level.

▪ Internal Compliance Costs

Regression for internal compliance costs were a rather poor fit with the adjusted R^2 of nine percent, but the overall relationship was significant at the 10 percent level ($F=2.210$, $p<0.10$). Specifically, the independent variables explained only 16.5 percent of the variability in the internal compliance costs incurred by the PLCs. The estimates of coefficient for the internal compliance costs are exhibited in Table 4.39.⁷⁶ The only significant determinant of the internal tax compliance costs burden was company size measured by the annual sales turnover. Annual sales turnover of more than MYR500 million was significant at the one percent level while turnover of between MYR100 and MYR500 million was significant at the five percent level. With other variables being constant, CIT compliance costs were positively related to companies’ size, increasing by 0.412 and 0.291 respectively, for every extra Malaysian Ringgit of annual sales turnover.

Table 4.39 Estimates of Coefficient: Internal Compliance Costs

<i>DVI</i> ^a	β ^b	<i>Std. Error</i>	<i>Beta</i> ^c	<i>t</i>	<i>p-value</i>
Constant	3.677	0.162	-	22.688	0.000
Size (D_1)	0.341	0.158	0.291	2.163	0.034**
Size (D_2)	0.515	0.180	0.412	2.858	0.006***
Sector (D_3)	-0.098	0.164	-0.079	-0.597	0.553
Sector (D_4)	-0.020	0.170	-0.016	-0.117	0.907
Year (X_1)	0.004	0.006	0.088	0.673	0.504
Tax (X_2)	0.018	0.159	0.016	0.115	0.908

^a Dependent Variable: Internal Compliance Costs.

^b Unstandardized Coefficient. ^c Standardized Coefficient.

*** Significant at the 0.01 level. ** Significant at the 0.05 level. * Significant at the 0.10 level.

⁷⁶ Internal compliance costs consisted of internal staff costs and incidental costs. Refer to Subsection 4.2.

The final estimated model of the multiple linear regression analysis for ‘Internal Compliance Costs’ component of costs is depicted in Equation 4.5 based on estimates of coefficients presented in Table 4.39.

Equation 4.5:

$$Y = 3.677 + 0.341(D_1) + 0.515(D_2) - 0.098(D_3) - 0.020(D_4) + 0.004(X_1) + 0.018(X_2) + e$$

▪ **External Compliance Costs**

The explanatory variables accounted for almost 30 percent of variability in the external CIT compliance costs incurred by the Malaysian PLCs. The estimates of coefficients for the external compliance costs⁷⁷ are exhibited in Table 4.40. Two variables were found to be significant determinants of external compliance costs, namely company size above MYR500 million and tax liability. With other variables held constant, external compliance costs were positively related to companies’ size and tax liability, increasing by 0.375 for every extra Malaysian Ringgit of annual sales turnover and by 0.225 for every extra Malaysian Ringgit of estimated tax liability.

Table 4.40 Estimates of Coefficient: External Compliance Costs

<i>DV2^a</i>	<i>β^b</i>	<i>Std. Error</i>	<i>Beta^c</i>	<i>t</i>	<i>p-value</i>
Constant	4.090	0.087	-	46.863	0.000
Size (D ₁)	0.073	0.089	0.090	0.821	0.414
Size (D ₂)	0.315	0.102	0.375	3.071	0.003***
Sector (D ₃)	-0.043	0.090	-0.051	-0.477	0.635
Sector (D ₄)	0.053	0.091	0.065	0.580	0.563
Year (X ₁)	0.002	0.003	0.079	0.772	0.442
Tax (X ₂)	0.177	0.085	0.225	2.081	0.040**

^a Dependent Variable: External Compliance Costs.

^b Unstandardized Coefficient ^c Standardized Coefficient.

*** Significant at the 0.01 level. ** Significant at the 0.05 level. * Significant at the 0.10 level.

⁷⁷ External compliance costs consist of tax fees paid to external tax professionals. Refer to Subsection 4.2.

The final estimated model of the multiple linear regression analysis for ‘External Compliance Costs’ components of costs is depicted in Equation 4.6 based on the estimates of coefficients presented in Table 4.40.

Equation 4.6

$$Y = 4.090 + 0.073(D_1) + 0.315(D_2) - 0.043(D_3) + 0.053(D_4) + 0.002(X_1) + 0.177(X_2) + e$$

▪ **Total Compliance Costs**

In this analysis, the independent variables explained more than 25 percent of the variability in the total CIT compliance costs burden. The estimates of coefficients for the total compliance costs⁷⁸ are exhibited in Table 4.41. The findings are similar with regression of internal compliance costs where only company size was found to be a significant determinant of tax compliance costs burden. Annual sales turnover of more than MYR500 million was significant at the one percent level while turnover of between MYR100 and MYR500 million was significant at the five percent level. With other variables held constant, CIT compliance costs were positively related to companies’ size, increasing by 0.445 and 0.233 respectively for every extra Malaysian Ringgit of annual sales turnover.

Table 4.41 Estimates of Coefficient: Total Compliance Costs

<i>DV3^a</i>	<i>β^b</i>	<i>Std. Error</i>	<i>Beta^c</i>	<i>t</i>	<i>p-value</i>
Constant	4.242	0.087	-	48.549	0.000
Size (D ₁)	0.178	0.089	0.223	2.013	0.047**
Size (D ₂)	0.370	0.103	0.445	3.594	0.001***
Sector (D ₃)	-0.072	0.088	-0.086	-0.814	0.418
Sector (D ₄)	0.026	0.092	0.032	0.287	0.775
Year (X ₁)	0.003	0.003	0.105	1.029	0.306
Tax (X ₂)	0.093	0.084	0.119	1.112	0.269

^a Dependent Variable: Total Compliance Costs.

^b Unstandardized Coefficient. ^c Standardized Coefficient.

*** Significant at the 0.01 level. ** Significant at the 0.05 level. * Significant at the 0.10 level.

⁷⁸ Total compliance costs comprehensively cover the internal, incidental and external costs. Refer to Subsection 4.2.

The final estimated model of the multiple linear regression analysis for ‘Total Compliance Costs’ component of costs is depicted in Equation 4.7 based on the estimates of coefficients presented in Table 4.41.

Equation 4.7

$$Y = 4.242 + 0.178(D_1) + 0.370(D_2) - 0.072(D_3) + 0.026(D_4) + 0.003(X_1) + 0.093(X_2) + e$$

Overall findings from the three multiple regression analyses has illuminated the statistical association between CIT compliance costs and its determinants, that have been suggested in the literature. Consistent in all the three regression analyses conducted, business size significantly affected the magnitude of CIT compliance costs. In addition, tax liability was found to be the significant determinant for the fees paid to external tax professionals on tax related affairs at the five percent significance level. Other corporate characteristics, particularly, business sector and business length, showed some correlation with the magnitude of CIT compliance costs but the influence was not statistically significant. The results gathered from the three multiple regression analyses on the factors affecting CIT compliance costs are exhibited in Table 4.42.

Table 4.42 Results Summary of Multiple Regressions: Model 1

<i>Results</i>	<i>Internal Compliance Costs [DV1]</i>	<i>External Compliance Costs [DV2]</i>	<i>Total Compliance Costs [DV3]</i>
R ²	0.165	0.296	0.257
Adjusted R ²	0.090	0.247	0.208
Standard Error	0.549	0.339	0.346
F-value	2.210	6.032	5.249
P-value	0.053*	0.000***	0.000***

*** Significant at the 0.01 level. * Significant at the 0.10 level.

4.6 Corporate Taxpayers Views and Suggestions

This section covers information regarding tax-related difficulties faced by companies, reasons for engaging external tax professionals and suggestions on how to reduce tax compliance costs of companies.

4.6.1 Tax-related Difficulties for Companies

Respondents who manage their tax matters internally were requested to identify the areas where their companies encountered difficulties in complying with tax requirements. Eight possible difficulties were set out, with a space for respondents to describe any other areas not specified. Respondents were also allowed to select more than one difficulty listed (refer to Appendix 3.1, Question 5).

Table 4.43 Tax-related Difficulties Facing Companies

<i>Tax-related Difficulties</i>	<i>Number of responses</i>	<i>Overall Percent</i>	<i>Percent of Cases^a</i>
Estimating income tax payable	48	18.0	64.9
Implementing the income tax changes	42	15.7	56.8
Dealing with the tax authority	42	15.7	56.8
Maintaining records for income tax purpose	40	15.0	54.1
Understanding income tax legislation	39	14.6	52.7
Short period of time to lodge the tax return	21	7.9	28.4
Dealing with the external advisor	18	6.7	24.3
Cash flow problems in paying tax instalments	15	5.6	20.3
Other	2	0.8	2.7
Total	267	100	

^a Based on 74 cases of companies with internal costs component.

More than 50 percent of respondents indicated five particular tax-related difficulties as challenging (Table 4.43). Out of 75 companies who have internal tax departments, 48 companies (64.9 percent) acknowledged that estimating income tax payable is problematic. This was followed by four other difficulties, specifically, implementing the income tax changes (56.8 percent), dealing with the tax authority (56.8 percent), maintaining records for income tax purposes (54.1 percent) and understanding income tax legislation (52.7 percent). Two respondents (companies) mentioned that dealing with government departments (such as Ministry of Finance and Malaysian Industrial Development Authority) on tax-related activities is a time consuming task.

Respondents indicated more than one tax-related difficulty were requested to rank these difficulties in order of importance (Table 4.44). The three most highly ranked difficulties were estimating income tax payable (27.5 percent), understanding income tax legislation (23.8

percent) and implementing the income tax changes (15.0 percent). In comparison, the least ranked tax-related difficulties (2.4 percent) were concerning external tax advisors and cash flow problems in paying tax instalments.

Table 4.44 Highest Ranked Tax-related Difficulties for Companies

<i>Tax-related Difficulties</i>	<i>Frequency</i>	<i>Percentage</i>
Estimating income tax payable	22	27.5
Understanding income tax legislation	19	23.8
Implementing the income tax changes	12	15.0
Dealing with the tax authority	11	13.8
Maintaining records for income tax purpose	7	8.8
Short period of time to lodge the tax return	5	6.3
Dealing with the external advisor	2	2.4
Cash flow position in paying tax instalment	2	2.4
Total	80 ^a	100

^a Based on 74 cases of companies with internal costs component.

4.6.2 Reasons for Engaging External Tax Professionals

The respondents were also requested to provide the main reasons for engaging external tax professional services (Table 4.45).

Table 4.45 Main Reasons for Engaging External Tax Professionals

<i>Reasons</i>	<i>Number of responses</i>	<i>Overall Percent</i>	<i>Percent of Cases ^a</i>
Depth of technical knowledge	79	26.2	85
Independent expert opinion is required	73	24.2	78.5
More cost effective to use tax professionals	46	15.2	49.5
Improve understanding of tax matters	39	12.9	41.9
Income tax planning	35	11.5	37.6
Income tax law is too complicated	22	7.3	23.7
Reduce the chance of being audited by IRB	8	2.7	8.6
Total	302	100	

^a Based on 93 cases of companies with external costs component.

Seven possible reasons for engaging external tax professionals were set out with a space for respondents to describe any other area not specified. Respondents were also allowed to select more than one reason listed (refer to Appendix 3.1, Question 12). ‘The depth of technical knowledge is not available internally’ (85 percent) and ‘Independent expert opinion is required’ (78.5 percent) were the most frequently stated reasons. Reducing the chance of being audited by IRB was the least stated reasons with less than nine percent of respondents identifying this reason.

If there were more than one reason, the question requested to rank them in order of importance (Table 4.46). The two most highly ranked reasons were the need for independent expert opinion (34.7 percent) and the depth in technical knowledge of external tax professionals (33.7 percent). On the contrary, the least ranked reasons for engaging external tax professionals (2.2 percent) were in relation to tax law complexity and understanding of tax matters.

Table 4.46 Highest Ranked Reasons for Engaging External Tax Professionals

<i>Reasons</i>	<i>Frequency</i>	<i>Percentage</i>
Independent expert opinion is required	32	34.7
Depth of technical knowledge	31	33.7
More cost effective to use tax professionals	16	17.4
Income tax planning	9	9.8
Income tax law is too complicated	2	2.2
Improve understanding of tax matters	2	2.2
Total	92 ^a	100

^a Based on 93 cases of companies with external costs component.

4.6.3 Suggestions to Reduce Compliance Costs Burden

Corporate taxpayer survey respondents were given the opportunity to suggest ways to reduce their CIT compliance costs burden through an open-ended question:

‘Please state if you have any suggestions for reducing the tax compliance costs of companies.’

A rich variety of suggestions received were analysed using content analysis⁷⁹ as summarised in Table 4.47.

Table 4.47 Suggestions to Reduce Compliance Costs Burden

<i>Suggestions</i>	<i>Frequency</i>	<i>Percentage</i>
Complexity in the tax system	23	28.4
Taxpayers education and training program	19	23.5
Deductibility of tax compliance expenses	17	21.0
Aligning of tax and accounting rules	10	12.3
Other suggestions	12	14.8
Total	81 ^a	100

^a Based on responses from 61 respondents regarding suggestions to reduce tax compliance costs.

On the suggestion to reduce tax compliance costs of companies, 23 of these responses (28.4 percent) were pertaining to the complexity of tax laws applicable to corporations. More than half of these responses stated the IRB requirement for tax estimations⁸⁰ as a source of complexity in the tax system. One respondent even suggested the abolition of tax estimation as it creates a lot of paperwork and possible imposition of unnecessary penalties. Taxpayers expected simple and consistent tax return forms without frequent amendments and for IRB to cut down on the number of public rulings but wanted more examples in each ruling. Many respondents also felt strongly that a penalty should not be imposed if there is any discrepancy as a result of a genuine error. They further argued that voluntary disclosure of understated income within three months after lodgement of tax returns should not attract any penalty.

Nineteen (19) respondents (23.5 percent) suggested that education and training of taxpayers should be given due attention by IRB. The main issue raised was the need for IRB to educate taxpayers on furnishing tax returns, especially on the new e-filing system. To a lesser extent, training of employees dealing with tax matters by respective companies and for the IRB to make the online system more user friendly to the taxpayer, were also suggested. All these suggestions will result in lesser dependence of corporate taxpayers on external tax professionals and as a consequence, would reduce their tax compliance costs burden. One respondent

⁷⁹ Utilizing content analysis a list of categories is first created, and then responses are coded into one of those categories.

⁸⁰ In addition to timely tax estimates, corporate taxpayers must ensure that the estimate of tax payable for the year is not less than 85 percent of the estimate of tax payable for the immediate preceeding year of assessment or otherwise penalty would be charged (IRB website).

suggested that the holding company of a group of companies can provide tax assistance and advice in order to reduce the reliance on external tax professionals. In addition, preparation of consolidated tax returns for the entire group of companies was proposed as it may reduce the total tax compliance costs for the whole group.

Seventeen (17) respondents (21 percent) proposed that statutory compliance expenses be allowable for deduction and they include tax and secretarial fees, in order to reduce costs of doing business in Malaysia. The taxpayers contended that these expenses be given a deduction as the objective is to get companies to carry out their responsibility as responsible citizens. Moreover, the respondents argued that deductions for business items should be more business-oriented and reasonable, where the IRB should consider the practicality of each business transaction in determining deductibility of expenses.

Ten (10) respondents (12.3 percent) were concerned with the need to align tax legislation with accounting standards and to rely more heavily on accounting rules. Corporate taxpayers suggested for a convergence of tax law with accounting standard practices, which in their opinion, would reduce discrepancy and tax adjustments.

Other issues which received diverse suggestions included: abolition of certain tax incentives and allowances (three responses); improvement on audit and appeals process (two responses); transparency in interpretation of the tax system (two responses); the provision of tax software by IRB (one response); more simplified and clearer tax returns form for easy understanding (one response) and more competent IRB officers (one response).

4.7 Analysis of External Tax Professionals Survey

This section presents the findings from the perceptions of external tax professionals engaged by large corporate taxpayers. The results mainly cover tax compliance costs estimates together with the views and suggestions of the external tax professionals.

4.7.1 Response Rate and Sample Demographic

The external tax professionals sample was gathered from the list of tax agents available at the IRB's website (See Subsection 3.4). Two hundred (200) external tax professionals with large companies' tax clients were approached. Forty-nine (49) respondents completed the self-administered survey, furnishing a response rate of 24.5 percent. All completed questionnaires were examined for accuracy of data and missing values prior to data entry. Follow-up calls and e-mails were made to address missing items and to clarify matters of possible incorrect responses. Table 4.48 provides the demographic profile of external tax professional involved in this study.

Table 4.48 Demographic Profile of External Tax Professionals

<i>Demographic Profile</i>	<i>Number of Respondents</i>	<i>Percentage</i>	<i>Cumulative Percentage</i>
Practice:			
▪ Big-four Accounting Firm	24	49.0	49.0
▪ Non Big-four firm/Tax Firm	25	51.0	100.0
Position:			
▪ Partner	31	63.3	63.3
▪ Manager	10	20.4	83.7
▪ Senior/Junior	8	16.3	100.0
Membership: ^a			
▪ MIA	33	67.4	67.4
▪ CTIM	22	44.9	112.3
▪ Others	21	42.9	115.2
Tax Experience:			
▪ Less than 10 years	7	14.3	14.3
▪ 10 to 20 years	17	34.7	49.0
▪ More than 20 years	25	51.0	100.0

^a Adds up to more than 100% as some external tax professionals have more than one membership.

There were almost an equal percentage of respondents practicing in the Big-four accounting firms (49 percent) and non Big-four accounting or tax firms (51 percent). A large majority of respondents' position in these firms were partners (63.3 percent), followed by managers (20.4 percent) and senior/junior staff (16.3 percent). Nearly all of the respondents were members of at least one of the accounting or tax professional bodies, either locally or internationally. More than 67 percent of the external tax professionals surveyed were members of the Malaysian

Institute of Accountants (MIA), and almost 45 percent were registered with the Chartered Tax Institute of Malaysia (CTIM). Other professional bodies included the Association of Chartered Certified Accountants (ACCA), Institute of Chartered Accountants in England and Wales (ICAEW) and CPA Australia (42.9 percent). In terms of tax experience, 51 percent have more than 20 years of professional experience, 34.7 percent have experience of between five to 10 years and only 14.3 percent have less than 10 years of professional exposure. Thus, it can be concluded that the survey data was obtained from the external tax professionals with appropriate position, knowledge and experience in handling tax matters of their respective corporate tax clients.

4.7.2 Descriptive Analysis of External Tax Professionals Sample

In order to comprehend the background information of respondents' corporate tax clients of this study, descriptive analyses was conducted based on the 49 usable survey data. Analysis of the professionals' tax clients indicated that on average 21 percent of their clients were large companies and the remaining were corporate SMEs. The minimum percentage of large companies' clientele was five percent and a maximum of 70 percent with a standard deviation of 18 (Table 4.49).

Table 4.49 Percentage of Corporate Tax Clients

<i>Types of Companies</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard Deviation</i>
Large Companies (%)	21	5	70	18.0
SMEs (%)	79	30	95	18.3

External tax professionals were requested to provide information on the business sector the large companies were engaged in and sales turnover. Table 4.50 exhibits the mean percentage of large tax clients' business sector with the minimum and maximum percentages. The highest mean percentage of large tax clients' business sector was services (35.2 percent), followed by manufacturing (26.7 percent), property and construction (20.9 percent) and others (17.2 percent). Other business sectors included trading, plantation, agriculture, finance and banking. The distribution of corporate tax clients' business sector mirrored the sample respondent companies in the corporate taxpayers' survey (see Table 3.10), which increased comparability of findings between the two surveys.

Table 4.50 Percentage of Tax Clients Business Sector

<i>Business Sector (%)</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard Deviation</i>
Manufacturing	26.7	0	90	22.3
Services	35.2	0	100	25.6
Property and Construction	20.9	0	63	21.8
Others	17.2	0	35	8.1

With regards to size of large corporate tax clients, the mean percentage was 46.3 percent for annual sales turnover level of less than MYR100 million, 35.1 percent for annual sales turnover of between MYR100 million and MYR500 million, followed by 18.6 percent for annual sales turnover of more than MYR500 million (Table 4.51).

Table 4.51 Percentage of Tax Clients Sales Turnover

<i>Sales Turnover (Million)</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard Deviation</i>
Less than MYR100	46.3	10	100	24.4
MYR100 to MYR500	35.1	0	80	18.0
More than MYR500	18.6	0	60	10.4

4.7.3 External Tax Fees of Corporate Clients

External tax professionals were also requested to state the lowest and highest range of fees charged in handling their large clients' tax matters (Table 4.52). The lowest tax fee ranged from MYR9,000 to MYR90,000 with a mean of MYR22,959 per company. The highest tax fee ranged from MYR13,500 to MYR120,000 with a mean of MYR33,347. The overall tax fees charged on large corporate tax clients ranged from MYR11,250 to MYR105,000 with a mean of MYR28,153.

Table 4.52 Corporate Clients External Tax Fees

<i>Tax Fees (MYR)</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard Deviation</i>
Lowest Range	22,959	9,000	90,000	24,080
Highest Range	33,347	13,500	120,000	31,734
Overall	28,153	11,250	105,000	27,783

Number of respondents equals 49.

4.7.4 Analysis by Computational-Planning Costs Ratio

The external tax professionals were requested to state the estimated percentage for tax computational, planning and any other nature of work. The percentages of these computational, planning and other costs were 73, 26 and one percent, respectively (Table 4.53). The ‘other’ component was related to a company restructuring exercise, and these costs were normally included as planning costs as it was closely related to tax planning schemes. Thus, from the tax professionals’ point of view, the computational and planning ratio was 73:27 and can therefore be concluded that most of the tax compliance activities of Malaysian PLCs is related to computational work.

Table 4.53 Tax Fees Computational-Planning Costs Ratio

<i>Cost Nature (%)</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Standard Deviation</i>
Computational	73	15	100	25
Planning	26	0	80	20
Other	1	0	10	-

Number of respondents equals 49.

4.7.5 Tax Difficulties Faced by Corporate Clients

External tax professionals were requested to identify the areas where their large tax clients encountered difficulties in complying with tax requirements (Table 4.54).

Table 4.54 Corporate Clients Tax-related Difficulties

<i>Difficulties</i>	<i>Number of responses</i>	<i>Overall Percent</i>	<i>Percent of Cases^a</i>
Understanding income tax legislation	41	23.2	87.2
Estimating income tax payable	37	20.9	78.7
Dealing with the tax authority	37	20.9	78.7
Implementing the income tax changes	34	19.2	72.3
Maintaining records for income tax purpose	28	15.8	59.6
Total	177	100	-

^a Based on 47 respondents.

Five possible difficulties were set out with a space for respondents to describe any other predicament encountered by their corporate tax clients. Respondents were also allowed to select more than one difficulty listed (refer to Appendix 3.2, Question 6). The most highly ranked tax difficulty of corporate taxpayers was in relation to understanding of income tax legislation (87.2 percent), followed by estimating income tax payable (78.7 percent) and dealing with the tax authorities (78.7 percent). Other areas of difficulties included implementing the income tax changes (72.3 percent) and maintaining records for income tax purposes (59.6 percent).

4.7.6 Reasons for Engaging External Tax Professionals

The views of external tax professionals were also sought concerning the reasons as to why their tax clients were utilising external tax services. Five main reasons for companies to engage external tax professionals are listed in Table 4.55. Respondents were also allowed to select more than one reason listed (refer to Appendix 3.2, Question 5).

Table 4.55 Corporate Clients Main Reasons for Engaging External Tax Professionals

<i>Main Reason</i>	<i>Number of responses</i>	<i>Overall Percent</i>	<i>Percent of Cases^a</i>
Lack of in depth technical knowledge	40	24.0	83.3
Income tax law is too complicated	40	24.0	83.3
Need for income tax planning	34	20.4	70.8
More cost effective to use tax professionals	29	17.4	60.4
Reduce the chance of being audited by IRB	15	12.6	31.3
Other	9	1.8	18.8
Total	167	100	

^a Based on 47 respondents.

‘Lack of in depth of technical knowledge’ and ‘Income tax law is too complicated’ were the most stated reasons with 83.3 percent of cases. Tax professionals also considered the need for income tax planning (70.8 percent), costs effectiveness (60.4 percent) and reducing the chances of being audited by IRB (31.3 percent), as among the reasons for engaging their services. Other reasons (18.8 percent) that were brought up by the external tax professionals included the need for independent expert opinion on certain specific areas and to secure representation before tax authorities.

4.7.7 Suggestions to Reduce Compliance Costs and Improve the Tax System

Apart from the findings analysed so far, external tax professionals were given an opportunity to recommend measures to lower compliance costs burden of their tax clients and how to improve the overall CIT system. A large diversity of suggestions received were analysed using content as summarised in Table 4.56 (Suggestions to Reduce Compliance Costs Burden) and Table 4.57 (Suggestions to Improve the CIT System).

With regards to the suggestions to reduce compliance costs burden, 43 external tax professionals provided feedback to the question:

‘Do you have any specific suggestions for reducing tax preparation work and documentation in respect of corporate income tax for companies?’

Table 4.56 Suggestions to Reduce Tax Compliance Costs of Corporate Clients

<i>Suggestions</i>	<i>Frequency</i>	<i>Percentage</i>
Simplification of tax legislation and reporting requirements	20	20.6
Technical training and internal staff development	17	17.5
Convergence of tax law with accounting standards and practices	14	14.4
Abolition of certain tax incentives and their restrictions	14	14.4
Audits and investigations process	11	11.3
Other suggestions	21	21.8
Total	97 ^a	100

^a Based on responses from 43 respondents regarding suggestions to reduce tax compliance costs.

In an effort to mitigate the burden of compliance costs, main suggestions pertained to the simplification of tax legislation and reporting requirements. Around one-third of respondents, who were suggesting simplification of tax law, further identified the IRB requirement for tax estimations as a major contributor to tax compliance costs burden of taxpayers. Hence, the external tax professionals suggested a few measures such as to: (i) reduce frequency of tax estimate revision, (ii) eliminate the penalty on underestimation of tax instalment as it is difficult to get an accurate estimate and (iii) terminate the compound for late submission of CP204 (tax estimation form). Respondents who found tax estimation as a problem also mentioned the complexity arising from frequent legislative changes.

Secondly, the external tax professionals' survey respondents suggested that companies should invest more on technical training for their internal staff development. They have noticed that some of their tax clients were quite ignorant about the tax laws even on basic tax requirements. They also felt that it would be useful for companies to be aware of proper documentation in order to ensure timely and accurate set of accounts for tax compilation. Moreover, higher compliance to documentation by the taxpayers would reduce tax preparation work and clients should also consider using software which can integrate accounting and tax data.

Thirdly, suggestions were made concerning the need for a convergence of tax rules with accounting standards and practices. This could be achieved through the acceptance of audit documentation, as part of tax evidence, and/or by having the same treatment for accounting standards and tax laws. For example, with regards to corporate fixed assets, the accounting standard requires depreciation provisions while the tax law specifies capital allowances computation.

Fourthly, issues regarding tax incentives provided under the ITA were mentioned by several respondents. They asserted that rules in relation to tax incentives should be straight forward through the abolition of certain incentives or reduction of the restrictions for qualifying for the incentives. The major concerns among external tax professionals were regarding the criteria to apply for tax incentives, which in their opinion, were too detailed and restrictive. These criteria imposed an additional burden in terms of research and tax planning costs.

Fifthly, there were also considerable anxieties about the IRB's audit and investigation process. External tax professionals requested for a lenient treatment in tax audit with regards to immaterial items in terms of size and nature of misstatement. Other issues receiving numerous suggestions included: continuity in tax rules (five responses); clearer and more concise tax legislations (five responses); greater use of e-filing (three responses), staggered filing timeline for a group of companies (three responses), improvement on the appeal process (two responses); and easy to use record keeping programmes for taxpayers (one response). Interestingly, two respondents disagreed with the reduction of tax preparation work and documentation in respect of CIT for companies. These respondents considered that the existing requirement for tax preparation was sufficient. In their opinion, material related to preparatory work and documentation were important evidence for taxpayers to protect their interest when audited by the tax department.

Next, based on their knowledge and experience, external tax professionals' survey respondents were also requested to respond to the following question regarding improvements to the Malaysian income tax system:

'In the light of your experience, do you think the company income tax system could be improved?'

Responses from this open-ended question generated a rich variety of suggestions regarding improvements to the Malaysian CIT system and they are summarised in Table 4.57.

Table 4.57 Suggestions to Improve the CIT System

<i>Suggestions</i>	<i>Frequency</i>	<i>Percentage</i>
Improve the clarity of tax legislation	19	28.4
Enhance the transparency of tax laws and their implementation	19	23.5
Higher competency of tax officers	17	21.0
Deductibility of tax related expenses	10	12.3
Other suggestions	18	14.8
Total	83 ^a	100

^a Based on responses from 31 respondents regarding suggestions to improve the company income tax system.

Generally, respondents believed that the tax authorities should follow the more established tax system from countries in the advanced economies. Apart from reducing ambiguous terminology in the tax legislations, the external tax professionals requested for more effective and logical public rulings, a better advanced rulings system, simpler tax returns and regular dialogue sessions between the IRB and tax practitioners. They also pointed out the lack of accountability and transparency in tax administration matters. Regarding the notion to improve transparency of tax laws and their implementation, the external tax professionals were desirous for IRB to issue fairer and more equitable legislation, together with greater transparency in interpretation of the law. Two examples provided were the issuance of public rulings which benefitted the IRB and IRB's reluctance to follow case law decisions if it did not favour them.

Another valuable suggestion by the external tax professionals was for a reduction in discretionary power of the DGIR. They argued that the DGIR's sole administrative discretion power has been criticised by many over the years. This directed us to another point on the competency of the tax officers in terms of their knowledge, capability and professionalism.

Some major dissatisfaction regarding the current Malaysian tax system was on the uncooperative attitude of officials and their lack of accountability. The external tax professionals also argued for the tax related expenses to be allowed for tax deduction since this amount is incurred to comply with segment of the law.

Other issues receiving numerous comments included: improving the refunds and appeals process (six responses), flexible instalment scheme for companies in difficult cash flow situation (four responses), ensuring timely and consistent response to queries (three responses), incentives to taxpayers for prompt payment and submission (two responses), waiver of company responsibility on employees monthly tax deduction work (one response), remove incentives and lower tax rates across the board (one response) and improve on information made available to the public (one response).

4.8 Chapter Summary

This chapter presents analyses on the estimation, distribution, and incidence of CIT compliance costs from the surveys of corporate taxpayers and external tax professionals. The estimated mean CIT compliance cost was MYR47,126 per company. The total aggregated SCC of the Malaysian PLCs for tax year 2009 amounted to almost MYR32 million, while the offsetting benefit was approximately MYR8 million. Taking into consideration the offsetting benefits, total aggregated TCC estimate for Malaysian PLCs was around MYR24 million. Factors that significantly affected the tax compliance costs' estimates were size of companies and their estimated tax liability. The regressive pattern of tax compliance costs was observed for the Malaysian PLCs.

The dominant cost component in the compliance costs structure of CIT payers in Malaysia was the external tax professional fees (63 percent). Tax compliance costs burden was mostly related to computational work with a computational-planning ratio of 74:26. The mean compliance costs in relation to tax incentives and psychological costs accounted for just around seven and 18 percent of the tax compliance costs burden, respectively.

Major tax-related difficulty for corporate taxpayers was in estimating income tax payable, while depth of technical knowledge was the main reason for employing external tax professionals. Simplification of the tax system, especially those concerning tax estimations was the most

frequently cited suggestion for reducing the compliance costs incurred by corporate taxpayers. The analysis of external tax professionals' survey concerning tax compliance costs incurred by their large corporate tax clients, indicated similar results, which further corroborated the findings in the main corporate taxpayers' survey. The following chapter presents the findings on tax compliance behaviour of PLCs in Malaysia.

CHAPTER 5

TAX COMPLIANCE BEHAVIOUR ANALYSIS

5.1 Introduction

The previous chapter (Chapter 4) presented the findings on the magnitude and determinants of CIT compliance costs. This chapter examines findings in relation to tax compliance behaviour of corporate taxpayers. Data were analysed using the Predictive Analytics Software for Windows (PASW) (Release 19). Section 5.2 discusses issues related to data examination, particularly regarding testing on the goodness of survey data. Section 5.3 provides a detailed description on the variables of this study in relation to tax reporting decisions of corporate taxpayers. This is followed by a report on the correlation matrix analysis using a Pearson product-moment correlation coefficient (Section 5.4). Section 5.5 examines the determinants of tax compliance behaviour using multiple regression analysis. Section 5.6 discusses corporate taxpayers' attitudes and compliance behaviour from external tax professionals' point of view. Finally, Section 5.7 provides the summary of this chapter.

5.2 Data Examination

The preliminary step of data cleaning and handling of blank responses was discussed in Chapter 3 (refer to Subsection 3.8.2). Data examination in this section focuses on testing the goodness of data in terms of reliability and validity.

5.2.1 Assessment of Data Reliability

In assessing for reliability of measurements used, Cronbach's alpha reliability statistics were performed. In this study, the respondents were requested to indicate their perceptions and opinions on five tax attitudinal aspects, consisting of 15 tax attitudinal statements (Table 5.1). These aspects were tax complexity (three statements), tax rate structure (three statements), tax deterrence sanctions (four statements), tax law fairness (four statements) and tax psychological costs (one statement).

Table 5.1 Tax Attitudinal Items

<i>Tax Aspects</i>	<i>Tax Attitudinal Statements ^a</i>
Tax Complexity	<p>Personally, I consider that the preparation of corporate income tax return is difficult. (<i>Complex 1</i>)</p> <p>Corporate income tax law is relatively simple to understand. (<i>Complex 2</i>) [<i>Reverse Phrasing</i>]</p> <p>Complexity in tax law is necessary so that companies are treated fairly. (<i>Complex 3</i>)</p>
Tax Rate Structure	<p>A 'fair' tax rate should be the same for every company regardless of their size (small, medium or large). (<i>Rate 1</i>)</p> <p>Large companies have a greater ability to pay income tax, so it is fair that they should pay a higher rate of tax than small and medium companies. (<i>Rate 2</i>)</p> <p>It is fair that high profit companies should pay a higher rate of tax than low profit companies. (<i>Rate 3</i>)</p>
Tax Deterrence Sanctions	<p>If there was a discrepancy in the annual tax return, how likely is that it would be audited? (<i>Sanction 1 - Audit Likelihood</i>)</p> <p>If your company was to be chosen for compulsory audit, how likely would a discrepancy be identified? (<i>Sanction 2 - Detection Likelihood</i>)</p> <p>If discrepancies were discovered during an audit, how severe are the penalties? (<i>Sanction 3 - Penalty Severity</i>)</p> <p>The chances of being audited (tax audit) are so low that it is worthwhile trying to economize a little on corporate income taxes for various reasons. (<i>Sanction 4 - Audit Likelihood</i>) [<i>Reverse Phrasing</i>]</p>
Tax Law Fairness	<p>I believe that each company's officers have a moral obligation to report all of their company's income and pay the correct amount of corporate income tax. (<i>Fair 1</i>)</p> <p>Do you believe that the move to self assessment made corporate tax laws more or less fair? (<i>Fair 2</i>)</p> <p>Overall, has the move to self assessment made the distribution of the corporate income tax burden among small, medium and large companies more or less fair? (<i>Fair 3</i>)</p> <p>Do you believe that as a result of changes in corporate income tax during the past five years, large companies are paying more or fewer taxes? (<i>Fair 4</i>)</p>
Tax Psychological Costs	<p>The tax compliance requirement may have caused stress and anxiety to taxpayers. Indicate your position with respect to the psychological costs causes by the income tax system. (<i>Psychological</i>)</p>

^a The corresponding variable names of tax attitudinal statements are given in parentheses.

Responses on all the tax attitudinal items were scored using six-point Likert scales. Internal consistency tests using Cronbach's alpha were conducted on tax attitudinal aspects with more than one item: tax complexity, tax rate structure, tax deterrence sanctions and tax law fairness. The alpha coefficient for each aspect was 0.7 and above, indicating that the measurements employed in this study are reliable and consistent (Table 5.2).⁸¹

Table 5.2 Alpha Coefficient of Tax Attitudinal Aspects

<i>Attitudinal Aspect</i>	<i>Number of Items</i>	<i>Alpha Coefficients</i>
Tax Complexity	3	0.899
Tax Rate Structure	3	0.760
Tax Deterrence Sanctions ^a	3	0.699
Tax Law Fairness ^a	3	0.786
Tax Psychological Costs	1	-

^a One item of each aspect was taken out to get an acceptable alpha coefficient. Two items (Sanction 4 and Fair 1) were removed to ensure adequate alpha values (see Tables 5.1 and 5.2).

5.2.2 Assessment of Data Validity

In appraising for validity of measurements utilised in this study, content and construct validity tests were conducted. Content validity of a scale can be examined by determining the extent to which it covered an adequate and representative set of items that tapped the concept being measured (Sekaran, 2003). The questionnaires used in this study had been validity-tested in previous studies when it was administered in several countries, for examples, Abdul-Jabbar (2009) in Malaysia; Evans et al. (1997) and Pope (1993a) in Australia; Sandford et al. (1989) in the UK; as well as Slemrod & Venkatesh, 2002 in the US. Nevertheless, in order to ensure that the questions and vocabulary used were correct and understandable, the instruments were tested using expert judges as suggested by Hair et al. (2010). In this study, the questionnaires were pre-tested on a group of tax practitioners and academics. Based on their feedback, the design was modified slightly and some minor changes on the wording were made to assure content validity of the questionnaires.

⁸¹ The values of Alpha Coefficients of 0.60 to 0.70 are deemed to be the lower limit acceptability (Hair et al., 2010) and in this study at least 70 percent of the variance would be held in common with a perfect measure of the same tax attitudinal aspects (Field, 2005; Nunnally, 1978).

In assessing for construct validity, factor analysis conducted using rotated component matrix supported the four subscales of the tax attitudinal aspects: tax complexity, tax rate structure, tax deterrence sanctions and tax law fairness (Table 5.3). The Kaiser-Meyer-Olkin (KMO) Statistic was 0.648, suggesting that sampling in this study was adequate. Bartlett's Test of Sphericity was highly significant ($p=0.000$), indicating that factor analysis was appropriate for these survey data. KMO value of greater than 0.5 and the significant result signified that the construct validity of each statement and the related components within each construct were significantly correlated, which are required for factor analysis (Field, 2005).⁸² Details of the rotated component matrix for factor analysis are provided in Appendix 5.1.

Table 5.3 Rotated Component Matrix for Factor Analysis

<i>Variable Name</i>	<i>Tax Attitudinal Aspect</i>			
	<i>Complexity</i>	<i>Rate Structure</i>	<i>Sanctions</i>	<i>Fairness</i>
Complex 1	0.834			
Complex 2	0.847			
Complex 3	0.801			
Rate 1		0.852		
Rate 2		0.423		
Rate 3		0.890		
Sanction 1			0.703	
Sanction 2			0.569	
Sanction 3			0.660	
Fair 2				0.889
Fair 3				0.904
Fair 4				0.638

Extraction Method: Principal Component Analysis. Rotation method: Varimax with Kaiser Normalization.

5.3 Descriptive Analysis of the Variables

The variables were assessed using the mean, median and standard deviation scores together with the analysis on responses. The six-point Likert scales were simplified into two categories to address the low response to all these scales. The scales were recoded into: those who are in agreement (six, five and four scales) and those who are in disagreement (three, two and one

⁸² KMO value of 0.5 and above is acceptable as it signifies that factor analysis will give distinct and reliable factors, while a significant test indicates relationships between variables (Field, 2005).

scale/s). This approach had been adopted by a number of earlier studies, locally and internationally (for example Abdul-Jabbar, 2009; Torgler, 2007). An analysis using ANOVA was also conducted to analyse the mean differences of the variables by corporate characteristics, namely business size, business sector, business length and estimated tax liability.

5.3.1 Tax Complexity

Respondents were requested to indicate their opinion on the complexity of CIT system using three items. The higher level of scores would indicate a high perception of complexity in the tax system and vice-versa. An overall mean score of 3.53 demonstrated the presence of complexity in the Malaysian CIT system (Table 5.4). With regards to the three individual items, mean scores of between 3.46 and 3.63 showed consistencies in respondents' views on the existence of tax complexity. On the first tax complexity statement (Complex 1), 48 percent of the respondents considered that the CIT preparation is difficult. The second tax complexity statement (Complex 2) related to the CIT law and it is a reverse-phrased item.⁸³ A little less than 50 percent of respondents considered that the income tax law for the corporate sector is not simple. On the third tax complexity statement (Complex 3), almost 48 percent of respondents agreed that complexity in the income tax law is necessary in order for companies to be treated fairly.

Table 5.4 Perceptions towards Corporate Tax Complexity

<i>Variable</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>	<i>No. of Responses^a (%)</i>	
				<i>Agree</i>	<i>Disagree</i>
Complex 1	3.46	3.00	1.27	47 (48.0)	51 (52.0)
Complex 2r ^b	3.63	3.00	1.31	48 (49.0)	50 (51.0)
Complex 3	3.54	3.00	1.49	46 (47.9)	50 (52.1)
Complexity	3.53	3.67	1.25	-	-

^a Percentage of responses is given in parentheses.

^b Complex 2r is reverse coded and the original mean is 2.37.

A further analysis using ANOVA and t-test were conducted to analyse the mean differences of tax complexity by corporate characteristics. The analysis revealed significant mean differences for business size and estimated tax liability. Relatively higher complexity levels were observed

⁸³ A reverse-phrased item is embedded in the questionnaire to reduce response bias as it forces the respondents to actually read the items carefully before answering (Field, 2005).

for larger companies with higher turnover levels. The mean tax complexity for the three turnover levels of ‘Less than MYR100 million’, ‘MYR100 to MYR500 million’ and ‘More than MYR500 million’ were 3.07, 3.27 and 4.28, respectively. Higher mean complexity score was also noted for companies with estimated tax liability of ‘MYR5 million and more’ (3.24), as compared to those with ‘Less than MYR5 million’ (3.90).

5.3.2 Tax Rate Structure

The higher level of scores would indicate a high perception of fairness in the corporate tax rate structure and vice-versa. The overall mean score of respondents’ perceptions toward the tax rate structure was 3.15 suggesting that it was perceived to be marginally fair (Table 5.5).

Table 5.5 Perceptions towards Corporate Tax Rate Structure

<i>Variable</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>	<i>No of Responses^a (%)</i>	
				<i>Agree</i>	<i>Disagree</i>
Rate 1	3.31	3.00	1.54	41 (41.8)	57 (58.2)
Rate 2	2.86	3.00	1.39	26 (26.5)	72 (73.5)
Rate 3	3.28	3.00	1.58	43 (43.9)	55 (56.1)
Rate Structure	3.15	3.00	1.24	-	-

^a Percentage of responses is given in parentheses.

Three rate structures were investigated, namely flat (Rate 1), proportional (Rate 2) and progressive (Rate 3). ‘Rate 1’ and ‘Rate 3’ structures had higher mean scores as compared to ‘Rate 2’ which indicated that respondents perceived flat and progressive tax structures as relatively fairer compared to proportional tax structure. A further analysis of the mean, however, revealed no significant mean differences ($p>0.05$) of tax rate perceptions by corporate characteristics.

5.3.3 Tax Deterrence Sanctions

Tax deterrence sanctions consist of three sanction variables: audit likelihood, detection likelihood, and penalty severity. Data concerning tax deterrence sanctions perception was measured using four items (Table 5.6). The higher level of scores would indicate a higher

perception of tax deterrence sanctions (audit likelihood, deterrence likelihood and penalty severity) and vice-versa.

Table 5.6 Perceptions towards Tax Deterrence Sanctions

<i>Variable</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>	<i>No. of Responses^a (%)</i>	
				<i>Agree</i>	<i>Disagree</i>
Sanction 1	3.28	3.00	0.99	39 (39.8)	59 (60.2)
Sanction 2	2.71	2.00	1.24	19 (19.4)	79 (80.6)
Sanction 3	2.94	3.00	1.36	23 (23.5)	75 (76.5)
Sanction 4r ^b	4.49	5.00	1.39	69 (70.4)	29 (29.6)
Sanctions	2.98	3.00	0.96	-	-

^a Percentage of responses is given in parentheses.

^b Sanction 4r was excluded from further analysis to achieve an acceptable alpha (see Table 5.2). It is reverse coded and the original mean score is 2.51.

Two items were used to measure audit likelihood, (Sanctions 1 and 4) and ‘Sanction 4’ was a reverse-phrased item. ‘Sanction 1’ has a mean score of 3.28, where less than 40 percent of respondents perceived their annual tax returns would be audited if there is discrepancy in the returns. ‘Sanction 4’ had a mean score of 4.49 which indicated that the respondents’ perception towards the chances of their company being audited was fairly high. More than 70 percent of the respondents disagreed with the statement that the chances of being audited (tax audit) were so low that it is worthwhile trying to economise a little on CIT for various reasons. However, ‘Sanction 4’ was excluded from further analysis to achieve an acceptable alpha value (see Table 5.2). Variable ‘Sanction 2’ measured detection likelihood with a mean score of 2.71. Less than 20 percent of respondents perceived that any under-reporting of income and/or over-claiming of expenses would be identified if their company was to be chosen for compulsory audit. Variable ‘Sanction 3’ measured penalty severity with a mean score of 2.94. Only 23.5 percent of respondents agreed that if discrepancy was discovered during an audit, there would be a severe penalty.

The overall mean score of 2.98 suggested that respondents’ perception towards tax deterrence sanctions was perceived to be marginally low. A further analysis of the mean revealed no significant mean differences ($p > 0.05$) of tax deterrence sanctions perceptions by corporate characteristics.

5.3.4 Tax Fairness

This construct measures respondents' perceptions on fairness of the corporate tax system in Malaysia. The higher level of scores would indicate a high perception of fairness in the tax system and vice-versa. Referring to Table 5.7, statement 'Fair 1' had a high mean score of 5.22, where almost 95 percent of respondents believed that each company's officer has a moral obligation to report all of his/her company's income and pay the correct amount of CIT. Statements 'Fair 2' and 'Fair 3' were concerning perceptions on tax fairness under the SAS environment. These statements' mean scores were 3.99 and 3.83 respectively, with majority of respondents (74.5 and 65.3 percent) indicating that the CIT is fairer under the SAS.

The final statement 'Fair 4', asked the respondents whether as a result of corporate tax rate changes for the past several years, large companies were paying more or lower taxes. This statement indirectly related to fairness of the tax system under the SAS regime with a mean score of 3.81 and more than 63 percent of respondents agreed with this statement. As stated earlier in Section 5.2, item 'Fair 1' was excluded from further analysis to achieve an acceptable alpha value. Thus, the overall mean score for this construct was 3.87, indicating a fairly strong agreement on the perception of fairness in the tax system. However, tax fairness perceptions examined by corporate characteristics showed no statistical mean differences ($p > 0.05$).

Table 5.7 Perceptions towards Corporate Tax Fairness

<i>Variable</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>	<i>No. of Responses (%)^a</i>	
				<i>Agree</i>	<i>Disagree</i>
Fair 1	5.22	5.00	0.91	93 (94.9)	5 (5.1)
Fair 2	3.99	4.00	1.10	73 (74.5)	25 (25.5)
Fair 3	3.83	4.00	1.18	64 (65.3)	34 (34.7)
Fair 4	3.81	4.00	0.82	62 (63.3)	36 (36.7)
Fairness	3.87	4.00	0.88	-	-

^a Percentage of responses is given in parentheses.

^b Fair 1 was excluded from further analysis to achieve an acceptable alpha (see Table 5.2).

5.3.5 Tax Psychological Costs

With regards to tax psychological costs, the higher level of scores would indicate a high perception on the level of stress and anxiety caused by the income tax system and vice-versa. A

mean score of 3.96 suggest that the tax compliance requirement may have caused high levels of stress and anxiety to taxpayers (Table 5.8). More than 60 percent of respondents agreed with the statement that the tax compliance requirement may have caused stress and anxiety to taxpayers. However, a further analysis of the mean psychology costs perceptions by corporate characteristics revealed no significant mean differences ($p > 0.05$).

Table 5.8 Perceptions towards Tax Psychological Costs

<i>Variable</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>	<i>No. of Responses (%)^a</i>	
				<i>Agree</i>	<i>Disagree</i>
Psychological	3.96	4.00	1.16	59 (60.2)	39 (39.8)

^a Number of respondents equals 98 with the percentage of responses given in parentheses.

5.3.6 Corporate Characteristics and Tax Compliance Costs

Other independent variables investigated were the corporate characteristics of respondents and tax compliance costs incurred. The analyses of these variables have been examined in the earlier chapters in this thesis (Chapters 3 and 4, respectively). With respect to corporate characteristics, the majority of the respondents were from services sector (33.7 percent), had annual sales turnover of between MYR100 to MYR500 million (36.7 percent), had been in business for 15 to 30 years (55.1 percent), had estimated tax liability of less than MYR5 million (46.9 percent), had mean tax refund of MYR1,553,604 and utilised both the internal and external sources to handle tax matters (70.4 percent) (see Subsection 3.8.3). As for the tax compliance costs, the estimated mean was MYR47,126 with a minimum and maximum amount of MYR10,506 and MYR155,790, respectively (see Subsection 4.2.5).

5.3.7 Tax Non-compliance Behaviour

Tax non-compliance behaviour, as an independent variable, was measured by responses gathered from two hypothetical tax scenarios⁸⁴: under-reporting of income and over-claiming of expenses. The lower level of scores would indicate that respondents' would be very likely to comply and vice-versa. Table 5.9 provides respondents' views towards non-compliance behaviour of corporate taxpayers. Regarding income reporting, a mean score of 1.98 indicated respondents' strong disagreement on non-compliance behaviour. Almost 85 percent of respondents disagreed with under-reporting of income. Comparatively, for the over-claiming of

⁸⁴ Refer to Appendix 3.1 (Questions 15 and 16) for the two hypothetical tax scenarios.

expenses, the mean score was slightly higher (2.61) with a lower disagreement (62.9 percent) towards the statement. Nevertheless, an overall mean of 2.30 is an indication of a compliant behaviour among corporate taxpayers.

Table 5.9 Respondents' Views towards Non-compliance Behaviour

<i>Non-compliance Behaviour</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>	<i>No. of Responses (%)^a</i>	
				<i>Agree</i>	<i>Disagree</i>
Under-reporting of income	1.98	1.00	1.33	15 (15.5)	82 (84.5)
Over-claiming of expenses	2.61	2.00	1.56	36 (37.1)	61 (62.9)
Overall non-compliance ^b	2.30	2.00	1.34	-	-

^a Percentage of responses is given in parentheses.

^b This refers to the combined category of both under-reporting of income and over-claiming of expenses.

Respondents were further investigated into their non-compliance behaviour by requesting them to respond on the likelihood of not complying with only part of the amount stated for both scenarios (Table 5.10). It was apparent that the mean score of the respondents' views towards partial non-compliance behaviour for both scenarios were higher as compared to earlier findings of full compliance behaviour (see Table 5.9). An overall mean score of 3.28 with approximately half of the respondents stating the likelihood of non-compliance, provided some indication of tax non-compliance behaviour.

Table 5.10 Respondents' Views towards Partial Non-compliance Behaviour

<i>Non-compliance Behaviour</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>	<i>No. of Responses (%)^a</i>	
				<i>Agree</i>	<i>Disagree</i>
Under-reporting of income	3.38	4.00	1.63	49 (50.5)	48 (49.5)
Over-claiming of expenses	3.18	3.00	1.67	47 (48.5)	50 (51.5)
Overall non-compliance ^b	3.28	3.50	1.40	-	-

^a Percentage of responses is given in parentheses.

^b This refers to the combined category of both under-reporting of income and over-claiming of expenses.

In this study, tax compliance behaviour, measured by two tax scenarios, indicated that public listed companies (PLCs) were predominantly compliant towards both income reporting and expenses claiming behaviour. However, with regards to partial non-compliance behaviour, the corporate taxpayers are marginally non-compliant.

5.4 Correlation Analysis

A correlation is a measure of a linear relationship between variables in terms of its strength and direction (Field, 2005). Pearson product-moment correlation coefficient was computed to assess the strength and direction among variables of this study. The coefficient value of between -1 to +1 indicated the strength of the relationship and the sign (- or +) indicated the direction of the correlation (Sekaran, 2003). The correlation coefficient value of this study was analysed based on suggestions by Cohen (1988) and Evans (1996). According to Cohen (1988), a correlation value of less than 0.3 is small, between 0.3 and 0.5 is medium and more than 0.5 is large. In greater detail, Evans (1996) classified the strength of correlation into very weak (0 – 0.19), weak (0.20 – 0.39), moderate (0.40 – 0.59), strong (0.60 – 0.79) and very strong (0.80 – 1.00).

5.4.1 Relationship of Tax Attitudinal Aspects and Non-compliance Behaviour

In this study, correlation analyses were undertaken to examine the relationship between each attitudinal aspect and the taxpayers' non-compliance behaviour. A combined mean was used for tax attitudinal aspects with more than one item: tax complexity, tax rate structure, tax deterrence sanctions and tax law fairness.⁸⁵ Table 5.11 shows the correlation analysis between each tax attitudinal aspect and types of non-compliance behaviour (under-reporting of income, over-claiming of expenses and the overall non-compliance).

Complexity of the tax system was positively correlated with all types of non-compliance, namely under-reporting of income, over-claiming of expenses and the overall non-compliance. A direct relationship between complexity in the tax systems and non-compliance behaviour was in the expected direction, where non-compliance increased with an increase in tax complexity. However, the strength of correlation was very weak and no significant relationship was found between non-compliance behaviour and complexity in the tax system.

The analysis undertaken also found positive correlations between tax psychological costs and all types of non-compliance behaviour. A direct relationship between the tax psychological costs and non-compliance behaviours indicated that increases in psychological costs are correlated with increases in the possibility of non-compliance. There were also significant relationships between psychological costs and under-reporting of income (one percent level), over-claiming

⁸⁵ A combined mean is used throughout the remainder of this thesis as applicable.

of expenses (five percent level) and overall non-compliance (one percent level). However, the correlation coefficients of 0.288, 0.218, and 0.277 respectively, suggested weak correlation between tax psychological costs and non-compliance behaviours.

Table 5.11 Attitudinal Aspects and Non-compliance Behaviour: Correlation Analysis

<i>Attitudinal Aspects</i>	<i>Under-reporting of Income</i>	<i>Over-claiming of Expenses</i>	<i>Overall Non-compliance</i>
Tax Complexity	+ 0.145	+ 0.011	+ 0.080
Tax Rate Structure	+ 0.192	- 0.077	+ 0.051
Tax Deterrence Sanctions	+ 0.049	- 0.058	- 0.010
Tax Law Fairness	- 0.026	+ 0.098	+ 0.046
Tax Psychological Costs	+ 0.288***	+ 0.218**	+ 0.277***

Positive (+) or negative (-) sign denotes a direct or indirect relationship respectively.

*** Significant at the 0.01 level (2-tailed). ** Significant at the 0.05 level (2-tailed).

Other tax attitudinal aspects investigated found a mixed correlation with the non-compliance behaviours. An indirect relationship between the tax rate structure and over-claiming of expenses indicated that the positive perception of corporate tax rate structure would decrease the likelihood of non-compliance by taxpayers. However, the strength of correlation between perception on tax rate structure and over-claiming of expenses was found to be very weak (-0.077). In contrast, direct relationships were observed between the tax rate structure, under-reporting of income and overall non-compliance. Nevertheless, no significant relationship was found between non-compliance behaviours and perception on the tax rate structure.

In relation to tax deterrence sanctions, indirect associations were observed with two types of non-compliance behaviour: over-claiming of expenses and overall non-compliance. This indicated that greater perceived sanctions in the tax system would result in a higher likelihood of reduction in the tax non-compliance behaviour. However, the strength of correlation on perception of tax deterrence sanctions with over-claiming of expenses (-0.058) and overall non-compliance (-0.010) were very weak. Adversely, a direct relationship was found between the perceived tax sanctions and under-reporting of income. Nevertheless, no significant relationship was observed between non-compliance behaviours and perception on tax deterrence sanctions.

With regards to tax fairness, an indirect association was observed between the perception on fairness in the tax system and under-reporting of income. This signified that better perceived

fairness in the tax system would result in a higher likelihood of reduction in the tax non-compliance behaviour. However, the strength of correlation between perception on tax fairness and under-reporting of income was found to be very weak (-0.026). By contrast, direct relationships were found between the perceived tax fairness, over-claiming of expenses and overall non-compliance. Likewise, no significant relationship was observed between non-compliance behaviour and perception of fairness in the tax system.

The correlation between the two types of non-compliance behaviour (under-reporting of income and over-claiming of expenses) was significant at the one percent level. There was a strong positive correlation of +0.634, indicating that non-compliant taxpayers in terms of under-reporting of income, would also be non-compliant under over-claiming of expenses.

5.4.2 Relationship of Tax Attitudinal Aspects and Compliance Costs

A correlation analysis was also utilised to investigate the relationship between the five tax attitudinal aspects and taxpayer compliance costs burden. Tax complexity, tax rate structure and tax law fairness were found to be significantly correlated with the mean tax compliance costs estimates (Table 5.12).

Table 5.12 Attitudinal Aspects and Compliance Costs: Correlation Analysis

<i>Attitudinal Aspects</i>	<i>Compliance Costs</i>
Tax Complexity	+ 0.384 ^{***}
Tax Rate Structure	- 0.249 ^{***}
Tax Deterrence Sanctions	+ 0.059
Tax Law Fairness	+ 0.253 ^{**}
Tax Psychological Costs	- 0.157

Positive (+) or negative (-) sign denotes a direct or indirect relationship respectively.

^{***} Significant at the 0.01 level (2-tailed). ^{**} Significant at the 0.05 level (2-tailed).

A positive relationship between the perception of complexity in the tax system and compliance costs suggested that an increase in the complexity level will increase the compliance costs of taxpayers. A coefficient value of 0.384 indicated a medium correlation between the two variables. The correlation between tax complexity and compliance costs was significant at the one percent level. A similar positive relationship between fairness in the tax system and

compliance costs implied that a fairer tax system would slightly reduce the compliance costs of corporate taxpayers. The correlation coefficient of 0.253 indicated a weak association between the two variables. The correlation between tax fairness and compliance costs was significant at the five percent level.

An indirect relationship between tax rate structure and compliance costs suggested that a positive perception on the tax rate structure could lead to lower compliance costs. However, there was only a weak association between tax rate structure and compliance costs with a correlation coefficient of 0.253. The correlation between the two variables was significant at the one percent level.

Regarding other attitudinal aspects, a positive association was observed for tax deterrence sanctions and a negative association for psychological costs. Compliance costs' positive association with the tax deterrence sanctions signified that greater perceived sanctions in the tax system would result in higher compliance costs. The strength of correlation on perception of tax deterrence sanctions with compliance costs of 0.059 was found to be very weak. Compliance costs negative association with the tax psychological costs exhibited that a lower perception on psychological costs would lead to higher compliance costs incurred by taxpayers. The correlation between perception of tax deterrence sanctions and compliance costs of -0.157 was also found to be very weak. Furthermore, the relationships between these attitudinal aspects and compliance costs were not significant.

5.4.3 Relationship of Tax Non-compliance Behaviour and Compliance Costs

Correlation analyses were further utilised to explore the relationship between tax compliance costs and the likely tax non-compliance behaviour. The positive associations between these variables indicated that an increase in compliance costs would possibly lead to greater non-compliance behaviour among taxpayers (Table 5.13). However, correlation coefficients of between 0.002 and 0.022 suggested very weak associations between these variables. Furthermore, there was no significant relationship between compliance costs and all the three types of non-compliance behaviour.

Table 5.13 Non-compliance Behaviour and Compliance Costs: Correlation Analysis

<i>Types of Non-compliance</i>	<i>Compliance Costs</i>
Under-reporting of Income	+ 0.022
Over-claiming of Expenses	+ 0.002
Overall Non-compliance ^a	+ 0.012

Positive (+) or negative (-) sign denotes a direct or indirect relationship respectively.

^a This refers to the combined category of both under-reporting of income and over-claiming of expenses.

Compliance costs were further analysed by compliance behaviour, namely complying and non-complying PLCs (Table 5.14).⁸⁶ The reason for this analysis was to identify differences in the magnitude of compliance costs with respect to non-compliance behaviour.

Table 5.14 Compliance Behaviour and Mean Compliance Costs

<i>Compliance Behaviour</i>	<i>Mean Compliance Costs (MYR)</i>			
	<i>Under-reporting of Income ^a</i>		<i>Over-claiming of Expenses ^a</i>	
Complying	48,103	(82)	48,311	(61)
Non-complying	41,593	(15)	45,038	(36)
Overall Costs ^b	47,097	(97)	47,097	(97)

^a The number of respondents is given in parentheses.

^b The overall costs are less than the reported mean compliance costs of MYR47,126 due to differences in the number of responses.

As for under-reporting of income, the mean compliance costs for complying PLCs (MYR48,103) was higher than non-complying PLCs (MYR41,593). Correspondingly, the mean compliance costs for complying PLCs (MYR48,311) was higher than non-complying PLCs (MYR45,038) for over-claiming of expenses. However, statistical t-test undertaken did not show any significant association of mean compliance costs either with under-reporting of income or over-claiming of expenses.

A corresponding analysis was undertaken for partial non-compliance behaviour regarding only part of the non-compliance amount (Table 5.15). A similar trend was detected where the mean compliance costs of non-complying PLCs for both under-reporting of income (MYR58,219) and over-claiming of expenses (MYR60,094) were higher than the complying PLCs (MYR35,742 and MYR34,879), respectively.

⁸⁶ Complying PLCs are those with likely compliance behaviour (strongly disagree, disagree and slightly disagree) and non-complying PLCs are those with likely non-compliance behaviour (strongly agree, agree and slightly agree) for all types of non-compliance.

Table 5.15 Partial Compliance Behaviour and Mean Compliance Costs

<i>Partial Compliance Behaviour</i>	<i>Mean Compliance Costs (MYR) ^a</i>			
	<i>Under-reporting of Income</i>		<i>Over-claiming of Expenses</i>	
Complying	35,742	(48)	34,879	(50)
Non-complying	58,219	(15)	60,094	(47)
Overall ^b	47,097	(97)	47,097	(97)

^a The number of respondents is given in parentheses.

^b The overall costs are less than the reported mean compliance costs of MYR7,126 due to differences in the number of responses.

Accordingly, an independent samples t-test was used to examine differences in mean compliance costs for each type of tax non-compliance behaviour. Regarding partial under-reporting of income, the result demonstrated that mean compliance costs for non-complying PLCs were significantly higher (M=58,219; SD=39,652) than those for complying PLCs (M=35,742; SD=28,436); $t=3.213$, $p=0.02$. Similar results were observed for partial over-claiming of expenses, where mean compliance costs for non-complying PLCs were significantly higher (M=60,094; SD=40,717) than those for complying PLCs (M=34,879; SD=26,365); $t=3.596$, $p=0.01$.

Table 5.16 Compliance Behaviour and Mean Compliance Costs

<i>Compliance Behaviour ^a</i>		<i>Combined Mean Compliance Costs (MYR)</i>
Complying PLCs	(34)	38,456
Non-complying PLCs	(63)	51,760
Overall ^b	(97)	47,097

^a The number of respondents is given in parentheses.

^b The overall costs are less than the reported mean compliance costs of MYR47,126 due to differences in the number of responses.

Dissimilar findings were observed with regards to full and partial tax non-compliance behaviour. There was no significant mean compliance costs difference for full non-compliance behaviour, but there was a significant difference for partial non-compliance behaviour. Further analysis was conducted for combined situations, where all types of non-compliance behaviour were integrated, specifically full non-compliance, partial non-compliance, under-reporting of income and over-claiming of expenses. Based on Table 5.16, the complying PLCs had a lower mean compliance cost (MYR38,456) than the non-complying PLCs (MYR51,760). An independent sample t-test analysis did not indicate a significant association between the

combined compliance behaviour and compliance costs at the five percent significance level. However, at the 10 percent significance level, the independent samples t-test result indicated that mean compliance costs for non-complying PLCs were significantly higher ($M=51,760$; $SD=38,552$) than those for complying PLCs ($M=38,456$; $SD=29,985$); $t=1.881$, $p=0.064$.

5.5 Multiple Regression Analysis

The analysis carried out so far has separately identified the association between the tax non-compliance behaviour and the explanatory variables. In this section, multiple linear regression method was utilised to identify the factors influencing tax non-compliance behaviour, all at the same time in a single model (Model 2: Determinants of Tax Non-compliance Behaviour)⁸⁷.

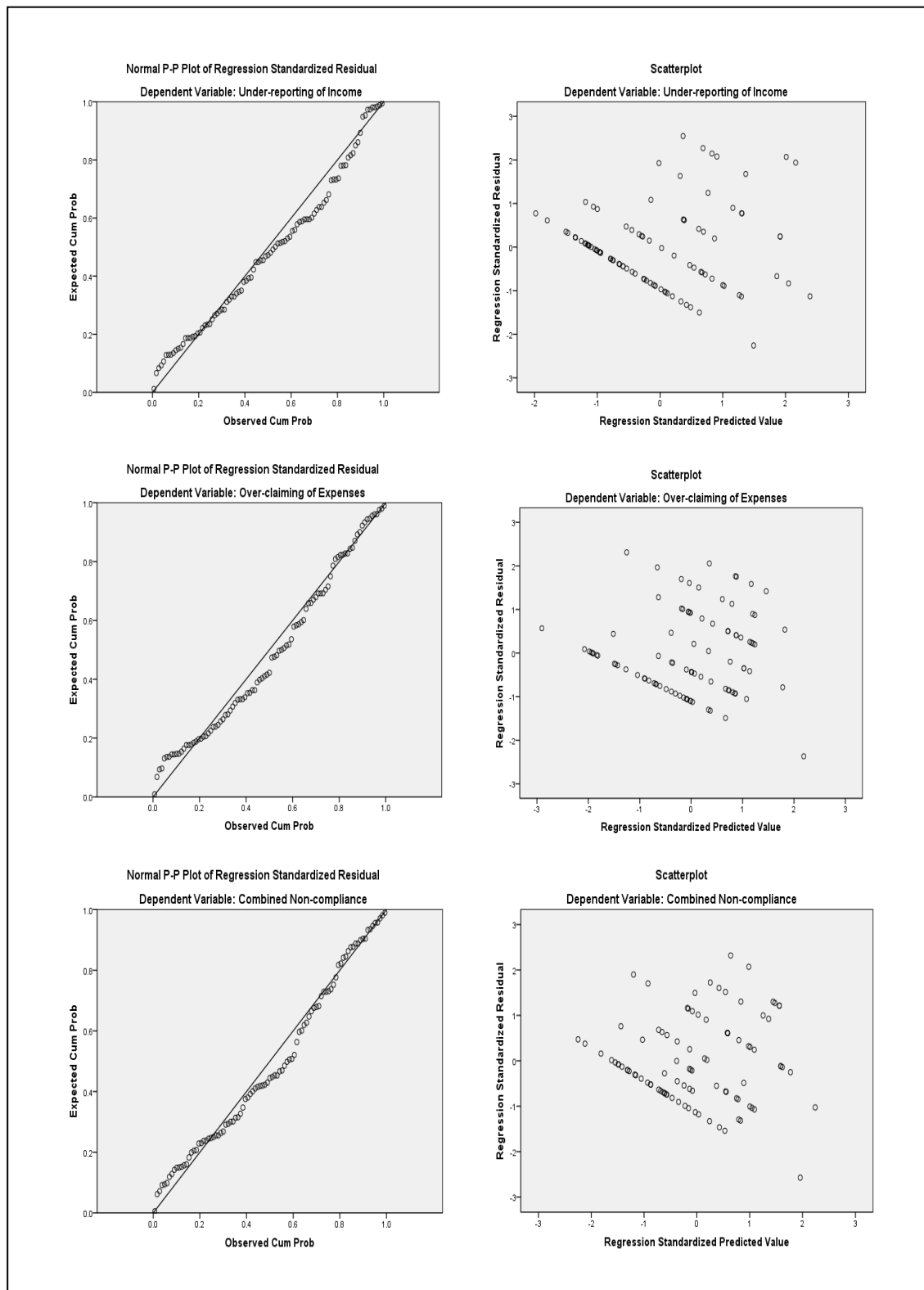
5.5.1 Testing the Assumptions of Regression Analysis

Assessments of the four assumptions underlying regression analysis, namely normality, linearity, homoscedasticity and multicollinearity for Model 2, were performed before the analysis was carried out.⁸⁸ Assessment based on annual sales turnover, as a company size measure, found that all the four underlying assumptions for multiple regressions were not violated. The normal probability plots and scatter plot diagrams of residual versus predicted values for all the three dependent variables, namely under-reporting of income, over-claiming of expenses and the combined non-compliance, are presented in Figure 5.1. First, with regards to normality assumption, the normal probability plots for all the three dependent variables showed no significant departures from the straight diagonal line, indicating that the dependent variables used in this study are normally distributed. Thus, there is no violation of the normality assumptions. Secondly, concerning linearity assumption, the scatter plot of residuals graphs for all the three dependent variables, showed no evidence of linearity as the dots were evenly dispersed around zero. Hence, linearity assumption is not violated. Thirdly, based on the same scatter plots diagrams, the assumption of homoscedasticity is not violated as the plots did not demonstrate any clear patterns.

⁸⁷ Model 2 identifies factors affecting the tax compliance behaviour of corporate taxpayers (refer to Subsection 2.5.2.2).

⁸⁸ The theory behind all the four assumptions underlying regression analysis has been discussed in Subsection 4.5.3.2 of this thesis for the multiple regression analysis of Model 1 (Determinants of Tax Compliance Costs).

Figure 5.1 Normal Probability Plot and Scatter Plot Diagram: Model 2



Source: PASW output of this study.

Finally, the variance inflation factor (VIF) value in relation to compliance behaviour regression ranged from 1.261 to 1.593 (tolerance value of between 0.628 and 0.793), thus multicollinearity assumption is not violated (Table 5.17).

Table 5.17 Collinearity Test of Predictor Variables: Model 2

<i>Variable</i>	<i>Colinearity Statistics</i>	
	<i>Tolerance</i>	<i>VIF</i>
Tax Complexity	0.670	1.492
Tax Rate Structure	0.722	1.384
Tax Deterrence Sanctions	0.711	1.406
Tax Law Fairness	0.793	1.261
Tax Psychological Costs	0.628	1.593

Source: PASW output of this study.

5.5.2 Regression Model of Tax Non-compliance Behaviour

Three regression analyses were undertaken separately to identify the likely tax non-compliance behaviour of corporate taxpayers (Table 5.18). The three multiple regression dependent variables were under-reporting of income [DV1], over-claiming of expenses [DV2] and overall non-compliance behaviour [DV3]. The separate regression analyses permitted exploration of the differences in response to under-reporting of income and over-claiming of expenses, as well as a combination of income reporting and expenses claiming issues.

Table 5.18 Regression Model 2: Dependent Variables

<i>Non-compliance Behaviour</i>	<i>Measurement</i>
Under-reporting of Income [DV1]	Agreement towards under-reporting of income obtained via a six-point Likert scale. Higher scores indicate likely non-compliance behaviour.
Over-claiming of Expenses [DV2]	Agreement towards over-claiming of expenses obtained via a six-point Likert scale. Higher scores indicate likely non-compliance behaviour.
Overall Non-compliance [DV3] ^a	An average of scores of DV1 and DV2

^a Overall non-compliance [DV3] is a combination of the two types of non-compliance behaviour: under-reporting of income and over-claiming of expenses.

Table 5.19 shows the predictor variables for the regression analyses were corporate characteristics (size, sector, year and tax), tax compliance costs, and tax attitudinal aspects (complexity, rate, sanctions, fairness and psychological costs). Thus, a 10-predictor multiple linear regression analysis was performed on each dependent variable, specifically under-reporting of income, over-claiming of expenses and overall non-compliance.

Taking into account the dependent and predictor variables of Model 2 on determinants of tax non-compliance behaviour, the equation for the regression models is depicted in Equation 5.1.

Equation 5.1

$$Y = \beta_0 + \beta_1(D_1) + \beta_2(D_2) + \beta_3(D_3) + \beta_4(D_4) + \beta_5(X_1) + \beta_6(X_2) + \beta_7(X_3) + \beta_8(X_4) + \beta_9(X_5) + \beta_{10}(X_6) + \beta_{11}(X_7) + \beta_{12}(X_8) + e$$

where:

- Y = Tax Non-compliance Behaviour;
- β = Coefficients;
- D_1 = Medium Size Company;
- D_2 = Large Size Company;
- D_3 = Manufacturing Sector;
- D_4 = Other Sectors;
- X_1 = Business Length;
- X_2 = Tax Liability;
- X_3 = Compliance Costs;
- X_4 = Tax Complexity;
- X_5 = Tax Rate Structure;
- X_6 = Tax Deterrence Sanctions;
- X_7 = Tax Fairness;
- X_8 = Psychological costs; and
- e = error term.

Table 5.19 Regression Model 2: Predictor Variables

<i>Predictor</i>	<i>Measurement</i>
Annual Sales Turnover [Size]	The four levels of annual sales turnover were reclassified into three levels due to the low number of responses in the last two categories. Two dummy variables were created for regression purposes with a sales turnover level of less than MYR100 million as the reference level.
Industry Sector [Sector]	The six industry sectors were reduced into three (manufacturing, services and other sectors) due to the low number of responses of a few sectors. The 'other' sectors are the remaining sectors, namely property & construction, finance & banking, plantation & agriculture and technology. Two dummy variables were created for regression purposes with services as the reference sector.
Business length [Year]	The number of years that companies have been in operation was identified from the actual survey responses. A higher score indicate companies have been in business for longer years.
Tax Liability [Tax]	The four levels of estimated tax liability were reduced into two due to low number of responses. The 'nil' and 'Less than MYR5 million' categories were merged in a single category of 'Less than MYR5 million'. The 'MYR5 to MYR10 million' and 'More than MYR10 million' were merged in a single category of 'MYR5 million and more'.
Compliance costs [Costs]	Tax compliance cost estimates were based on three main components: internal, incidental and external costs. Internal compliance costs estimates were logarithmically transformed into log10 to reduce skewness of variable for regression purposes.
Tax Complexity [Complex]	Three statements were used to measure complexity in the tax system via a six-point Likert scale from strongly agrees to strongly disagree. A higher score indicate greater perceived complexity in the tax system.
Tax Rate Structure [Rate]	Three statements were used to measure perceptions of tax rate structure via a six-point Likert scale from strongly agree to strongly disagree. A higher score indicate greater perceived fairness in the tax rate structure.
Tax Deterrence Sanctions [Penalty]	Three statements were used to measure perceptions of tax deterrence sanctions (audit likelihood, detection likelihood and penalty severity) via a six-point Likert scale. Two types of response scale were used: very likely to very unlikely and very severe to not very severe. A higher score indicate greater perceived tax deterrence sanctions.
Tax Fairness [Fairness]	Three statements were used to measure perceptions of tax law fairness via a six-point Likert scale. Two types of response scale were used: much more fair to much less fair and much more taxes to much fewer taxes. A higher score indicate greater perceived fairness in the tax system.
Psychological costs [Psychology]	A single statement was utilized to measure the psychological costs in dealing with tax compliance requirement via a six-point Likert scale from very stressful to not very stressful. A higher score indicate higher perceived tax psychological costs.

5.5.3 Results of Multiple Regression Analysis

Findings from the multiple regression analyses undertaken found that all the three regression analyses on tax non-compliance behaviour were statistically significant at the one percent level. With regards to under-reporting of income, the predictor variables explained 38 percent of the variability in the non-compliance behaviour of corporate taxpayers ($F=5.804$, $p<0.01$). Pertaining to non-compliance behaviour in terms of over-claiming of expenses, the regression was a rather poor fit. The adjusted R^2 was only 19.3 percent, but the overall relationship was significant ($F=2.873$, $p<0.01$). For the third dependent variable, overall non-compliance, the independent variables explained almost 30 percent of the variability in the overall non-compliance behaviour of corporate taxpayers. Details on the determinants of tax non-compliance behaviour are discussed below with respect to each independent variable: (i) Under-reporting of Income (ii) Over-claiming of Expenses and (iii) Overall Non-compliance.

(i) Under-reporting of Income

Eight variables were found to be significant determinants of tax non-compliance behaviour in terms of under-reporting of income. The variables include business size (medium and large), tax liability, business length, tax complexity, tax rate structure, tax deterrence sanctions and tax psychological costs (Table 5.20). Tax liability, business length, tax complexity and tax psychological costs were significant at the one percent level. Medium-sized PLCs and tax deterrence sanctions were significant at the five percent level, while to a lower extent large-sized PLCs and tax rate structure were significant at the 10 percent level.

Companies with a higher annual sales turnover, shorter business length and those with a lower tax liability, were more non-compliant. With other variables held constant, non-compliance behaviours were positively related to companies' size while negatively related to tax liability and business length. The result further indicated that non-compliance with under-reporting of income was greater for companies with higher perceived tax complexity level and fairness in the tax rate structure. Non-compliance was however lower for companies with a higher perceived tax deterrence sanctions. The findings also suggested that companies with higher psychological costs in terms of stress and anxiety in meeting their compliance obligations, tended to be more non-compliant with regards to under-reporting of income.

Table 5.20 Estimates of Coefficient: Under-reporting of Income

<i>DVI</i> ^a	β ^b	<i>Std. Error</i>	<i>Beta</i> ^c	<i>t</i>	<i>p-value</i>
Constant	4.454	1.602	-	2.780	0.007
Size (D ₁)	0.685	0.287	0.250	2.386	0.019**
Size (D ₂)	0.691	0.356	0.241	1.938	0.056*
Sector (D ₃)	-0.431	0.285	-0.151	-1.514	0.134
Sector (D ₄)	0.185	0.301	0.066	0.617	0.539
Tax (X ₁)	-0.901	0.263	-0.335	-3.420	0.001***
Year (X ₂)	-0.035	0.010	-0.352	-3.612	0.001***
Cost (X ₃)	-0.339	0.389	-0.099	-0.873	0.385
Complex (X ₄)	0.288	0.107	0.267	2.697	0.008***
Rate (X ₅)	0.199	0.106	0.182	1.882	0.063*
Sanction (X ₆)	-0.322	0.136	-0.231	-2.370	0.020**
Fair (X ₇)	-0.109	0.145	-0.072	-0.753	0.453
Psycho (X ₈)	0.571	0.118	0.491	4.847	0.000***

^a Dependent Variable: Under-reporting of Income

^b Unstandardized Coefficient ^c Standardized Coefficient

*** Significant at the 0.01 level ** Significant at the 0.05 level * Significant at the 0.10 level

Based on the estimates of coefficients presented in Table 5.20, the final estimated model of the multiple linear regression analysis for ‘Under-reporting of Income’ is depicted in Equation 5.2.

Equation 5.2

$$Y = 4.454 + 0.685(D_1) + 0.691(D_2) - 0.431(D_3) + 0.185(D_4) - 0.901(X_1) - 0.035(X_2) - 0.339(X_3) + 0.288(X_4) + 0.199(X_5) - 0.322(X_6) - 0.109(X_7) + 0.571(X_8) + e$$

(ii) Over-claiming of Expenses

With regards to over-claiming of expenses, only four variables were found to be significant determinants of corporate taxpayers’ non-compliance behaviour (Table 5.21). The variables were tax liability ($p < 0.10$), business length ($p < 0.01$), tax complexity ($p < 0.05$) and tax fairness ($p < 0.05$).

Table 5.21 Estimates of Coefficient: Over-claiming of Expenses

<i>Variable^a</i>	β^b	<i>Std. Error</i>	<i>Beta^c</i>	<i>t</i>	<i>p-value</i>
Constant	5.166	2.230		2.317	0.023
Size (D ₁)	0.639	0.400	0.191	1.598	0.114
Size (D ₂)	0.393	0.496	0.113	0.793	0.430
Sector (D ₃)	-0.640	0.397	-0.183	-1.613	0.111
Sector (D ₄)	0.463	0.418	0.135	1.107	0.272
Tax (X ₁)	-0.699	0.366	-0.214	-1.908	0.060*
Year (X ₂)	-0.045	0.013	-0.377	-3.384	0.001***
Cost (X ₃)	-0.844	0.541	-0.202	-1.561	0.122
Complex (X ₄)	0.322	0.148	0.245	2.168	0.033**
Rate (X ₅)	-0.168	0.147	-0.126	-1.141	0.257
Sanction (X ₆)	-0.257	0.189	-0.151	-1.362	0.177
Fair (X ₇)	0.447	0.201	0.242	2.220	0.029**
Psycho (X ₈)	0.178	0.164	0.125	1.086	0.281

^a Dependent Variable: Over-claiming of Expenses^b Unstandardized Coefficient ^c Standardized Coefficient

*** Significant at the 0.01 level ** Significant at the 0.05 level * Significant at the 0.10 level

With other variables held constant, non-compliance behaviour was negatively related to tax liability and business length. Companies with a lower tax liability and those with shorter business length were more non-compliant. Similar to under-reporting of income, the result also signified that non-compliance, with over-claiming of expenses, was greater for companies with a high perceived tax complexity level and fairness in the tax rate structure. The final estimated model of multiple linear regression analysis for ‘Over-claiming of Expenses’ is depicted in Equation 5.3 based on estimates of coefficients presented in Table 5.21.

Equation 5.3

$$Y = 5.166 + 0.639(D_1) + 0.393(D_2) - 0.640(D_3) + 0.463(D_4) - 0.699(X_1) - 0.045(X_2) - 0.844(X_3) + 0.322(X_4) - 0.168(X_5) - 0.257(X_6) + 0.447(X_7) + 0.178(X_8) + e$$

(iii) Overall Non-compliance

Overall non-compliance is a combination of the two types of tax non-compliance behaviour: under-reporting of income and over-claiming of expenses (Table 5.22). The business size (medium), business sector (manufacturing), tax liability, business length, tax complexity, tax deterrence sanctions and tax psychological costs variables were found to be significant determinants of corporate non-compliance behaviour. Tax liability, business length and tax psychological costs were significant at the one percent level. Medium-sized PLCs and tax complexity were significant at the five percent level, while to a lesser extent, the manufacturing sector and tax deterrence sanctions were significant at the 10 percent level.

Table 5.22 Estimates of Coefficient: Overall Non-compliance

<i>Variable^a</i>	β^b	<i>Std. Error</i>	<i>Beta^c</i>	<i>t</i>	<i>p-value</i>
Constant	4.810	1.726		2.787	0.007
Size (D ₁)	0.662	0.309	0.239	2.140	0.035**
Size (D ₂)	0.542	0.384	0.188	1.412	0.162
Sector (D ₃)	-0.535	0.307	-0.185	-1.744	0.085*
Sector (D ₄)	0.324	0.324	0.114	1.001	0.320
Tax (X ₁)	-0.800	0.284	-0.295	-2.820	0.006***
Year (X ₂)	-0.040	0.010	-0.402	-3.862	0.000***
Cost (X ₃)	-0.592	0.419	-0.171	-1.414	0.161
Complex (X ₄)	0.305	0.115	0.280	2.652	0.010**
Rate (X ₅)	0.016	0.114	0.014	0.137	0.891
Sanction (X ₆)	-0.290	0.146	-0.206	-1.980	0.051*
Fair (X ₇)	0.169	0.156	0.111	1.084	0.281
Psycho (X ₈)	0.375	0.127	0.319	2.952	0.004***

^a Dependent Variable: Overall Non-compliance

^b Unstandardized Coefficient ^c Standardized Coefficients

*** Significant at the 0.01 level ** Significant at the 0.05 level * Significant at the 0.10 level

The results suggest that medium-sized companies (annual sales turnover of between MYR100 - MYR500 million) were found to be more likely to demonstrate non-compliance behaviour. Companies in the manufacturing sector were identified to be more compliant as compared to the other sectors ($t = -1.751$, $p < 0.10$). The finding also indicated that non-

compliance behaviour was greater for companies with a lower tax liability, shorter business length, a high perceived complexity level and low perceived tax deterrence sanctions. Similar to findings with regards to under-reporting of income, companies with higher psychological costs in terms of stress and anxiety in meeting their compliance obligations, tended to be more non-compliant with regards to overall non-compliance behaviour.

The final estimated model of the multiple linear regression analysis for overall non-compliance is depicted in Equation 5.4, based on coefficients presented in Table 5.22.

Equation 5.4

$$Y = 4.810 + 0.662(D_1) + 0.542(D_2) - 0.535(D_3) + 0.324(D_4) - 0.800(X_1) - 0.040(X_2) - 0.592(X_3) + 0.305(X_4) + 0.016(X_5) - 0.290(X_6) + 0.169(X_7) + 0.375(X_8) + e$$

The results gathered from the three multiple regression analyses on the factors affecting CIT compliance costs are exhibited in Table 5.23.

Table 5.23 Results Summary of Multiple Regressions: Model 2

<i>Results</i>	<i>Under-reporting of Income [DV1]</i>	<i>Over-claiming of Expenses [DV2]</i>	<i>Overall Non- compliance [DV3]</i>
R ²	0.459	0.296	0.385
Adjusted R ²	0.380	0.193	0.295
Standard Error	1.053	1.465	1.134
F-value	5.804	2.873	4.284
P-value	0.000 ***	0.002 ***	0.000 ***

*** Significant at the 0.01 level

5.5.4 Synthesis on the Multiple Regression Results

Table 5.24 presents the synthesis of findings based on a 10-predictor multiple linear regression analysis performed to identify the determinants of tax compliance behaviour of corporate taxpayers.

Table 5.24 Synthesis of the Statistical Significant Level of Multiple Regressions Results

<i>Item</i>	<i>Under-reporting of Income</i>	<i>Over-claiming of Expenses</i>	<i>Overall Non- compliance</i>
Corporate Characteristics:			
▪ Size	0.05 – 0.10	-	0.05
▪ Sector	-	-	0.10
▪ Length	0.01	0.01	0.01
▪ Tax Liability	0.01	0.10	0.01
Tax Compliance Costs	-	-	-
Tax Attitudinal Aspects:			
▪ Tax Complexity	0.01	0.05	0.05
▪ Tax Rate Structure	0.10	-	-
▪ Tax Deterrence Sanctions	0.05	-	0.10
▪ Tax Law Fairness	-	0.05	-
▪ Tax Psychological Costs	0.01	-	0.01

In this study, business length, tax liability and tax complexity were found to consistently influence the likely tax non-compliance behaviour for all types of non-compliance. Within the three regression analysis conducted as discussed in Subsection 5.5.2, the findings indicated that these three variables had significant relationship with under-reporting of income, over-claiming of expenses and overall non-compliance. In terms of business length, the possibility of non-compliance decreased with the number of years PLCs have been in operation. This implied that companies which have been in operation longer, were more compliant than their younger counterparts.

With regards to corporate tax liability, the possibility of non-compliance decreased with the increase in the estimated tax liability. This finding implied that PLCs with a lower tax liability were more non-compliant. In terms of tax complexity, the possibility of non-compliance increased with the higher perceptions of complexity in the tax system. The finding showed that higher perceptions on complexity surrounding the CIT systems resulted in greater non-compliance of corporate taxpayers. Thus, in this study, length of business, tax liability and perceptions on tax complexity had the greatest impact in influencing the non-compliance behaviour of corporate taxpayers.

Contrary to expectations that high compliance costs incurred by corporate income taxpayers will result in tax non-compliance behaviour, this study did not find a significant difference between the two variables. Findings from all three regression analyses indicated conclusively that tax compliance costs had insignificant relationships with non-compliance behaviour of corporate taxpayers. In other words, tax compliance costs burden was not found to be a significant predictor of PLCs tax non-compliance.

The remaining six factors, specifically business size, business sector, tax rate structure, tax deterrence sanction, tax law fairness and tax psychological costs were significant determinants of the likely tax non-compliance behaviour in at least one type of non-compliance. Size of business, perceptions on tax deterrence sanctions and level of tax psychological costs were significant determinants for under-reporting of income and overall non-compliance.

In terms of business size, the findings of this study found that medium-sized PLCs with annual sales turnover of between MYR100 - MYR500 million were more non-compliant than the small-sized PLCs ($p < 0.05$). To a lesser extent, large-sized PLCs with annual sales turnover of more than MYR500 million were also more non-compliant than the small-sized PLCs ($p < 0.10$). The findings of this study also found that the possibility of non-compliance decreased with higher perceived tax deterrence sanctions and level of tax psychological costs. Increases in tax deterrence sanctions pertaining audit likelihood, detection likelihood and penalty severity resulted in lower non-compliance of PLCs. By contrast, companies with higher tax psychological costs in terms of stress and anxiety in meeting their compliance obligations, tended to be more non-compliant with regards to the overall non-compliance behaviour.⁸⁹

Perceived fairness in the tax rate structure was a significant determinant for under-reporting of income. The possibility of under-reporting of income decreased with higher perceived unfairness in the tax rate structure. It is implied that companies with higher perceptions on fairness in the tax rate structure would be more non-compliant. Next, perceived fairness of the tax system was a significant determinant for over-claiming of expenses while business sector was a significant determinant for overall non-compliance. In terms of tax law fairness, the possibility of over-claiming of expenses increased with higher perceptions of fairness in the tax system. With regards to business sector, those PLCs in the manufacturing sector were more

⁸⁹ With regards to under-reporting of income and overall non-compliance, the tax psychological costs variable is significant at the one percent level while the tax deterrence sanctions variable is significant at the five and 10 percent levels (Refer to Subsection 5.5.2).

compliant than the reference level (services sector) in the overall non-compliance behaviour. Therefore, in this study, tax liability, tax rate structure, tax law fairness and business sector had the least impact in influencing the non-compliance behaviour of corporate taxpayers.

5.6 Taxpayers Attitudes and Behaviour: External Tax Professionals' Views

Similar to the survey of corporate taxpayers, external tax professionals were requested to indicate their perceptions towards tax attitudinal aspects and behaviour of their corporate tax clients. Table 5.25 presents the mean scores of each tax attitudinal aspect gathered from the perspective of external tax professionals.⁹⁰

Table 5.25 External Tax Professionals' Views towards Tax Attitudes

<i>Attitudinal Aspect</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>
Tax Complexity	3.17	3.00	0.88
Tax Rate Structure	3.39	3.33	1.01
Tax Deterrence Sanctions	3.68	4.00	0.64
Tax Law Fairness	3.60	4.00	0.82
Tax Psychological Costs	4.81	5.00	1.20

Tax psychological costs perceptions obtained the highest mean score of 4.81. This demonstrated that corporate taxpayers were facing anxiety and stress in dealing with tax requirements as perceived by the external tax professionals. Tax deterrence sanctions perceptions' mean scores of 3.68 indicated that external tax professionals' perception towards the audit likelihood, deterrence likelihood and penalty severity, was marginally high. This is followed by a mean score of 3.60 for tax fairness perceptions suggesting that the corporate tax system was regarded as being relatively fair. Finally, the mean scores of 3.39 and 3.17 for tax rate structure and tax complexity, respectively, showed that tax professionals' perception toward these tax aspects were only marginally high and moving towards indifferent perceptions.

Table 5.26 provides the external tax professionals' views towards non-compliance behaviour of their tax clients. The lower level of scores indicated that external tax professionals consider their clients as compliant taxpayers and vice-versa. Mean scores of between 2.14 to 2.51 for all

⁹⁰ Detailed key findings of the tax attitudinal aspects from the perspective of external tax professionals are presented in Appendix 5.2.

types of non-compliance behaviour suggested that tax professionals acknowledge their tax clients as compliant taxpayers.

Table 5.26 External Tax Professionals' Views on Non-compliance Behaviour

<i>Non-compliance Behaviour</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>
Under-reporting of Income	2.14	1.00	1.53
Over-claiming of expenses	2.51	2.00	1.65
Overall Non-compliance	2.33	2.00	1.45

The relationship between tax attitudinal aspects and the likely non-compliance behaviour were further analysed using correlation analysis (Table 5.27). Based on the result, complexity of the tax system was positively correlated with all types of non-compliance, namely under-reporting of income, over-claiming of expenses and the overall non-compliance. A direct relationship between complexity in the tax systems and non-compliance behaviour was in the expected direction, suggesting that non-compliance increased with an increase in tax complexity. Moreover, the values of correlation coefficients⁹¹ were medium to large and significant relationships were consistently found between all types of non-compliance behaviour and complexity in the tax systems.

Table 5.27 Attitudinal Aspects and Non-compliance Behaviour: Correlation Analysis

<i>Attitudinal Aspect</i>	<i>Under-reporting of Income</i>	<i>Over-claiming of Expenses</i>	<i>Overall Non-compliance</i>
Tax Complexity	+ 0.531 ^{***}	+ 0.453 ^{***}	+ 0.537 ^{***}
Tax Rate Structure	+ 0.352 ^{**}	+ 0.183	+ 0.289 ^{**}
Tax Deterrence Sanctions	- 0.060	+ 0.041	- 0.008
Tax Law Fairness	+ 0.419 ^{***}	+ 0.468 ^{***}	+ 0.487 ^{***}
Tax Psychological Costs	- 0.317 ^{**}	- 0.288 ^{**}	- 0.330 ^{**}

Positive (+) or negative (-) sign denotes a direct or indirect relationship respectively.

*** Significant at the 0.01 level (2-tailed). ** Significant at the 0.05 level (2-tailed).

Similarly, in relation to tax law fairness, a positive association was observed between the perception on fairness in the tax system and all types of non-compliance. This signified that better perceived fairness in the tax system would result in a lower likelihood of reduction in taxpayer non-compliance. The strengths of correlations between perceptions of tax fairness and

⁹¹ Refer to Subsection 5.4 regarding the interpretation for values of correlation coefficients.

non-compliance behaviour were moderate and significant relationships were consistently found in all the three correlation analyses. On the contrary, the analysis undertaken discovered negative correlations between tax psychological costs and all types of non-compliance. This relationship indicated that increases in psychological costs were correlated with decreases in the possibility of non-compliance. There were also significant relationships between psychological costs and all types of non-compliance behaviour at the five percent level. However, the correlation coefficients of between 0.288 and 0.330 suggested weak correlation between tax psychological costs and non-compliance behaviour of corporate taxpayers.

The other two tax attitudinal aspects investigated, tax rate structure and tax deterrence sanctions, exhibited very weak correlations coupled with insignificant findings. Positive relationships were found between the tax rate structure and all types of non-compliance with weak correlation values ranging from 0.183 to 0.352. Significant relationships were only observed for under-reporting of income and overall non-compliance. In relation to tax deterrence sanctions, mixed and very weak associations were ascertained (-0.008 to +0.041). Moreover, no significant relationship was found between non-compliance behaviours and perception on tax deterrence sanctions.

Results from the multiple regression analyses undertaken found that all the three regression analyses undertaken were statistically significant at the one percent level (Table 5.28). Assessment on appropriateness of regression models found that all four assumptions underlying regression analysis, namely normality, linearity, homoscedasticity and multicollinearity assumptions were not violated (refer to appendix 5.3).

Pertaining to under-reporting of income, the predictor variables accounted for almost 50 percent of the variability in the non-compliance behaviour of corporate taxpayers ($F=8.154$, $p<0.01$). Regarding over-claiming of expenses, the predictor variables explained around 40 percent of non-compliance behaviour ($F=5.486$, $p<0.01$). Similarly, with regards to overall non-compliance, the independent variables explained almost 52 percent of the variability in the non-compliance behaviour of corporate taxpayers.

Table 5.28 Results of Multiple Regressions: External Tax Professionals Survey

<i>Results</i>	<i>Under-reporting of Income</i>	<i>Over-claiming of Expenses</i>	<i>Overall Non- compliance</i>
R ²	0.499	0.401	0.519
Adjusted R ²	0.437	0.328	0.460
Standard Error	1.152	1.366	1.074
F-value	8.154	5.486	8.835
P-value	0.000 ***	0.001 ***	0.000 ***

*** Significant at the 0.01 level.

Multiple regression analysis undertaken on the five tax attitudinal aspects further revealed that perceptions on tax complexity and tax psychological costs were statistically significant for all types of non-compliance behaviour. Fairness in the CIT law was a significant determinant to over-claiming of expenses and overall non-compliance behaviour. Generally, the results were quite similar with findings of the main corporate taxpayer survey. The detailed results of multiple regressions for corporate taxpayers' compliance behaviour analysis from the perspective of external tax professionals are presented in Table 5.29.

Table 5.29 Estimates of Coefficient: External Tax Professionals Survey

<i>Variable</i>	<i>Under-reporting of Income</i>	<i>Over-claiming of Expenses</i>	<i>Overall Non- compliance</i>
Tax Complexity	0.481 (3.801) ***	0.373 (2.695) **	0.465 (3.751) ***
Tax Rate Structure	0.171 (1.424)	-0.021 (-0.157)	0.078 (0.664)
Tax Deterrence Sanctions	-0.147 (-1.198)	-0.010 (-0.076)	-0.083 (-0.691)
Tax Law Fairness	0.168 (1.164)	0.304 (2.262) **	0.262 (2.169) *
Tax Psychological Costs	-0.301 (-2.536) **	-0.293 (-2.257) *	-0.325 (-2.794) **

Number of respondents equal 49, t value is given in parenthesis.

*** Significant at the 0.01 level. ** Significant at the 0.05 level. * Significant at the 0.10 level.

5.7 Chapter Summary

This chapter presents the results of tax compliance behaviour analysis mainly based on data collected from the survey of corporate taxpayers and the supplementary survey of external tax professionals. Data examination indicated the goodness of data with regards to reliability and validity.

Descriptive analysis of the tax attitudinal aspects indicated the presence of complexity in the Malaysian CIT system. Fairness in the tax rate structures and corporate income tax law were perceived to be marginally and fairly high, respectively. Corporate taxpayers perceived tax deterrence sanctions to be marginally low but suggested that tax compliance requirements may cause stress and anxiety to taxpayers. In this study, PLCs were predominantly compliant taxpayers in terms of under-reporting of income and over-claiming of expenses. Only tax psychological costs were found to have significant positive associations with under reporting of income, over-claiming of expenses, and overall non-compliance.

The results from the multiple regression analysis undertaken on the three types of non-compliance behaviour indicate that business size, business sector, business length, tax liability, tax complexity, tax rate structure, tax deterrence sanctions, tax law fairness and tax psychological costs are significant determinants of compliance behaviour of corporate taxpayers. The analysis of external tax professionals' survey on tax compliance behaviour of their large corporate tax clients, indicated similar results which further corroborated the findings in the corporate taxpayers' survey. The following chapter (Chapter 6) provides a comparative analysis of the integrated findings of corporate taxpayers' and external tax professionals' surveys administered in this study.

CHAPTER 6

INTEGRATED FINDINGS AND DISCUSSION

6.1 Introduction

The previous two chapters (Chapters 4 and 5) presented the findings on tax compliance costs and compliance behaviour of corporate taxpayers, respectively. In this chapter (Chapter 6), a comparative analysis is drawn upon the integrated findings of corporate taxpayers and external tax professionals surveys administered in this study. Results of this study were further examined in the light of existing literatures with a view of identifying similarities and differences of research findings between studies. Accordingly, the following sections provide comparisons of research findings regarding compliance costs estimates (Section 6.2), tax attitudinal aspects (Section 6.3), tax compliance behaviour (Section 6.4) and determinants of tax non-compliance behaviour (Section 6.5) of corporate taxpayers. Finally, Section 6.6 provides the summary of this chapter.

Comparative analysis of research findings between countries (see Sandford, 1995a); within the same country (see Evans, Ritchie, Tran-Nam & Walpole, 1998) and with different types of respondents in a study (see Abdul-Jabbar, 2009), are beneficial to support the overall findings of this study. However, simple direct comparisons of these findings may not be useful and can be misleading as there are differences in the methodology employed between studies especially regarding compliance costs estimation. Factors such as method of time valuation for internal staff, representativeness of data, assessment system and timing of survey may influence the value of estimates. There are also dissimilarities in the taxation systems between countries, including level of development, the culture of paying taxes, public sector size and tax administrative capacity (Bird & Gendron, 2001), which need to be considered. Therefore, comparisons of findings should be interpreted with caution and according to Evans (2003b), the results are only to be considered as being suggestive, instead of conclusive.

6.2 Comparative Analysis of Compliance Costs Estimates

This section provides a comparison between compliance costs estimates furnished by the corporate taxpayers and external tax professionals. The findings were then analysed against the existing Malaysian and international studies.

6.2.1 Corporate Taxpayers versus External Tax Professionals Surveys

Comparisons of findings between the two surveys of this study were limited to external tax compliance costs incurred by corporate taxpayers (Table 6.1). The external tax professionals were only able to provide information regarding the external tax fees charged to their tax clients.

Table 6.1 Compliance Costs Estimation by Survey Respondents

<i>Tax Compliance Costs</i>	<i>Corporate Taxpayers</i>	<i>External Tax Professionals</i>
External Tax Compliance costs:		
▪ Average per Company (MYR)	31,907	28,153
Component of Costs:		
▪ Computational (%)	70	73
▪ Planning (%)	30	27

The external compliance costs estimates in both surveys of the corporate taxpayers and external tax professionals appeared to be compatible. More precisely, the estimate of average fees charged by external tax professionals (MYR28,153) was only marginally lower than the costs estimates provided by the corporate taxpayers (MYR31,907). The lower average tax compliance costs provided by external tax professionals might be due to the size of tax clients that they were engaged by. For instance, in the largest size category of ‘annual sales turnover of more than MYR500 million’, around 33 percent of the corporate taxpayers’ responses were derived from this size category (see Table 3.11), while in the external tax professionals’ survey, only an average of 18 percent of their tax clients were in the similar category (see Table 4.51). The differences notwithstanding, the amount of fees that the external tax professionals charged their clients for the income tax work also acted as an additional check on the reliability of the compliance costs estimates provided by the corporate taxpayers.

Likewise, this study found a consistent finding between the two surveys of corporate taxpayers and external tax professionals with regards to components of costs. The computational-planning costs ratios of 70:30 derived from corporate taxpayers’ survey were slightly lower than the external tax professionals’ survey finding of 73:27 (Table 6.1). A meagre three percent difference in computational and planning work percentages may be due to the differences in the perception of what constitutes tax computational and planning work.

Hence, conformable findings derived from the surveys of corporate taxpayers and external tax professionals added reliability to this study's compliance costs estimates and the corresponding cost components.

6.2.2 Current versus Existing Malaysian Studies

This section highlights comparative analysis of findings in this study and two prior Malaysian studies on CIT compliance costs estimates. This study focused on tax compliance costs of PLCs under the SAS environment. The earlier study by Loh et al. (1997) examined PLCs population but was conducted prior to the implementation of SAS, while Abdul-Jabbar's (2009) study focused on SMEs under the SAS environment. The comparisons of tax compliance costs findings among these three studies are presented in Table 6.2.⁹²

Regarding comparison of tax compliance costs estimates with existing PLCs' study, surprisingly, the average tax compliance cost in the post-SAS study was 31.5 percent lower than the pre-SAS study. Contrary to expectation, this study did not observe higher tax compliance costs estimates under the SAS regime. For example, Mathieu et al. (2010) advocated the likelihood of low average tax compliance costs in countries, where the SAS is not implemented, intermediary costs for countries where SAS has recently been introduced and high average costs in countries where the SAS is well established. Moreover, Sandford (1994) strongly argued that there is a great deal of evidence to suggest higher compliance costs for countries with self-assessment.

A possible explanation for the lower compliance costs estimate in this study may be due to the length of time SAS has been introduced. SAS was implemented in 2001 for corporate taxpayers and the data for this study were collected in 2009, a gap of nine years. A few researchers (for example, Singh, 1999; Ariff & Pope, 2002) had anticipated compliance costs to likely rise initially as a result of the new SAS, but the burden is expected to decrease in the long run as learning takes place.

⁹² These studies are comparable due to the similarity in the studies' objectives and methodological approach adopted. The main difference is with regard to data collection method. This study utilized self administered survey while the two earlier studies used postal survey.

Abdul-Jabbar's (2009) study also observed a huge reduction in tax compliance costs (57.7 percent) as compared to earlier SMEs' study by Hanefah et al. (2001), conducted prior to the implementation of SAS. He suggested that the high initial costs or start-up effects of SAS were removed as his study was administered six years after the introduction of the new system. He asserted that there could be a substantial increase in the compliance costs estimates during the early stages of the SAS implementation. Unfortunately, this argument is unsubstantiated as no compliance costs study was conducted to measure the start-up effects of SAS implementation in Malaysia.

Table 6.2 Compliance Costs of Malaysian Companies ^a

<i>Compliance Costs</i>	<i>Loh et al.</i> (1997)	<i>Abdul-Jabbar</i> (2009)	<i>Current Study</i> (2012)
Tax Year	1995	2006	2009
Scope	CIT	CIT	CIT
Coverage	Malaysia	Peninsular Malaysia	Peninsular Malaysia
Types of company	PLCs	SMEs	PLCs
Survey Method	Postal	Postal	Self-administered
Tax Compliance Costs:			
▪ Average per Firm(MYR)	68,836 (100%)	9,295 (100%)	47,126 (100%)
Components of Costs:			
▪ Computational (MYR)	41,906 (61%)	7,217 (74%)	34,874 (74%)
▪ Planning (MYR)	26,930 (39%)	2,474 (26%)	12,252 (26%)
Sources of costs:			
▪ Internal (MYR)	191,176 (28%)	5,509 (59%)	17,437 (37%)
▪ External (MYR)	49,660 (72%)	3,786 (41%)	29,869 (63%)
Relative to:			
▪ Tax Revenue (%)	0.36	9.3	0.11 ^b
▪ GDP ^c (%)	n/a	0.19	0.01 ^b

^a All monetary values are in current year prices. These figures have not been adjusted to reflect costs in 2009 for this study. Taking into account the effects of inflation, the average tax compliance costs estimates of existing studies are adjusted to MYR95,819 for Loh et al. (1997) and MYR10,076 for Abdul-Jabbar (2009).

^b Based on Social Compliance Costs of Malaysian PLCs (see Subsection 4.2.6).

^c Gross Domestic Product.

Another possible explanation for a lower tax compliance costs estimates in this study may be due to the effectiveness of several simplification measures by the IRB under the SAS. The IRB's mission is to raise the level of voluntary compliance among taxpayers without burdening them with high compliance costs (IRB Annual Report, 2002). Moreover, the main objective of implementing SAS is to simplify the tax collection system and increase voluntary compliance (Loo, McKerchar & Hansford, 2008). Among the main simplification measures designed by the IRB under the SAS include taxpayers' education and awareness programmes⁹³, as well as the move towards electronic filing⁹⁴. In Singapore, Ariff et al., (1997) noticed a decrease of 30 percent in the tax compliance costs incurred over a period of one year (1994 and 1995). Correspondingly, the compliance costs, expressed as a percentage of tax revenue, indicated a decrease from 0.4 percent in 1994 to 0.3 percent in 1995. They suggested that the reduction of taxpayers' compliance costs was as a result of numerous simplification measures undertaken by their tax authorities.

With respect to computational and planning components of compliance costs, this study observed an increase in computational-planning costs ratio at approximately 13 percent. The increasing nature of computational work under the SAS regime was expected as there are additional obligations under the new system, which include determining taxable income, computing tax liability and submitting tax returns based on existing tax laws. The increase in the computational-planning ratio from 59 percent to 74 percent found in Abdul-Jabbar's (2009) study for SMEs in the SAS environment, further substantiated the current findings. He argued that the high trend of internal costs is expected under the SAS environment, especially for the corporate SMEs. In addition, similar to the findings of Ariff and Pope (2002) on tax planning activities of PLCs, larger companies incurred greater costs in terms of seeking external tax professionals' advice.

Findings on sources of costs in terms of internal-external costs ratio found a nine percent increase in the proportion of internal sources of costs as compared to the prior PLCs study. The

⁹³ In this regard, the IRB has held talks, briefings and workshops for taxpayers and tax practitioners. Information was also disseminated through radio, television and website, distribution of booklets, leaflets and notes as well as meeting with individual taxpayers. The IRB has also held dialogues with trade unions and professional bodies in the fields of taxation and accounting, which in turn will disseminate the taxation knowledge and information to their respective members (IRB Annual Report, 2002).

⁹⁴ The electronic filing (e-filing) system was introduced in 2003, which allows taxpayers to submit their tax return through the internet as an alternative to manual submission. Since its introduction, a large proportion of taxpayers have used the system. For example in 2009, 1.25 million taxpayers were reported to have filed their tax return through the e-filing (Bernama, 2009).

findings of this study, however, did not support those of Abdul-Jabbar's (2009) study on SMEs, which found a 16 percent decrease in the proportion of internal work under the SAS. He argued that the increase demonstrated that tax professionals played a more significant role in the SAS regime. This contradictory result may be due to a varying group of respondents employed in each study. This study focused on PLCs, where an increase in the proportion of internal sources of costs may not indicate that external tax professionals were no longer playing a significant role in the SAS regime. Instead, it might demonstrate that more companies were taking tax issues seriously by having their own tax department to handle tax affairs. The possibility of companies establishing facilities and expertise to handle their tax activities internally due to the additional compliance requirements under SAS, is another possible explanation for the increase in reliance on internal sources.

With regards to lower tax compliance costs estimates under the SAS environment, percentages of tax compliance costs in relation to tax revenue and gross domestic product (GDP) exhibited a similar pattern with this study's earlier findings (Table 6.2). Comparative analysis on tax compliance costs expressed as a percentage of tax revenue for the two PLCs' studies exhibited a reduction of around 25 percent from 0.36 (pre-SAS)⁹⁵ to 0.11 (post-SAS). On the contrary, findings of the SMEs' studies by Abdul-Jabbar (2009) identified a slight increase of compliance costs relative to tax revenue from almost eight percent (pre-SAS) to just over nine percent (post-SAS). Likewise, with regards to tax compliance costs as a percentage of GDP, the SMEs incurred a much higher proportion of costs as compared to this PLCs' study (0.19 and 0.10 respectively). This contrasting finding is anticipated from the established regressive nature of tax compliance costs in relation to size of companies.

Table 6.3 Compliance Costs Distribution of Malaysian PLCs

<i>Turnover Level (Million)</i>	<i>Compliance Costs as a Percentage of Sales Turnover</i>	
	<i>Prior Study^a</i>	<i>Current Study^b</i>
Less than MYR100	0.358	0.057
MYR100 to MYR500	0.170	0.016
More than MYR500	0.111	0.001
Overall	0.253	0.010

Source: ^a Abdul-Jabbar (2009), ^b Data from this study.

⁹⁵ The pre-SAS study was conducted prior to the implementation of SAS by Loh et al. (1997).

Most importantly, this study found a consistent finding with prior Malaysian PLCs study (Loh et al., 1997) on the regressive nature of tax compliance costs as a percentage of annual sales turnover (Table 6.3). The overall regressivity level of the tax compliance costs estimates was smaller in this study (0.01 percent) as compared to the existing PLCs' study (0.25 percent).

6.2.3 Current versus Existing International Studies

This section exhibits comparative analysis of research findings between this study's compliance costs estimates with existing international studies in the advanced and emerging economies. The following international studies in the advanced economy focusing on tax compliance costs of large corporations⁹⁶ were considered: Ariff et al. (1995, 1997) in Singapore; Chan et al. (1999) in Hong Kong; Erard (1997) in Canada; Pope et al. (1991) in Australia; Sandford et al. (1989) in the UK; and Slemrod & Blumenthal (1996) in the US (Table 6.4). In addition, comparisons of findings to the limited empirical studies from the emerging economies included: Chattopadhyay & Das-Gupta (2002) in India, Klun (2004) in Slovenia and Blazic (2004) in Croatia (Table 6.5).⁹⁷

Several existing studies focusing on compliance costs of corporate taxpayers distinguished between computational and planning components of compliance costs. Almost all of these studies observed a higher proportion of tax computational costs as compared to the planning costs (see Tables 6.4 and 6.5). Findings from studies in Singapore however found almost an equal percentage of computational and planning costs. As a percentage of total compliance costs, computational costs accounted for 74 percent in Hong Kong and Slovenia, 70 percent in Malaysia, 55 percent in Australia and 50 - 51 percent in Singapore. In addition, similar to the findings of existing international studies, larger companies engaged in greater tax planning activities. Among possible explanations for the findings are that larger companies engage more in planning activities to minimise the amount of tax liability and/or reflect the complexity of commercial activity of these companies. However, all of these existing studies, which considered the computational-planning ratio, were conducted prior to the implementation of SAS. Thus, the comparison on computational-planning costs ratio is limited, though it does corroborate this study's finding on the prominence of computational work in tax compliance.

⁹⁶ The studies chosen for comparative analysis are mainly those focusing on PLCs and largest corporations except for Sandford et al. (1989) which covered all corporations.

⁹⁷ As the existing studies which focus solely on PLCs or largest corporation are not available in the emerging economies, comparative analysis of findings includes those involving corporations.

Table 6.4 Corporate Compliance Costs Findings in Advanced Economies ^a

<i>Country (Author, Year)</i>	<i>UK (Sandford et al., 1989)</i>	<i>Australia (Pope et al., 1991)</i>	<i>Singapore (Ariff et al., 1995& 1997)</i>		<i>Canada (Erard, 1997)</i>	<i>US (Slemrod & Blumenthal, 1996)</i>	<i>Hong Kong (Chan et al., 1999)</i>	<i>Malaysia (Current Study, 2012)</i>
Year Studied	1986/87	1986/87	1994	1995	1995	1995/96	2009	1992
Assessment system ^b	OAS	OAS	OAS	OAS	SAS	OAS	SAS	SAS
Compliance Costs:								
By Component (%)								
▪ Computational	n/a	55	51	50	n/a	n/a	74	70
▪ Planning	n/a	45	49	50	n/a	n/a	26	30
By Sources (%)								
▪ Internal	53	50	42	42	80	84	30	37
▪ External	47	50	58	58	20	16	70	63
Relative to (%)								
▪ Tax Revenue	2.2	11.4-23.7	0.4	0.3	5	3.2	n/a	0.11
▪ GDP	0.08	0.25-0.53	n/a	n/a	n/a	n/a	n/a	0.01

^a This comparison is limited to studies on large corporation CIT compliance costs by main findings except for study by Sandford et al. (1989) (Refer to Appendix 2.1 for a tabulated summary of related studies).

^b Assessment system used during the period: Self Assessment System (SAS) or Official Assessment System (OAS).

Table 6.5 Corporate Compliance Costs Findings in Emerging Economies ^a

<i>Country (Author, Year)</i>	<i>India (Chattopadhyay & Das-Gupta, 2002)</i>	<i>Croatia (Klun, 2004) ^b</i>	<i>Slovenia (Blazic, 2004)</i>	<i>Malaysia (Current Study, 2012)</i>
Year Studied	2001/02	2001/2002	2002	2009
Assessment system ^c	SAS	SAS	SAS	SAS
Compliance Costs:				
By Component (%)				
▪ Computational	n/a	n/a	n/a	70
▪ Planning	n/a	n/a	n/a	30
By Sources (%)				
▪ Internal	n/a	82	74	37
▪ External	n/a	18	26	63
Relative to (%)				
▪ Tax Revenue	5.6 – 14.5	11.8	4.2	0.11
▪ GDP	n/a	1.20	1.00	0.01

^a This comparison is mainly limited to studies on corporation CIT compliance costs of the emerging economies by main findings (Refer to Appendix 2.1 for a tabulated summary of related studies).

^b Klun (2004) study covered costs for all three types of taxes paid by Slovenian corporations.

^c Assessment system used during the period: Self Assessment System (SAS).

The comparisons of research findings on the sources of costs in terms of internal-external costs ratio exhibited some contrasting results. Studies conducted in the Asia-Pacific region (Malaysia, Singapore and Hong Kong) have consistently found a low internal-external ratio of tax compliance costs, except for Australia, with equal internal and external portions. The remaining countries in the advanced (US, Canada and UK) and emerging (Slovenia and Croatia) economies, on the contrary, showed a high proportion of internal sources of income tax work. The percentage of internal compliance costs were 30 percent in Hong Kong, 37 percent in Malaysia, 42 percent in Singapore, 50 percent in Australia, 53 percent in the UK, 74 percent in Slovenia, 80 percent in Canada, 82 percent in Croatia and the highest of 84 percent in the US.

These findings indicated that companies within the Asia-Pacific region relied more heavily on the external sources, while companies in the US, UK and Canada, utilised more of internal expertise. Companies in the Asia-Pacific region have yet to establish facilities and expertise in handling corporate tax activities internally and this might be one of the possible explanations for

a greater significant role of tax professionals in these countries. In addition, it might be more economical for these companies to outsource their tax work as compared to managing their own tax departments. As for the emerging economies (Slovenia and Croatia), the external compliance costs portion is considerably lower because tax consultancy is quite a new phenomenon in these countries (Klun & Blazic, 2005). With regards to the assessment system adopted by countries under review, no clear relationship was observed to the proportion of internal-external sources of income tax work.

The findings in this study further indicate that the magnitude of CIT compliance costs estimates was lower for Malaysia in comparison with compliance costs incurred in other countries. As a basis for international comparisons, most researchers commonly illustrate the compliance costs estimates as a proportion of tax revenue and/or GDP (Tables 6.4 and 6.5). For example, Sandford et al.'s (1989) study of UK companies estimated average compliance costs to be 2.2 percent of tax revenue. A study of the Australian public companies' income taxation in 1986/87 found higher estimated compliance costs as a percentage of tax revenue of between 11.4 and 23.7 percent (Pope et al., 1991).⁹⁸ On the other hand, two Singapore studies on listed companies arrived at lower averages of 0.4 percent for the year of assessment 1994 (Ariff et al., 1995) and 0.3 percent for the year of assessment 1995 (Ariff et al., 1997). An overall analysis on the existing corporate tax compliance costs studies established that the tax compliance costs, as a percentage of tax revenue, ranged widely from 0.3 to 23.7 percent in the advanced economies and from 4.2 to 14.5 percent in the emerging economies. Hence, the Malaysian result of 0.11 percent seems relatively lower than those countries in the advanced and emerging economies, highlighting the complexities of the tax system in these countries. Correspondingly, the Malaysian PLCs' compliance costs estimate expressed as a percentage of GDP (0.01 percent) is lower compared to the findings of almost all existing studies (0.08 to 1.2 percent). Compliance costs of CIT, as a percentage of GDP, were 0.08 percent in the UK, 0.25 - 0.53 percent in Australia, 1.0 percent in Slovenia and 1.2 percent in Croatia.

Although the tax compliance costs' magnitude and percentages of the Malaysian PLCs were suggested to be low, they were disproportionately distributed among different sized groups of taxpayers. The regressive nature of CIT compliance costs as a percentage of annual sales turnovers conformed the findings of almost all existing tax compliance costs studies.

⁹⁸ As noted by Abdul-Jabbar and Pope (2008a), Australian studies identified similar trend of findings to the Malaysian studies regarding lower tax compliance costs estimates in the context of SAS (Refer to Subsection 6.2.2).

Nevertheless, country-to-country comparisons need to exercise additional caution in dealing with dissimilarity in the tax systems used by different tax jurisdictions. One example is on the scope of taxation; some countries like Malaysia, Singapore and Hong Kong adopt territorial basis⁹⁹, while other tax jurisdictions, like Australia and the US, adopt a more complex world income basis. Moreover, a considerable lag of at least 10 years between this study and almost all existing studies under review, especially those studies in the advanced economies, needs to be considered.

6.3 Comparative Analysis of Tax Attitudinal Aspects

This section presents the similarities and differences of research findings on tax attitudinal aspects. Comparative analyses between the two surveys in this study and with the existing Malaysian studies are provided. The analyses however do not include comparison with findings from international studies as all the existing international studies do not include tax attitudinal aspects in their analysis.¹⁰⁰

6.3.1 Corporate Taxpayers versus External Tax Professionals Surveys

The findings on the perceptions of the five tax attitudinal aspects differed marginally between the surveys of corporate taxpayers and external tax professionals (Table 6.6).

Table 6.6 Perceptions on Tax Attitudinal Aspects: Taxpayers and Tax Professionals

<i>Attitudinal Aspect</i>	<i>Corporate Taxpayers</i>		<i>External Tax Professionals</i>	
	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>
Tax Complexity	3.53	3.67	3.17	3.00
Tax Rate Structure	3.15	3.00	3.39	3.33
Tax Deterrence Sanctions	2.98	3.00	3.68	4.00
Tax Law Fairness	3.87	4.00	3.60	4.00
Tax Psychological Costs	3.96	4.00	4.81	5.00

⁹⁹ The territorial scope of taxation was embraced by different countries in varying degrees (Kasipillai, 2010a). Malaysia for example adopted a territorial and remittance scope of taxation for taxing income whereby income accruing in or derived from within Malaysia or received in Malaysia from abroad would be subject to tax (Section 3, ITA 1967). However, with effect from year of assessment 1995, foreign income remitted into Malaysia by resident companies investing overseas is exempted from tax (Section 3C, Income Tax Act 1967).

¹⁰⁰ Refer to Subsection 2.3.2 with regards to review of empirical studies on corporate tax compliance.

Mean scores from the survey of corporate taxpayers were comparatively lower than the external tax professionals, except for perceptions on complexity in the tax system and tax law fairness. The slight dissimilarity of mean scores between the two types of respondents may be due to differences in interpretations of the tax attitudinal aspects as well as their level of tax expertise. In this study, corporate taxpayers perceived CIT as quite complex while external tax professionals perceived it to be only marginally complex. A lower tax complexity level perceived by the external tax professionals was expected, given the level of their tax knowledge and expertise. Another example was on the perception of tax psychological costs where external tax professionals perceived it to be higher compared to the taxpayers themselves.

External tax professionals were more inclined towards agreeing with the statements that tax compliance requirements may have caused high level of stress and anxiety to taxpayers. A likely reason is because they predominantly handle tax matters and are in regular communication with the IRB officers on behalf of their clients. Hence, they might experience stress and anxiety when dealing with IRB officers as compared to their corporate tax clients, who normally have lesser tax comprehension and exposure. Another possible explanation is due to the fact that most PLCs engage external tax professionals,¹⁰¹ which might relieve the companies of some stress and anxiety in dealing with tax authorities. Interestingly, the highest mean scores indicated a similar pattern, with the highest mean recorded for perceptions on tax psychological costs. Overall, external tax professionals' perceptions towards all five tax attitudinal aspects sufficiently supported the findings of corporate taxpayers' survey.

6.3.2 Current versus Existing Malaysian Studies

Most Malaysian tax compliance studies concentrated on individual taxpayers, with a few studies including SMEs as their respondents, and none of these studies was conducted on large corporations. Thus, a direct comparison with earlier Malaysian tax compliance studies is not possible except for Abdul-Jabbar's (2009) study, which investigated the income tax non-compliance of corporate SMEs in Malaysia. Nevertheless, only three attitudinal aspects, namely perceptions on tax complexity, tax rate structure and tax law fairness, were available for examination (Table 6.7). In addition, comparisons were made with the findings of other existing Malaysian studies on individual taxpayers as appropriate, especially those that included business respondents in their sample.

¹⁰¹ External tax professionals would normally deal with IRB on their client's tax affairs.

Table 6.7 Tax Attitudes of Corporate Taxpayers

<i>Attitudinal Aspect</i>	<i>Prior Study^a</i>		<i>Current Study^b</i>	
	Mean	Median	Mean	Median
Tax Complexity	3.56	3.67	3.53	3.67
Tax Rate Structure	3.34	3.33	3.15	3.00
Tax Deterrence Sanctions	-	-	2.98	3.00
Tax Law Fairness	3.22	3.20	3.87	4.00
Tax Psychological Costs	-	-	3.96	4.00

Source: ^a Abdul-Jabbar (2009), ^b Data from this study.

The findings of this study are mostly consistent with those of Abdul-Jabbar (2009) on all the three comparable tax attitudinal aspects (Table 6.7). This is especially so with regards to the complexity of corporate tax law, the mean score of the corporate taxpayers' perceptions were almost identical (3.56 and 3.53). These findings further supported evidence on the existence of complexity in the Malaysian income tax laws. A study conducted before the commencement of SAS by Hanefah (1996) on personal taxpayers suggested the presence of some degree of complexity in the Malaysian tax system. Hanefah et al. (2001) argued that, as a result of amendments to existing tax legislation and/or introduction of a new assessment system, the level of tax complexity evidenced an increasing trend.

These findings and arguments were further correlated with the main tax related difficulties recognised by corporate taxpayers in this study under the SAS regime. They identified estimating income tax payable, understanding income tax legislation and implementing income tax changes as the main challenges.¹⁰² According to Kasipillai (2005, 2010b), the difficulties faced by taxpayers in interpreting tax amendments are among the indicators of tax complexity. Furthermore, this study found that almost 95 percent of PLCs engaged external tax professionals¹⁰³ and one of the reasons identified is complexity in the income tax legislation.¹⁰⁴ Hence, these similar perspectives supported the presence of complexity in the Malaysian income tax system.

¹⁰² Refer to Subsection 4.6.1 regarding tax related difficulties for companies.

¹⁰³ Refer to Subsection 3.8.3.6 regarding sources of income tax work.

¹⁰⁴ Refer to Subsection 4.6.2 regarding reasons for engaging external tax professionals.

The mean score on perception of fairness in the tax rate structure coincided with Abdul-Jabbar's (2009) research findings, although the score was marginally lower. The findings demonstrated that corporate taxpayers perceived fairness in the Malaysian income tax rate structure. With regards to perception on tax law fairness, corporate taxpayers' perceived the Malaysian tax system as quite fair. The PLCs, however, exhibited a higher perception towards fairness in the tax system (3.87) as compared to the SMEs' respondents (3.22). Nevertheless, these results of fairness in the tax law and rate structure were also consistent with other existing studies on individual taxpayers (see Che Azmi & Perumal, 2008; Sia et al., 2008). These existing Malaysian studies were all conducted in the SAS environment which further corroborated the findings of this study.

6.4 Comparative Analysis of Tax Compliance Behaviour

In this section, comparisons of research findings regarding tax compliance behaviour between the two surveys in this study and existing Malaysian studies are presented. Country-to-country comparison is not addressed in this study as all the existing international studies measured only 'actual' non-compliance utilising tax authority data.¹⁰⁵

6.4.1 Corporate Taxpayers versus External Tax Professionals Surveys

There are mixed findings on tax compliance mean scores of corporate taxpayers and external tax professionals surveys (Table 6.8). With regards to non-compliance in the form of income reporting, corporate taxpayers portrayed relatively better compliance behaviour than the external tax professionals' respondents. This was evidenced by a lower mean score in the corporate taxpayers' survey findings for under-reporting of income.

Table 6.8 Respondents' Views towards Non-compliance Behaviour

<i>Non-compliance Behaviour</i>	<i>Corporate Taxpayers</i>		<i>External Tax Professionals</i>	
	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>
Under-reporting of Income	1.98	1.00	2.14	1.00
Over-claiming of Expenses	2.61	2.00	2.51	2.00
Overall Non-compliance	2.30	2.00	2.33	2.00

¹⁰⁵ Refer to Subsection 2.3.2 with respect to dissimilarities in measurement and methodology between international studies.

By contrast, the external tax professionals' views on their tax clients' compliance behaviour was relatively better than the corporate taxpayer respondents in relation to over-claiming of expenses. Nevertheless, overall non-compliance mean scores of 2.30 and 2.33 for the two surveys indicated that both respondents were portraying compliant behaviour and the almost identical scores further corroborated the findings of each survey in this study. This finding is also practically sound as both corporate taxpayers and external tax professionals are subjected to the same penalty structure for any non-compliant activity.

6.4.2 Current versus Existing Malaysian Studies

The comparative analysis of findings between studies of Malaysian corporate taxpayers demonstrated some degree of similarities (Table 6.9). The respondents did not exhibit any non-compliant reporting decisions for all types of non-compliance behaviour examined. Nevertheless, the mean scores in this study for each type of tax non-compliance behaviour were slightly lower than the mean scores of the prior study. Thus, PLCs portrayed a relatively better compliant behaviour as compared to the SMEs' respondents and the compliant behaviour among corporate taxpayers was most apparent in relation to under-reporting of income for both studies.

Table 6.9 Non-compliance Behaviour of Corporate Taxpayers

<i>Non-compliance Behaviour</i>	<i>Prior Study^a</i>		<i>Current Study^b</i>	
	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>
Under-reporting of Income	2.28	2.00	1.98	1.00
Over-claiming of Expenses	2.76	3.00	2.61	2.00
Overall Non-compliance	2.52	2.50	2.30	2.00

Source: ^aAbdul-Jabbar (2009), ^b Data from this study.

Other existing tax compliance studies in Malaysia (Kasipillai, Aripin & Amran, 2003; Kasipillai, Mat-Udin & Zainol-Arifin, 2003; Kasipillai & Abdul-Jabbar, 2006),¹⁰⁶ also did not indicate any non-compliant reporting decisions in most tax situations. These studies, however, were undertaken before the introduction of SAS and are subject to several methodological differences, such as the nature of tax scenarios and the value of consideration tested.¹⁰⁷

¹⁰⁶ These existing Malaysian studies are deemed appropriate for comparisons as they include individuals with business income and/or SMEs in their studies.

¹⁰⁷ Refer to Appendix 3.1: Corporate Taxpayers Questionnaire (Questions 15 and 16). The findings of this study are therefore not exactly comparable with those of existing Malaysian studies.

6.5 Comparative Analysis on Determinants of Tax Non-compliance Behaviour

This section presents the comparative findings and discussion with regards to multivariate analysis on determinants of tax compliance behaviour of corporate taxpayers. A detailed comparison with external tax professionals' perspective was not attempted in this study due to the small sample size of only 49 responses. However, it is interesting to note that as with the findings from survey of corporate taxpayers, perceptions on tax complexity appeared to have the most effect on corporate taxpayers' compliance behaviour.

6.5.1 Current versus Existing Malaysian Studies

Comparative analysis of the research findings with regards to determinants of tax compliance behaviour is presented in Table 6.10. This study identified business length, tax liability and tax complexity as significant determinants of tax non-compliance behaviour for all types of non-compliance. To a lower extent, business size, business sector, tax rate structure, tax deterrence sanction, tax law fairness and tax psychological costs were also significant determinants in at least one type of non-compliance behaviour that was examined. There was however, no evidence of compliance costs as a factor affecting corporation tax non-compliance behaviour. Although these findings are not exactly comparable with other existing Malaysian studies due to differences in the types of respondents, some analyses were carried out to identify a general trend for Malaysian taxpayers.

Findings of this study are consistent with findings of Abdul-Jabbar's (2009) study with respect to some comparable variables, namely business sector, business length, tax compliance costs, tax complexity and tax rate structure, but distinct differences in this study are business size, tax liability and tax law fairness. This study supports existing finding where compliance costs were not a significant determinant of likely tax non-compliance behaviour but there is a strong positive relationship between tax complexity and tax non-compliance behaviour. The findings are also similar to three other factors, namely business sector, business length and tax rate structure, where the significant relationship varies with types of non-compliance. In contrast to Abdul-Jabbar's (2009) findings, this study identified business size, tax liability and tax law fairness as significant determinants of the likely tax non-compliance behaviour. For example, with regards to business size, this study found a mixed result, while the former study, in the context of SMEs, did not find any influence on tax behaviour. The differences in findings may

be due to studies targeting different company sizes (PLCs and SMEs) and accordingly, dissimilar size measures.

Table 6.10 Determinants of Tax Compliance for Malaysian Businesses

<i>Author (Year)</i>	<i>Hanefah (1996)</i>	<i>Loo (2006)</i>	<i>Sia et al. (2008)</i>	<i>Abdul-Jabbar (2009)</i>	<i>Current Study (2012)</i>
Assessment system	OAS	OAS/SAS	SAS	SAS	SAS
Business Taxpayers ^a	IND	IND	IND	CORP	CORP
Determinants:					
Corporate Characteristics: ^b					
▪ Size	-	-	-	N	M
▪ Sector	-	-	-	M	M
▪ Length	-	-	-	M	D
▪ Tax Liability	-	-	-	N	D
Tax Compliance Costs	-	-	-	N	N
Tax Attitudinal Aspects: ^c					
▪ Complexity	D	-	-	D	D
▪ Rate Structure	D	-	N	M	M
▪ Deterrence Sanctions	-	-	D	-	M
▪ Law Fairness	D	D	N	N	M
▪ Psychological Costs	-	-	-	-	M

Notes: Determinants (D)/Non-determinants (N)/Mixed findings between the types of non-compliance (M)

^a Types of taxpayer: Individual (IND)/Corporate (CORP)

^b Corporate characteristics are not relevant to studies on individuals taxpayers.

^c The comparisons of findings in relation to tax attitudinal aspects are limited to the one investigated in this study. Other variables investigate in other existing studies include: IRB relationship, tax rate, tax audit, tax penalty, tax knowledge, tax morale and financial constraints.

Comparisons of research findings with other existing Malaysian tax compliance studies comprised only those studies which included individuals with business income as respondents (Table 6.10). However differences between these studies, mainly on types of respondents, assessment system and tax factors examined, need to be acknowledged in ensuring useful evaluation. There are only four comparable factors; namely perceptions on tax complexity, tax law fairness, tax rate structure and tax deterrence sanctions.

This study confirms that tax complexity was also an important determinant of corporate taxpayer compliance, as suggested by Hanefah (1996), for individual taxpayers with business income. The finding concerning perception on tax law fairness as a determinant of tax compliance is consistent with prior findings (e.g. Hanefah, 1996 & Loo, 2006) but in contrast with Sia et al. (2008). With regards to tax rate structure, two earlier studies (Hanefah, 1996 and Sia et al., 2008) found contradictory findings on whether perceptions on fairness of tax rate structure influenced compliance behaviour of taxpayers. The finding of this study is consistent with Hanefah's (1996) study which exhibited a relationship between fairness in the tax rate structure and tax compliance behaviour. Finally regarding tax deterrence sanctions, Sia et al.'s (2008) study found perceptions on tax deterrence sanctions as determinants of non-compliance behaviour of individual taxpayers, while this study also observed significant determinants towards under-reporting of income and overall non-compliance of corporate taxpayers. Therefore, tax deterrence sanctions, to a certain extent, could be effective enforcement strategies by the IRB to reduce non-compliance behaviour of individuals and corporate taxpayers in Malaysia.

6.5.2 Current versus Existing International Studies

International corporate tax compliance studies, which are relevant to this comparative analysis, as listed in Table 6.11, were all conducted in the US. Although international comparability of research findings of corporate tax compliance is limited by differences in countries' tax structure and research methodology adopted, comparisons will be beneficial for policy considerations.

With regards to business characteristics' determinants, only two factors are comparable to the existing US studies, namely business size and industry sector. In this study, business size was found to be a significant determinant of tax non-compliance behaviour and this finding is similar to Joulfaian (2000) and Hanlon et al. (2005), but contradicts those of Rice (1992). The variation in findings may be as a result of different focus on types of corporate taxpayers and proxies employed to measure business size. Joulfaian (2000) examined small and medium-sized corporations, Hanlon et al. (2005) covered large and medium-sized corporations, Rice (1992) focused on medium-sized corporations, while this study considered PLCs. Regarding proxies employed for business size, Joulfaian (2000) considered annual sales level, Rice (1992) used total value of assets, Hanlon et al. (2005) utilised both assets and sales measures, while this

study employed annual sales turnover. In relation to the relationship between business sectors and tax compliance, the result of this study confirmed the findings of Hanlon et al. (2005), where there is evidence of the influence of business sectors upon the overall tax compliance. Nevertheless, major differences between these two studies are the size of corporations studied as mentioned earlier and business sector categorisation¹⁰⁸.

Table 6.11 Determinants of Corporate Tax Compliance Internationally

<i>Author (Year)</i>	<i>Rice (1992)</i>	<i>Kamdar (1997)</i>	<i>Joufaian (2000)</i>	<i>Hanlon et al. (2005)</i>	<i>Current Study (2012)</i>
Country	US				Malaysia
Determinants					
Corporate Characteristics:					
▪ Size ^a	N	-	D	D	M
▪ Profit/Income	D	D	D	-	-
▪ Marginal tax rate	D	-	D	-	-
▪ Tax liability	-	-	-	-	D
▪ Foreign ownership	-	-	N	D	-
▪ Industry/Sector	-	-	-	D	M
▪ Public/Private	-	-	-	D	-
▪ Multi-nationality	-	-	-	D	-
▪ Length of Business	-	-	-	-	D
Audit Rate	-	D	-	-	-
Public Disclosure	D	-	-	-	-
Attitudinal Aspects:					
▪ Tax Complexity	-	-	-	-	D
▪ Tax Law Fairness	-	-	-	-	M
▪ Tax rate structure	-	-	-	-	M
▪ Tax Deterrence Sanctions	-	-	-	-	M
▪ Tax Psychological costs	-	-	-	-	M
Tax Compliance Costs	-	-	-	-	N

Note: Determinants (D)/Non-determinants (N)/Mixed findings between the types of non-compliance (M)

^a Various size proxies were employed: assets, sales, annual sales turnover.

¹⁰⁸ Hanlon et al. (2005) categorised business into eight sectors compared to six sectors in this study.

Regarding tax attitudinal aspects, the managerial perceptions on tax complexity were singled out as an important determinant of corporate tax compliance on all types of tax non-compliance behaviour examined in this study. In addition, some pieces of evidence on the possible association between tax law fairness, tax rate structure, tax deterrence sanctions and tax psychological costs with corporate tax non-compliance were indicated in this study. Unfortunately, these tax attitudinal aspects were not considered empirically in almost all prior tax compliance studies on corporations as these studies were restricted to only the actual tax compliance data provided by tax authorities. In this context, no existing studies could be identified to provide comparative findings with this current research.

Nevertheless, with regards to complexity, there is some evidence from existing international studies on a relationship between the complexity in the tax law and taxpayer compliance. Cuccia and Carnes (2001) and McKerchar (2002) found a negative impact of complexity upon tax compliance in the context of individual taxpayers. Slemrod (2004) suggested tax complexity as one of the main obstacles for the US small businesses. Erard (1997) investigated the problem areas of tax compliance for large corporations and found that tax complexity is among the frequently cited compliance problems by businesses. Slemrod and Blumenthal (1996) and Slemrod and Venkatesh (2002) studied sources of complexity of the US large and medium corporations and found that the depreciation rules and the alternative minimum tax provisions were the most frequently cited areas that increased tax complexity and the compliance burden.

6.6 Chapter Summary

This chapter provides comparative analyses of findings of this study with existing Malaysian and international studies. Results from the two surveys of this study are integrated in order to compare and contrast research findings of this study with findings of prior studies. Estimations and distributions of tax compliance costs from the external tax professionals' survey provided corroborative evidence for the main corporate taxpayer survey as conformable findings were observed. This study's evaluation of tax compliance costs under SAS environment found a reduction of costs from the prior Malaysian study conducted before the implementation of SAS. A comparison in relation to the international context indicated that compliance costs of the Malaysian PLCs as a percentage of tax revenue and GDP were lower than the international range.

With regards to tax compliance behaviour of corporate taxpayers, almost all studies consistently supported the significant influence of tax complexity on tax non-compliance behaviour. Overall, this chapter provides comparative analyses of tax compliance costs and compliance behaviour of corporate Malaysian PLCs in the context of local and international studies. Nevertheless, due to differences in category of taxpayers studied, methodology employed and taxation systems between countries, the findings of this study are not exactly comparable with those of existing studies. The subsequent chapter (Chapter 7) presents the conclusions coupled with implications of the research findings to the Malaysian government, tax authorities in particular, together with major limitations of the study and future research directions.

CHAPTER 7

CONCLUSIONS AND POLICY RECOMMENDATIONS

7.1 Introduction

This thesis consists of seven chapters. Chapter 1 provides background information representing the foundation of this study. An overview of existing literature focusing on corporate income tax (CIT) compliance costs and compliance behaviour of large corporate taxpayers are presented in Chapter 2. This led to the identification of estimation framework and research model of this study. Chapter 3 outlines the research method together with the rational for employing self-administered survey for data collection. Chapters 4 and 5 exhibit the research findings in relation to compliance costs and compliance behaviour of corporate taxpayers, respectively. Chapter 6 compares the key findings of the two surveys conducted in this study, namely surveys of corporate taxpayers and external tax professionals. A comparative analysis between the findings of this study and existing studies was then undertaken. The final chapter (Chapter 7) provides conclusions of this study and presents policy recommendations in the context of tax compliance costs and compliance behaviour of corporate taxpayers. After introducing this chapter in Section 7.1, Section 7.2 provides a summary of major findings by reference to the research objectives and hypotheses of this study. The contributions of this study are highlighted in Section 7.3, while Section 7.4 provides major policy implications and recommendations to various stakeholders, in particular the tax authorities. This is followed by a discussion on limitations of this research (Section 7.5) and suggestions for future research directions (Section 7.6). Finally, Section 7.7 presents the conclusions of this thesis.

7.2 The Synthesis of Key Research Findings

In this section, the key research findings are discussed in relation to the four research objectives and 15 hypotheses developed for this study (Table 7.1). These research findings are based on estimation framework of tax compliance costs, research Model 1 (Determinants of Tax Compliance Costs) and Model 2 (Determinants of Tax Compliance Behaviour) of this study as outlined in Chapter 2.¹⁰⁹

¹⁰⁹ Refer to Section 1.4 for the four research objectives of this study and Section 2.5 for the 15 corresponding hypotheses.

Table 7.1 Summary of Research Findings by Research Objectives and Corresponding Hypotheses

Research Objectives	Hypotheses	Findings
1. To assess the magnitude and nature of tax compliance costs incurred by Malaysian corporate taxpayers under the self assessment system (SAS).	H ₁ : The distribution of corporate income tax compliance costs is not fair as smaller companies bear a disproportionately heavier burden of compliance costs.	Supported
2. To examine the relationship between the determinants that are expected to impact the magnitude of corporate income tax compliance costs and the compliance costs estimate.	H _{2a} : There is a positive relationship between company size and the level of a company's compliance costs.	Supported
	H _{2b} : There is a variation between business sectors and the level of a company's compliance costs.	Not Supported
	H _{2c} : There is a negative relationship between business length and the level of a company's compliance costs.	Not Supported
	H _{2d} : There is a positive relationship between tax liability and the level of a company's compliance costs.	Supported
3. To evaluate the relationship between corporate income tax compliance costs and compliance behaviour of taxpayers.	H ₃ : A reduction in tax compliance costs reduces the level of non-compliance among corporate income taxpayers.	Not Supported
4. To examine the relationship between corporate characteristics, tax attitudinal aspects and compliance behaviour taxpayers.	H _{4a} : There is a relationship between business size and non-compliance of corporate taxpayers.	Supported
	H _{4b} : There is a relationship between business sectors and non-compliance of corporate taxpayers.	Supported
	H _{4c} : There is a relationship between business length and non-compliance of corporate taxpayers.	Supported
	H _{4d} : There is a relationship between business tax liability and non-compliance of corporate taxpayers.	Supported
	H _{5a} : There is a relationship between perceived tax complexity and non-compliance of corporate taxpayers.	Supported
	H _{5b} : There is a relationship between perceived fairness in the tax rate structure and non-compliance of corporate taxpayers.	Supported
	H _{5c} : There is a relationship between perceived tax deterrence sanctions and non-compliance of corporate taxpayers.	Supported
	H _{5d} : There is a relationship between perceived fairness of the tax system and non-compliance of corporate taxpayers.	Supported
	H _{5e} : There is a relationship between perceived level of psychological costs and non-compliance of corporate taxpayers.	Supported

7.2.1 Compliance Costs Estimates

The first research objective of this study concerns the estimation of CIT compliance costs of Malaysian PLCs for the year of assessment 2009. Specifically, the study's first research objective is stated as follows:

“To assess the magnitude and nature of tax compliance costs incurred by Malaysian corporate taxpayers under the self-assessment system (SAS)”

The magnitude of CIT compliance costs incurred by Malaysian PLCs in 2009 is approximately MYR47,126 per company. The mean tax compliance costs estimate of this study is 31.5 percent lower compared to the finding of pre-SAS study of Malaysian PLCs.¹¹⁰ This decrease could be due to the income tax simplification measures initiated by the IRB. Furthermore, the high initial commencement costs of changes in the tax system might have evolved into recurrent costs as taxpayers are becoming accustomed to the requirements of SAS. There is an eight-year gap between the introduction of SAS for corporations in 2001 and this study's compliance costs estimate for the year 2009. During this period, corporate taxpayers would have familiarised themselves with the current tax system, hence resulting in lower tax compliance costs.

With regards to the components of internal-external sources of tax work, 63 percent of the total compliance costs were incurred in engaging external tax professionals to deal with companies' tax affairs. This suggests a greater reliance on external sources, in handling corporate tax matters such as preparing tax return forms and for purposes of tax documentation. Components of internal and external sources as a percentage of annual sales turnover are U-shaped, implying that PLCs in the lowest and highest size levels utilised greater external resources compared to medium-sized companies. The medium-sized PLCs, with annual sales turnover value of between MYR100 and MYR500 million, did not show much difference between the internal-external sources of tax work. The computational-planning tax compliance costs ratio is 74:26 suggesting that most corporations' compliance burden is due to routine tax computation work. In relation to annual sales turnover, the larger the company size, the higher the proportion of compliance work allocated for tax planning activities. This finding indicates that larger

¹¹⁰ Taking into account the effects of inflation, the average tax compliance costs estimate of this study is almost 51 percent lower compared to the finding of Loh et al. (1997).

companies engage in greater tax planning in order to minimise the amount of their income tax liability.¹¹¹

The aggregate total tax compliance costs of Malaysian PLCs amounted to approximately MYR32 million for the year of assessment 2009. The deductibility benefits of tax compliance¹¹² amounted to almost MYR8 million, or 25 percent of the aggregate total tax compliance costs. Taking into account these offsetting benefits, the taxpayers' compliance costs were reduced to around MYR24 million in aggregate. As a consistency check on the measurement of tax compliance costs, an indirect question regarding a possible compensation amount that taxpayers would wish to claim from IRB in relation to their tax compliance burden was embedded in the questionnaire. A compensation amount of approximately MYR33 million that was expected by corporate taxpayers present comparable results, which add reliability to this study's compliance costs estimates of around MYR32 million. The difference between tax compliance costs incurred and the higher expected compensation amount might represent an element of psychological costs in complying with tax obligations. In addition, an analysis of a supplementary survey on external tax professionals validates the estimations made in the primary corporate taxpayers' survey.

In this study, the estimated aggregate tax compliance costs expressed as a percentage of CIT revenue and GDP are approximately 0.1 percent and 0.01 percent, respectively. Compliance costs, as a percentage of tax revenue and GDP, are the two most prominent indicators for international comparisons of research findings. The ranges of these percentages reported in the existing studies were between 0.3 to 23.7 percent of tax revenue and 0.08 to 1.2 percent of GDP. Specifically, CIT compliance costs as a percentage of tax revenue were 0.3 – 0.4 percent in Singapore, 2.2 percent in the UK, 3.2 percent in the US, 4.2 percent in Slovenia, 5.6 – 14.5 percent in India, 11.8 percent in Croatia and 11.4 – 23.7 percent in Australia. The limited international comparisons of CIT compliance costs as a percentage of GDP findings were 0.08 percent in the UK, 1.0 percent in Slovenia, 1.2 percent in Croatia and 0.25 – 0.53 percent in Australia. Prior studies on Malaysian PLCs estimated tax compliance costs as a percentage of tax revenue to be 0.36 percent for the 1995 tax year. Thus, tax compliance costs of corporate taxpayers estimated in this study are comparatively lower than those reported in existing

¹¹¹ The finding is similar to what has been observed in existing studies where larger companies incur higher costs in terms of tax planning work.

¹¹² Refer to Subsection 2.2.2 for the discussion on the measurement and conceptual issues of tax deductibility benefits.

Malaysian studies and other similar international estimates. The low tax compliance costs estimates incurred by corporate taxpayers suggest that the Malaysian tax system is comparatively less complex than those of other advanced and emerging economies. Nonetheless, due to the differences in the overall tax systems between countries, comparisons of those percentages should be interpreted with caution.

This study further investigated into the nature of CIT compliance costs in terms of tax psychological costs and tax incentives costs of corporate taxpayers. The findings exhibited that psychological costs of CIT compliance represented approximately 18 percent of the total compliance costs incurred, while the tax incentives costs only accounted for less than seven percent. The type of respondents investigated in this study, that is PLC taxpayers, might be the possible explanation for the low percentage of tax compliance costs estimates of these two sources of compliance burden. Concerning tax psychological costs, corporate taxpayers, in this study, mainly engaged external tax professionals in dealing with their tax affairs as only five percent of the respondents completely handled their tax affairs internally. Thus, the stress and anxiety in dealing with tax issues might not be prominent for PLCs as compared to other categories of taxpayers, such as individuals and unincorporated entities. Regarding compliance costs for dealing with tax incentives,¹¹³ these incentives were predominantly offered to newly established companies and therefore, were not applicable to most respondents of this study, as more than 78 percent of them have been in operation for 15 years or more. It is also observed that the larger the company size, the lower the proportion of compliance costs incurred on tax psychological and tax incentives' compliance costs.

Hypothesis 1 posited that company's compliance costs as a proportion of company's sales turnover tend to be regressive as they bear more heavily on smaller companies as compared to the larger ones. It was hypothesised that the distribution of CIT compliance costs is not fair as smaller companies bear a disproportionately heavier burden of compliance costs. Similar to findings reported in all existing studies¹¹⁴ on CIT compliance costs burden, the regressive nature of tax compliance costs were observed in this study. Larger companies were generally found to have greater total compliance costs than their smaller counterparts, but as a percentage of annual sales turnover, these costs were greater for smaller corporations. In this study, tax compliance costs estimates, as a percentage of taxable turnover, ranged from 0.001 percent to

¹¹³ Refer to Subsection 1.2.2 for the different types of incentives provided by the Malaysian tax system.

¹¹⁴ Refer to Appendix 2.1 for a tabulated summary of related studies.

0.057 percent. The lower range was generally applicable to larger PLCs while the higher range was applicable to smaller PLCs.

The findings of this study, on the regressive nature of tax compliance costs, was robust and significant when examined through the different sources of compliance costs (internal, incidental and external) and components of costs (computational and planning). Thus, Hypothesis 1 pertaining to the unfairness in the distribution of CIT compliance costs is fully supported. Furthermore, the high level of regressivity found in this study is also consistent with the findings of existing Malaysian and international studies with regards to unfairness in the CIT compliance costs burden. The relatively higher compliance costs burden incurred by smaller companies would likely impact the equity of the tax system as a whole. Regressivity of tax compliance costs in relation to size of companies might affect profitability and competitiveness of smaller companies.

7.2.2 Incidence of Tax Compliance Costs

The second research objective of this study is to determine the factors affecting the magnitude of tax compliance costs incurred by the Malaysian PLCs. Specifically, this study's second research objective is stated as follows:

“To examine the relationship between the determinants that are expected to impact the magnitude of CIT compliance costs and the compliance costs estimate.”

Theoretically, specific characteristics of companies such as business size in terms of annual sales turnover, business sector, length of time companies have been operating and estimated tax liability are expected to influence the magnitude of tax compliance costs incurred by corporate taxpayers. The findings of this study, based on correlation analyses, indicated some relationships between tax compliance costs estimates and corporate characteristics investigated in this study. These characteristics are business size, business sector, business length and tax liability. Larger companies in certain sectors such as ‘plantation & agriculture’ and ‘finance & banking’ that have been operating longer and with higher tax liability, incurred greater compliance costs. CIT compliance costs were found to be significantly affected by size of business and such a finding is consistent with the results of all prior studies (see for example Sandford et al. 1989; Pope, 1994; Ariff et al., 1997). Although the remaining corporate

characteristics (business sector, business length and estimated liability) were found to have an impact on the magnitude of CIT compliance costs, the correlations were statistically weak.

Furthermore, multiple regression analysis was utilised to identify the determinants of tax compliance costs for PLCs (Model 1). Three separate multiple regression analyses were undertaken for Model 1 to investigate the differences in response to the effects of corporate characteristics on each dependent variable in terms of internal, external and total compliance costs. Table 7.2 presents a summary of the evaluation of research hypotheses formulated in identifying the determinants of tax compliance costs for this study.

Table 7.2 Summary of Hypotheses Evaluation: Model 1

Hypotheses Statement	Outcome	Regression
H _{2a} : There is a positive relationship between company size and the level of a company's compliance costs.	Supported	Internal, External & Total Costs
H _{2b} : There is a variation between business sectors and the level of a company's compliance costs.	Not Supported	-
H _{2c} : There is a negative relationship between business length and the level of a company's compliance costs.	Not Supported	-
H _{2d} : There is a positive relationship between tax liability and the level of a company's compliance costs.	Supported	External Costs

Hypothesis 2a (**H_{2a}**) posited that there is a positive relationship between business size and the level of a company's compliance costs. The findings of this study indicated that business size significantly affected the magnitude of CIT compliance costs incurred by corporate taxpayers in all the three regression analyses undertaken, namely internal, external and total compliance costs. Thus, **H_{2a}** which hypothesised that company size as measured by company's sales turnover is a predictor of a company's compliance costs, is well supported. Larger PLCs, in terms of annual sales turnover, incur higher tax compliance costs.

Hypothesis 2b (**H_{2b}**) posited that there is a variation between business sectors and the level of a company's compliance costs. In this study, business sectors have insignificant relationships with all the three dependent variables examined. Therefore, the business sector is not a

significant predictor of PLCs' tax compliance costs burden and the finding of this study does not support **H_{2b}**.

Hypothesis 2c (**H_{2c}**) posited that there is a negative relationship between business length and the level of a company's compliance costs. In this study, business length has insignificant relationships with all the three dependent variables examined. Therefore, number of years companies have been in operation is not a significant predictor of PLCs' tax compliance costs burden. Thus, the findings of this study do not support **H_{2c}**.

Finally, Hypothesis 2d (**H_{2d}**) posited that there is a positive relationship between tax liability and the level of a company's compliance costs. Regression analysis on external tax compliance costs found a significant relationship between tax liability and compliance costs incurred by corporate taxpayers. In other words, estimated tax liability was found to be a significant predictor of PLCs' compliance costs in terms of fees paid to the external tax professionals pertaining to CIT. Thus, **H_{2d}** which predicted that there is a positive relationship between tax liability and the level of a company's compliance costs, is supported only in relation to 'External Compliance Costs'. Companies with higher estimated tax liability incurred greater external compliance costs in terms of fees paid to external tax professionals.

Overall, business size significantly affected the magnitude of CIT's internal, external and total compliance costs. A significant relationship between estimated tax liability and the level of a company's compliance costs was only observed for CIT external compliance costs. Business sectors and length of time the business has been operating were not found to have any significant influence on tax compliance costs estimates.

7.2.3 Relationship between Compliance Costs and Behaviour

The third research objective explores the link between compliance burden of the tax system and the likely compliance behaviour of PLCs. The study's third research objective is:

“To evaluate the relationship between CIT compliance costs and compliance behaviour of taxpayers”

In theory, the magnitude of tax compliance burden is expected to influence the likely compliance behaviour of corporate taxpayers. Hypothesis 3 (**H₃**) posited that there is a relationship between tax compliance costs incurred by taxpayers and their non-compliance behaviour. It was hypothesised that a reduction in tax compliance costs would lower the level of non-compliance among corporate taxpayers. The findings of this study found a positive correlation between tax compliance costs and the likely tax non-compliance behaviour. Positive associations indicated that an increase in compliance costs would possibly lead to greater non-compliance behaviours among taxpayers, although the associations between these variables were very weak. The findings of this study did not appear to support a significant association between tax compliance costs and the likely compliance behaviour, except for the mean analysis of partial non-compliance behaviour.

Three regression analyses were carried out independently for each type of non-compliance behaviour, namely under-reporting of income, over-claiming of expenses and the overall non-compliance. The results of the regression analyses undertaken found insignificant relationships between tax compliance costs and all the three types of tax non-compliance behaviour. In other words, tax compliance costs burden was not a significant predictor for under-reporting of income, over-claiming of expenses and overall non-compliance of PLCs. Thus, the findings of this study do not fully support **H₃**, which predicted that higher compliance costs would likely induce non-compliance behaviour of corporate taxpayers.

This lack of relationship is understandable as this study focused only on specific business size, namely PLCs. Based on findings of existing studies, business size was found to be a significant determinant of tax non-compliance behaviour in studies covering various types of respondents, such as small, medium and large-sized corporations, but not in studies targeting homogenous group of corporate taxpayers. The finding is similar with Rice (1992) and Abdul-Jabbar (2009) which also concentrated on a specific homogeneous business size in their studies. In contrast, Hanlon et al. (2005) covered all business sizes in a corporate tax compliance study and found significant differences in the tax compliance behaviour. It is therefore likely that a significant relationship between compliance costs and compliance behaviour would have been found in this study, if all small, medium and large corporate taxpayers had been included.

7.2.4 Determinants of Tax Non-compliance Behaviour

The fourth and final research objective of this study is to gain insights into the influence of some possible causes that impact compliance behaviour of taxpayers. It is stated as follows:

“To examine the relationship between corporate characteristics, tax attitudinal aspects and compliance behaviour of taxpayers”

The final research objective deliberated on how corporate characteristics and perceptions on tax attitudinal aspects shape the tax compliance behaviour of corporate taxpayers. In this study, the four corporate characteristics investigated were business size, business sector, business length and business tax liability, while the five tax attitudinal aspects were tax complexity, tax rate structure, tax deterrence sanctions, tax law fairness and tax psychological costs. Multiple regression analysis was utilised to identify the determinants of tax non-compliance behaviour of PLCs (Model 2). Three multiple regression analyses were carried out independently to provide a better picture on the effects of corporate characteristics and attitudinal aspects on each type of non-compliance behaviour, namely under-reporting of income, over-claiming of expenses and the overall non-compliance. Table 7.3 presents a summary of the evaluation of research hypotheses formulated to identify the determinants of tax compliance behaviour for this study.

Hypothesis 4 (**H₄**) predicted that there is a relationship between corporate characteristics and tax non-compliance behaviour. Within the three regression analyses performed, the findings indicated that business size, sector, length and tax liability had a significant relationship with the likely tax non-compliance behaviour in at least one type of non-compliance and thus, **H₄** is well supported. Length of business and tax liability had the greatest impact in influencing the non-compliance behaviour of corporate taxpayers while the business sector had the least. Business size (**H_{4a}**) is a significant determinant for under-reporting of income and overall non-compliance. It was observed that medium-sized PLCs with annual sales turnover of between MYR100 - MYR500 million were more non-compliant than small-sized PLCs ($p < 0.05$). To a lesser extent, large-sized PLCs with annual sales turnover of more than MYR500 million were also more non-compliant than the small-sized PLCs ($p < 0.10$). Business sector (**H_{4b}**) characteristic was only a significant determinant for overall non-compliance, where PLCs in the manufacturing sector were more compliant than the services sector in the overall non-compliance behaviour.

Table 7.3 Summary of Hypotheses Evaluation: Model 2

Construct	Hypotheses Statement		Outcome	Regression
Tax Compliance Costs ^a	H ₃ :	A reduction in tax compliance costs reduces the level of non-compliance among corporate income taxpayers.	Not Supported	-
Corporate Characteristics	H _{4a} :	There is a relationship between business size and non-compliance of corporate taxpayers.	Supported	<ul style="list-style-type: none"> ▪ Under-reporting of Income ▪ Overall Non-compliance
	H _{4b} :	There is a relationship between business sectors and non-compliance of corporate taxpayers.	Supported	<ul style="list-style-type: none"> ▪ Overall Non-compliance
	H _{4c} :	There is a relationship between business length and non-compliance of corporate taxpayers.	Supported	<ul style="list-style-type: none"> ▪ Under-reporting of Income, ▪ Over-claiming of Expenses ▪ Overall Non-compliance
	H _{4d} :	There is a relationship between business tax liability and non-compliance of corporate taxpayers.	Supported	<ul style="list-style-type: none"> ▪ Under-reporting of Income
Tax Attitudinal Aspects	H _{5a} :	There is a relationship between perceived tax complexity and non-compliance of corporate taxpayers.	Supported	<ul style="list-style-type: none"> ▪ Under-reporting of Income ▪ Over-claiming of Expenses ▪ Overall Non-compliance
	H _{5b} :	There is a relationship between perceived fairness in the tax rate structure and non-compliance of corporate taxpayers.	Supported	<ul style="list-style-type: none"> ▪ Under-reporting of Income
	H _{5c} :	There is a relationship between perceived tax deterrence sanctions and non-compliance of corporate taxpayers.	Supported	<ul style="list-style-type: none"> ▪ Under-reporting of Income ▪ Overall Non-compliance
	H _{5d} :	There is a relationship between perceived fairness of the tax system and non-compliance of corporate taxpayers.	Supported	<ul style="list-style-type: none"> ▪ Over-claiming of Expenses
	H _{5e} :	There is a relationship between perceived level of psychological costs and non-compliance of corporate taxpayers.	Supported	<ul style="list-style-type: none"> ▪ Under-reporting of Income ▪ Overall Non-compliance

^a Tax compliance cost is one of the predictor variables for multiple regression analysis in Model 2 and the findings are discussed in Section 7.2.3.

This study provides evidence on the significant influence of business length (**H_{4c}**) and tax liability (**H_{4d}**) on all the three types of taxpayers' non-compliance behaviour, specifically under-reporting of income, over-claiming of expenses and overall non-compliance. In terms of business length, the possibility of non-compliance decreased with the number of years the PLCs have been in operation. It is implied that companies which are in operation for a longer period were more compliant than their younger counterparts. With regards to corporate tax liability, the possibility of under-reporting of income decreased with the increase in the estimated tax liability which implied that companies with a lower tax liability were more non-compliant.

Hypothesis 5 (**H₅**) predicted that there is a relationship between tax attitudinal aspects and tax non-compliance behaviour. Within the three regression analyses performed, the findings indicated that tax complexity, tax rate structure, tax deterrence sanctions, tax law fairness and tax psychological costs had a significant relationship with the likely tax non-compliance behaviour in at least one type of non-compliance and thus, **H₅** is supported. Perceived tax complexity had the greatest impact in influencing the non-compliance behaviour of corporate taxpayers while tax rate structure and tax law fairness had the least.

Tax complexity was found to have a significant relationship with tax non-compliance behaviour for all types of non-compliance. The possibility of under-reporting of income, over-claiming of expenses and the overall non-compliance increased with higher perceptions of complexity in the tax system. Hypothesis 5a (**H_{5a}**) which predicted a relationship between perceived complexity in the tax system and tax non-compliance behaviour is well supported. The findings showed that higher perceptions on complexity surrounding the CIT systems resulted in greater non-compliance among corporate taxpayers.

Hypothesis 5b (**H_{5b}**) predicted that there is a relationship between perceived fairness in the tax rate structure and tax non-compliance behaviour. In this study, tax rate structure had a significant relationship with under-reporting of income and thus **H_{5b}** is supported. Perceived unfairness in the tax rate structure was a significant determinant for under-reporting of income. The possibility of under-reporting of income decreased with higher perceived unfairness in the tax rate structure.

Hypothesis 5c (**H_{5c}**) predicted that there is a relationship between perceptions on tax deterrence sanctions and tax non-compliance behaviour of corporate taxpayers. In this study, tax deterrence

sanctions had a significant relationship with under-reporting of income and overall non-compliance behaviour, thus **H_{5c}** is supported. Perception on tax deterrence sanctions was a significant determinant for under-reporting of income and overall non-compliance. The findings of this study also found that the possibility of non-compliance decreased with higher perceived tax deterrence sanctions. Increases in tax deterrence sanctions pertaining audit likelihood, detection likelihood and penalty severity resulted in lower non-compliance among PLCs.

Hypothesis 5d (**H_{5d}**) predicted that there is a relationship between perception of fairness in the tax system and tax non-compliance behaviour. In this study, perception of fairness had a significant relationship with over-claiming of expenses and thus **H_{5d}** is supported. Perceived fairness of the tax system was a significant determinant for over-claiming of expenses. The possibility of over-claiming of expenses increased with the higher perceptions of fairness in the tax system.

Finally, Hypothesis 5e (**H_{5e}**) predicted that there is a relationship between perceived tax psychological costs and tax non-compliance behaviour. In this study, perceptions on the level of tax psychological costs had a significant relationship with under-reporting of income and overall non-compliance behaviour, thus **H_{5e}** is supported. The findings of this study also found that the possibility of non-compliance increased with the level of tax psychological costs. Companies with higher psychological costs, in terms of stress and anxiety in meeting their compliance obligations, tended to be more non-compliant with regards to under-reporting of income and overall non-compliance behaviour.

Some findings on tax non-compliance determinants appear to be consistent with findings of existing Malaysian and international studies. For example, the impact of complexity in the tax system on tax non-compliance behaviour is mostly supported while the results of business size are mixed between studies. A possible reason for differences in research findings may be due to studies targeting different company sizes and/or adopting varying size measures. However, there is only a limited number of corporate tax compliance studies available for the comparative analyses in Malaysia and internationally. The comparative analyses of research findings between current and existing studies were covered in Chapter 6.

7.3 Contributions of this Thesis

This section addresses how the findings of this thesis can advance the existing knowledge in terms of research and practical contributions.

7.3.1 Research Contributions

This study contributes to the body of knowledge on CIT compliance costs and compliance behaviour in terms of research methodology and its findings.

First, in terms of methodology employed, a major contribution of this study hinges on the approaches in the data collection process. As opposed to most studies in the tax compliance costs and compliance behaviour area, which commonly engage postal surveys for data collection, this study used self-administered questionnaires. As the study is technical in nature, this method allowed the researcher to provide some clarification to the participants in this study with regards to certain crucial, sensitive and/or challenging questions. One example is the valuation of internal time where the fine line between income tax compliance obligations and other accounting work may not be easily understood by respondents. The self-administered survey method was also chosen because this research is based on the Malaysian environment, a country that has received little attention concerning corporate tax compliance costs and compliance behaviour studies. Referring to existing tax literature, almost all the theories and studies were developed based on western perspectives (Richardson & Sawyer, 2001). Hence, there is a possibility that the survey questionnaire may be interpreted differently by the respondents. By utilising a self-administered survey method, more accurate survey responses were derived, thus improving the validity of this study.

Second, this study also contributes to the tax literature by providing evidence utilising both corporate taxpayers' and external tax professionals' survey data. Responses from external tax professionals were sought to support the overall findings of this study. Findings from a supplementary survey of external tax professionals provided corroborative evidence on external compliance costs estimates and perceptions of corporate taxpayers' respondents. The empirical enquiries on both corporate taxpayers and external tax professionals provide distinct advancement to the compliance costs and compliance behaviour area of research. The external tax professionals' survey added richness to data and provided different context to the corporate

taxpayers survey, thereby significantly assisting the interpretations of results. The cross-validation of findings from the two surveys enhanced the level of confidence in the overall findings and provided significant contributions to the existing knowledge of tax compliance costs and compliance behaviour.

Third, with respect to the research findings, this study makes several contributions to the body of knowledge especially when one takes into consideration the very limited tax studies in the emerging economies. The main research contributions that have been established in this study are as follows:

- (i) This study is the first major attempt at quantifying the CIT compliance costs of Malaysian PLCs after the introduction of SAS. The compliance costs estimates established in this study will serve as a benchmark in which changes in compliance costs burden can be assessed in the future. In addition, this study analysed the determinants of tax compliance costs burden for corporate taxpayers.
- (ii) This study fills the gap of compliance costs estimates associated with tax incentives in tax compliance cost research. Tax incentives have not been subjected to empirical testing due to the lack of incentives offered in other tax regimes worldwide (Abdul-Manaf, Hasseldine & Hodges, 2005). Since Malaysia has numerous incentives available under the income tax legislation, this distinction would be of particular importance to future studies. Accordingly, this study contributes to the tax literature by identifying the fraction of the tax compliance costs associated with tax incentives.
- (iii) Another important contribution of this research is the findings on the psychological costs incurred in complying with tax legislation. Psychological costs are normally excluded from tax compliance costs study as they are incapable of having a reliable measurement. This study provides some insights into the psychological costs of tax compliance for corporate taxpayers. In our study, tax psychological costs, in terms of stress and anxiety, accounted for approximately 18 percent of the total compliance costs incurred by PLCs.
- (iv) Most research studies to-date have examined compliance costs separately from compliance decisions. However, none of these studies have identified the relationship between tax compliance costs and the compliance behaviour of large corporate taxpayers.

This study addresses gaps in the literature by providing empirical evidence with regards to the impact of tax compliance burden on tax non-compliance behaviour of corporate taxpayers. This study is likely to act as a point of reference for future tax studies, covering both compliance costs and compliance behaviour of corporate taxpayers.

- (v) The findings in this study not only enhance the current literature on tax compliance costs but also extend the tax compliance behaviour literature on factors influencing the likely tax non-compliance of corporate taxpayers. Specifically, this study provides empirical evaluation of the determinants of corporation's tax non-compliance behaviour, namely corporate characteristics and tax attitudinal aspects.
- (vi) While most existing studies examined factors which influence tax compliance costs and compliance behaviour in general, this study took the approach a step further by observing different sources of compliance costs (internal, external and total) and types of non-compliance behaviour (under-reporting of income, over-claiming of expenses and overall non-compliance).

The overall conclusions from this study's research findings on tax compliance cost estimates and compliance behaviour of corporate taxpayers are broadly in line with existing studies in these areas. Thus, the findings of this study add to research evidence from countries in emerging economies, which according to Ariff and Pope (2002), have weaker tax policies and structures and less transparent tax system than those in the advanced economies. In addition, this study also meets the call made by Evans (2003a) and Richardson and Sawyer (2001) in seeking more evidence from countries in emerging economies on corporate taxpayers' compliance costs burden and their reporting decisions.

7.3.2 Practical Contributions

Practically, the findings arising from this study provide valuable information on corporate tax compliance costs and behaviour, which are very beneficial for policy makers in the area of taxation, as well as to the taxation profession and the management of companies. This study contributes to the aim of providing information in order that policy decisions may be based on reliable data through robust research findings. Accordingly, the issue of compliance burden of corporate taxpayers and their compliance behaviour can now be fully acknowledged and eventually be considered as essential features for future tax policy decision-making. In addition,

this study provides feedback to the tax authorities on the need for policies that support as well as amplify the relationship between compliance costs and compliance behaviour of corporate taxpayers.

Specifically, the results of this study may enlighten the relevant bodies on the importance of tax compliance costs and their impact on compliance behaviour in providing guidelines to develop better tax policies. Most importantly, such information may assist the government, particularly the tax authorities, when planning to formulate future tax policies. The findings of this study further contribute to improving external tax professionals' awareness on the compliance costs burden incurred by their corporate tax clients and to members of professional bodies such as the Malaysian Institute of Accountants (MIA) and Chartered Tax Institute of Malaysia (CTIM). In addition, this study provides a research framework to the academic communities for tax compliance costs and compliance behaviour researchers especially in incorporating these two streams of research into a single study.

Thus, the findings arising from this study provide estimates about a typical company's tax compliance costs and behaviour, which ought to be useful for policy formulation in the area of taxation. The findings of this study may provide some directions which are relevant for the Malaysian government, in general, and the IRB, in particular, in refining the overall operations of the CIT system. Measures taken in relation to simplification of the tax system are expected to ease the burden in terms of compliance costs of CIT on taxpayers. These directions may also be relevant for other countries and in connection with other types of taxes. The following section further elaborates these directions that originated from the findings of this thesis.

7.4 Policy Implications and Recommendations

This section outlines policy implications in the context of tax compliance costs and compliance decisions of corporate taxpayers. Based on findings of this study deliberated in the preceding chapters (Chapters 4 and 5), specific policy recommendations are provided.

7.4.1 Policy Recognition of Tax Compliance Costs

The findings of this study will have implications for the tax administrators in evaluating, establishing and improving government tax policy. Robust and up-to-date estimates of the magnitude and the distribution of compliance costs for Malaysian corporate taxpayers under the SAS environment have been established. Based on these estimates of the tax compliance costs incurred by Malaysian taxpayers, researchers would then be able to reason with the government, particularly the IRB, to recognise compliance cost issues when making policy decisions.

The advancement of taxation compliance costs as a policy area consists of six phases classified as follows (Pope, 1993b, pp. 71-73):

- Phase 1 : Unrecognised and hidden with no interest in the topic area;*
- Phase 2 : Professionals' qualitative recognition;*
- Phase 3 : Estimation and evaluation;*
- Phase 4 : Policy recognition;*
- Phase 5 : Effective policy measures; and*
- Phase 6 : Continual monitoring of compliance costs.*

Referring to Pope (2003b)'s six phases, Malaysia has merely passed the first developmental phase, which is Phase 1, with some interest in the tax compliance costs issue. At present Malaysia is progressing towards Phases 2 and 3 with some recognition by professionals, as well as several completed and on-going estimation work. Academics and tax professionals have acknowledged the existence of tax compliance costs incurred by taxpayers which resulted in some awareness on this issue. Moreover, this study on tax compliance costs estimates of PLCs coupled with Abdul-Jabbar's (2009) study on SMEs and the earlier study by Loh et al. (1997) in the pre-SAS environment, have placed Malaysia in Phase 3. Findings of these studies would collectively provide a foundation for Malaysia to progress towards Phase 4 of policy recognition. According to Ariff and Pope (2002), the knowledge of tax compliance costs' relative burden to different classes of companies will provide an objective basis for policy formulation affecting business operation costs arising from compliance activities. Finally, Phases 5 and 6 will be achieved when tax compliance costs have become an important consideration in tax policy development, similar to what has been accomplished in the advanced economies (Hansford, Hasseldine & Howorth, 2003).

In Malaysia, the importance of companies, in terms of tax revenue contributions, has been evident. Corporate income tax has always represented the highest portion of revenue, either as a percentage of direct tax or federal tax revenue. For example, in 2011, CIT accounted for more than 45 percent as a percentage of direct tax revenue and 34 percent of the federal tax revenue. This proportion of CIT to federal tax revenue was maintained at around 32 to 54 percent between the years 2003 to 2011 (Economic Report, various years). Unfortunately, the issue of compliance burden incurred by corporate taxpayers is yet to be explicitly recognised. Evidence regarding tax compliance costs derived from a number of empirical studies would provide an overall picture on the compliance burden faced by Malaysian corporate taxpayers. This information would be useful in convincing the policy makers on the need for a specific policy on tax compliance costs. A similar approach has been used in most advanced economies for such purpose and compliance costs have become an integral part in their tax policy process.

Sandford et al. (1989, p. 209) emphasised the need for recognising tax compliance costs as policy issues by highlighting four criteria that governments should consider: (i) to recognise the importance of compliance costs explicitly; (ii) not to reduce the administrative costs at the expense of compliance costs; (iii) to minimise compliance costs and (iv) to compensate for compliance costs. The Malaysian tax authority has acknowledged tax compliance costs to a certain extent by introducing tax simplification measures to lessen the compliance burden of taxpayers. Some of the initiatives undertaken by IRB include establishing a business support unit to educate small businessman on handling their tax affairs and a one-stop solution centre addressing taxpayer concerns. The IRB has further introduced taxpayers' education and awareness programmes.¹¹⁵ These initiatives and simplification measures indicate some acknowledgement on the importance of taxpayers' compliance costs by the tax authorities. The IRB, however, has yet to formulate a specific policy that would acknowledge and address these burdens explicitly at the national level.

The results of this study illuminate the importance of having an analysis on the impact of changes in the tax law to the compliance burden of taxpayers. There is a need for periodic assessment of compliance costs as an integral element of the tax policy review, so that policy information may be built from objective and factual evidence. The common procedure of tax

¹¹⁵ These programmes are designed to ensure that taxpayers are able to understand taxation laws and regulations, keep documents and activity records, complete tax returns and also aware of their rights and responsibilities without requiring the assistance of tax practitioners or agents, which may increase compliance costs (IRB Annual Report, 2002).

authorities in advanced economies such as Australia and the UK is that all substantial modification to the tax legislation must be accompanied by an evaluation report on compliance costs assessments.

Further, policy makers should consider preparing a tax impact statement (TIS) when there are any tax reforms or changes, particularly to companies. Similar with what has been implemented in the Organisation for Economic Co-operation and Development (OECD) countries, it is vital to undertake an impact analysis of taxpayers' burden due to changes in the tax system (Evans & Walpole, 1999). Therefore, when Malaysia introduces GST, it should be accompanied by a TIS on the additional compliance burden imposed on taxpayers.

Currently in Malaysia, not much is known about the extent to which the tax authority, the accounting and taxation professions and PLC-related organisations have recognised the importance of compliance costs to corporate taxpayers. In ensuring minimal tax compliance costs of taxpayers, an explicit acknowledgement of the burden is essential for policy consideration. This study reinforces Pope and Abdul-Jabbar (2008)'s call for an establishment of a national investigative committee to carry out a comprehensive review of the tax system in Malaysia akin to the Beddall Committee in Australia and the O'Donnell Committee in the UK. The proposed committee should consider the modern tax administrative features outlined by Hasseldine (2008) which include concern over cost efficiency and effectiveness, engagement with stakeholders and factors that influence the behaviour of both taxpayers and tax professionals. Ultimately, policy makers in Malaysia should recognise and incorporate tax compliance costs' consideration in their decision-making process. These findings would also be relevant for policy interest in neighbouring Southeast Asian countries, and/or for ASEAN countries.

7.4.2 Tax Simplification and Compliance Costs Minimisation

The high costs of compliance, indicating a complex tax system (Slemrod, 1992; Pope, 1993a) and tax complexity are 'mirror images' of tax simplicity (Tran-Nam, 1999). According to Pope (1992, 1993a), tax simplification measures are likely to minimise tax compliance costs and ensure higher tax revenue. Moreover, Kasipillai (2005, p. 26) highlighted that tax law should be systematically simplified in order to reduce tax compliance costs, tax administrative costs and uncertainty faced by taxpayers due to tax complexity, along with enhancing voluntary

compliance. It is evident from the findings of this study that the perceptions on complexity in the tax system considerably impact the likely non-compliance behaviour of corporate taxpayers in terms of under-reporting of income, over-claiming of expenses and overall non-compliance.

The findings of this study also found a decrease in tax compliance costs under the SAS and this is partly due to the simplification of the tax system. Therefore, the issue of tax complexity and areas for consideration through income tax simplification for corporate PLCs need to be addressed in order to reduce compliance costs burden and improve voluntary tax compliance of corporate taxpayers. For example, in 2010, the Australian Taxation Office (ATO) published a booklet on 'Large Business and Tax Compliance' as an effort to provide practical certainty in complying with tax laws, supporting voluntary compliance and reducing compliance costs of large corporate taxpayers.

In Malaysia, various tax simplification measures have been introduced since the introduction of SAS, mainly derived from international best practices. The move from an imputation tax system to a single tier system is one example of income tax reform for companies which have reduced compliance requirements of corporate taxpayers. Under the single tier system, companies are no longer required to maintain Section 108 balances which previously imposed tremendous compliance burden for corporate taxpayers. Nevertheless, the Malaysian government tends to adopt an incremental approach as opposed to a package approach for the process of tax simplification.¹¹⁶ According to Kasipillai (2007), the incremental approach is embraced as such a move does not involve drastic changes that may "upset" taxpayers. However, constant changes to the tax legislation and ad hoc simplification programmes may instead lead to further complexities in the tax system. A package approach, with comprehensive and well-conceived initiatives, is required for the simplification measures to be more effective (Sandford, 1993).

Moreover, most of the simplification initiatives undertaken so far, such as the IRB education and awareness programmes, only target certain groups of taxpayers especially the individuals and small businesses as well as focus mainly on the accuracy of tax computation and taxpayers' statutory obligations. Future measures should also take into consideration issues facing large corporate taxpayers and to educate them in terms of their social, moral and legal obligations in relation to tax compliance.

¹¹⁶ The former includes a sequence of small tax changes while the latter is a major change that could revolutionize a tax system (Kasipillai, 2007).

Future tax simplification measures should also consider experiences from other tax regimes, both in the advanced and emerging economies, as well as findings and suggestions made by the current and existing research studies. For example, Ariff et al.'s (1995, 1997) studies on CIT in Singapore indicated considerable reduction of overall compliance costs for large companies through IRAS measures in simplifying the completion and lodgement of tax returns.¹¹⁷

Respondents of this study also provided various suggestions on reducing tax compliance costs of companies through tax simplification.¹¹⁸ The main concerns of both the corporate taxpayers and external tax professionals on simplification of the tax system are with regard to tax estimation and increasing number of public rulings administered by the IRB.

With regards to advanced tax estimates, respondents often request for more flexibility or even abolishment of tax estimation requirement as it creates a lot of paperwork where a slight mistake will elicit inevitable penalty. As highlighted by survey respondents, it is unfair to impose punitive penalties even on an immaterial amount of under-estimated CIT. Provisions pertaining to penalties on under-estimation are being implemented to a great extent on all taxpayers, despite the fact that they should be aimed at the adamant, intentional non-compliant taxpayer. As argued by Yesegat (2009), exercising strict penalty provisions rather than taxpayers' education may result in negative implications on the attitudes of taxpayers beyond its deterrence effect.

Concerning the large number of public rulings issued, Pope and Abdul-Jabbar (2007) recommended for the issuance of private rulings instead, as what has been practiced in countries in advanced economies.¹¹⁹ According to Crist (2004), the right to request for a private ruling particularly for specific tax issues would be a better measure than a public ruling. The Malaysian government has started issuing private rulings but the imposition of this fee is burdensome for taxpayers. Pope and Abdul-Jabbar (2007) have proposed a waiver of this fee similar to what is available in Australia. Respondents of this study were also concerned about conflicting interpretations of the public rulings and related judicial decisions. Hence, they called

¹¹⁷ IRAS denotes Inland Revenue Authority of Singapore and the measures include increased automation, enhanced tax publications and improved taxpayers' services.

¹¹⁸ Respondents (corporate taxpayers and external tax professionals) provide suggestions on how to reduce the tax compliance costs of corporate taxpayers through an open-ended question (refer to Subsections 4.6.3 and 4.7.7, respectively).

¹¹⁹ For example in Australia, private rulings are issued by the tax authorities upon request by a taxpayer and these rulings only apply to the applicant taxpayer specific cases (Scolaro, 2006).

for the IRB to release lesser number of public rulings and instead furnish more examples in each public ruling issued in order to ensure clear and consistent applications of tax rules and regulations for taxpayers.

Although embedded in almost all tax reform proposals in various tax jurisdictions, tax simplification, on its own, may not necessarily lower compliance costs of taxpayers. There are some empirical pieces of evidence exhibiting that compliance cost increases with tax simplification¹²⁰ and despite noticeable simplicity of certain tax jurisdiction, the compliance costs incurred is greater than other countries.¹²¹ Therefore, apart from tax simplification, well designed tax legislation and good tax administration must also be feasible to ensure minimal compliance costs and to enhance voluntary compliance.¹²²

7.4.3 Features of the Tax System

There are a number of features in the CIT system that may affect the compliance costs, compliance decisions and overall tax administration in Malaysia. Some of the features that are within the control of the Malaysian tax authorities, include the tax administration aspects, such as education and taxpayer services, along with the tax design aspects such as tax exemptions and incentives. In this context, based on the analysis of findings in the preceding chapters, the following measures are laid out from the perspective of lowering compliance costs and non-compliance of taxpayers.

- (i) Enhancing education and training programmes for taxpayers are worth considering. Specifically, corporate taxpayers suggested the need for IRB to educate taxpayers especially on the new e-filing system and to ensure a user-friendly system. The external tax professionals' respondents called for more competent and accountable tax officers in terms of their capabilities and professionalism.

¹²⁰ Blumenthal and Slemrod (1992) compared data from studies administered in 1982 and 1989, uncovered an upward trend of tax compliance costs with tax simplification.

¹²¹ For example, Hong Kong with a unique tax regime of flat tax rate and imposes tax on territorial basis (Ariff & Pope, 2002).

¹²² For further discussion on this issue, see: Rimmer and Wilson (1996) and Ariff and Pope (2002). Rimmer and Wilson (1996) focuses on well designed and managed tax regulation as taxpayers feel poorly informed about regulatory change. Ariff and Pope (2002) suggested modernization of tax administration and taxpayer-friendly systems in order to reduce tax avoidance, corruption and compliance costs.

- (ii) More clarity of the tax legislation and transparencies on the implementations of tax laws were also suggested. Among others, external tax professionals pointed out the lack of accountability and transparency in tax administration matters and ambiguous terminology of the tax legislations. Concerning audit and investigation process, a more transparent interpretation of the law and a more lenient treatment for minor and unintentional errors were requested by respondents.
- (iii) The respondents also suggested for deductibility of tax related expenses in computing chargeable income of a corporation, as the amount is incurred in complying with income tax law. Fees of external tax professionals are deductible expenses in almost all advanced economies as taxpayers are carrying out their statutory compliance obligations for the government.
- (iv) Simplification of tax incentive requirements for corporations would permit corporations to devote greater resources and efforts to carry out and expand their business. This would involve a reduction in the length of tax related forms, accompanying supporting documents and the number of mutually exclusive incentives offered.¹²³
- (v) Both corporate taxpayers and external tax professionals suggested the need to align tax with accounting rules. Convergence of tax law with accounting standards and practices would reduce discrepancy and tax adjustments, which in turn would reduce significantly the compliance burden of taxpayers.
- (vi) Finally, the respondents have suggested that compliance behaviour of corporate taxpayers could be further improved by enhancing taxpayers' positive attitudes towards complexity in the tax system. Apart from tax simplifications, the IRB should consider improving its public relations strategies and developing a more comprehensive taxpayers' charter, as has been practiced in most advanced economies.

¹²³ In this study, tax incentives are responsible for a maximum of 20 percent of internal and 30 percent of external compliance costs of PLCs (see Table 4.24). As PLCs are normally matured companies which have been in operation for more than 10 years (see Table 3.12), it is therefore expected that tax incentives compliance requirement are a major source of compliance costs for younger companies.

7.5 Research Limitations

This study has empirically estimated tax compliance costs and assessed the impact on tax compliance behaviour. The findings of this study have contributed to the body of knowledge on tax compliance costs and compliance behaviour issues in the context of CIT. However, as a piece of research, this study is not without its limitations and many of them represent opportunities for future research.

(i) Sample size

This study obtained a usable response rate of 20.7 percent (98 responses) via the corporate taxpayers' survey and a 24.5 percent (49 responses) via a supplementary external tax professionals' survey. The responses received are considered adequate for multiple regression analyses and are representative of the sample's industry sectors of the Malaysian PLCs' population. Comparatively, prior studies in the area of tax compliance costs and compliance behaviour also appear to have reported low response rates.¹²⁴ Nevertheless, in order for the findings of this study to be more representative, a larger sample size would have been desirable. As a result of the relatively small sample size and the exclusion of unlisted companies, the generalisability of the findings is limited. Furthermore, as a self-administered data collection method was employed, the availability of time and financial resources limit the number of companies surveyed. However, the accessibility, validity and diversity of business sectors were a positive factor helping to balance any sample size limitation.

(ii) Participants of this study

In this study, corporation tax attitudes and their compliance behaviour were measured from the managerial or respondent's perspectives. As the respondents were persons, not the company itself, they might not necessarily represent the attitudes and behaviour of the PLCs being studied. In order to pursue this area of study, especially in Malaysia, the alternative way to proceed would be by capturing the views of each company's tax professionals who are handling corporate tax activities of the respective companies. Furthermore, corporate tax computations and returns are mostly conducted and lodged by external tax professionals on behalf of their

¹²⁴ Broadly as comparisons, response rates of about 16 to 21 percent in corporate tax compliance costs studies and around 14 to 26 percent in a number of Asian tax studies (Abdul-Jabbar, 2009).

corporate tax clients. As such, it should be acknowledged that this challenge is one of the limitations of this study.

(iii) Corporate Taxpayers and External tax professionals sample

The use of 'Malaysian Top 500 Largest Listed Corporations 2008-2009' published directory and exclusion of companies in Eastern Malaysia, results in bias in findings towards large companies in the Peninsular Malaysia. With regards to the external tax professionals sample, a limited quantity of data was used in the statistical analysis, as the number of responses was quite low (49 responses). Thus, comparability of findings between the corporate taxpayers' and external tax professionals' surveys is considered as tentative.

(iv) Measurement issues

One of the main tax compliance costs component is the internal time spent in complying with the tax law by different categories of staff. The respondents would need to recall their monthly average time spent for all the relevant staff categories. There is a possibility that respondents were not able to accurately recall the time spent. Thus, it should be acknowledged that tax compliance costs estimates are merely a measure of the magnitude and not the actual amount incurred. Another limitation is the use of hypothetical tax scenarios in this study in determining taxpayers' compliance behaviour. It is recognised that the actual judgement of the respondents may vary and the findings would considerably depend on their honesty.

(v) Comparative analysis

A final limitation is regarding comparative analysis of the compliance costs estimate with other tax jurisdictions. Country-to-country comparisons should be interpreted with caution due to variances, such as level of development of the nation's tax structures and income tax design features. Specifically, for tax compliance costs studies, differences in methods adopted to value the internal staff time, representativeness of estimates and the year studied should be taken into account. Thus, the findings have to be interpreted with caution and used as suggestive, instead of conclusive recommendations.

7.6 Future Research Directions

Given the findings, observations and limitations of this study, there are several avenues for future research directions.

- (i) This thesis focused on compliance costs and compliance behaviour of CIT from the large corporate taxpayers' perspective.¹²⁵ The applicability of the findings in connection with other types of taxes, such as personal income tax and indirect taxes in the Malaysian context, remains untapped. The scope of this research can also be extended to cover different types of taxpayers who have not been examined, such as the individuals, self-employed persons and partnerships. Future studies may also consider GST if and when it is introduced in Malaysia to capture the initial commencement costs incurred by taxpayers. Another possible extension is to investigate whether tax compliance costs and compliance behaviour of large corporate taxpayers differ significantly by factors such as audited and non-audited taxpayers, foreign ownership, public or private companies and/or multi-nationality. These extensions are feasible with a larger sample of companies than the one used in this study and/or through collaboration with IRB. Studies regarding corporate taxpayers' compliance costs and compliance behaviour are complicated and challenging, thus cooperation and support from the IRB, for example, through the availability of tax audit data, would further improve studies in this area.
- (ii) This study on tax compliance costs and compliance behaviour is based on self-administered questionnaire survey responses of corporate taxpayers and external tax professionals. Future research should consider conducting in-depth interviews and/or experiments with these two types of respondents. Research utilising these approaches can be a good complement to large-scale surveys as they are useful in providing a deeper understanding and explanation on the relationship between variables. The use of case studies may provide better quality responses to some issues of interest, including investigation on the measures to reduce tax compliance costs and assessing the impact of reducing compliance costs on compliance decisions. It would also be valuable to gain the views of other stakeholders, especially the tax authorities, on the various aspects of tax compliance costs and compliance behaviour addressed in this study. Likewise, future

¹²⁵ Due to data availability, this study examined the PLCs population (refer to Section 3.4).

studies may consider the use of an experimental method where non-compliance behaviour of taxpayers is measured through a controlled experiment (see Trivedi et al., 2005).

- (iii) The surveys for this study used two types of hypothetical tax scenarios in measuring compliance behaviour, specifically under-reporting of income and over-claiming of expenses. Future studies may consider other specific types of non-compliance behaviour such as failure to submit a tax return and/or failure to remit taxes by due date (see Baldry & Kasipillai, 1996). Researchers could also consider employing IRB tax audit research data similar to studies of US corporations (see Rice, 1992; Joulfaian, 2000; Hanlon et al., 2005). These studies measured “actual” non-compliance by employing the IRS reported data, especially the Taxpayer Compliance Measurement Program. The use of government data, however, requires full cooperation from the IRB as the information is not publicly available due to data confidentiality.
- (iv) One of IRB’s main objectives under SAS is to collect taxes with nominal administrative cost to the tax authorities along with minimal compliance costs burden on taxpayers. Tax compliance cost literatures have discussed at great length on the transferability of tax administration costs to the compliance costs incurred by taxpayers (see Sandford et al., 1989 & Tran-Nam et al., 2000). The argument is basically not to minimise the administrative costs at the expense of taxpayers’ compliance costs, as the IRB may shift some of their administrative burden to taxpayers through the implementation of SAS. Future studies should consider estimating tax administrative costs in Malaysia to compare with compliance costs burden of taxpayers and to establish the total operating costs of CIT system in Malaysia.
- (v) Finally, findings of this study provide important elements for future tax policy decision making in Malaysia and in the emerging economies generally, where tax studies are very limited. Nonetheless, the findings of this study provide initial evidence pertaining to compliance costs and compliance behaviour in the context of Malaysian PLCs. Future studies should explore the feasibility of replicating or extending this study in other tax jurisdictions, perhaps through collaborations with researchers of the respective countries. Comparative studies with other emerging and advanced economies, especially with our neighbouring countries like Thailand and Indonesia, could make further contributions to corporate tax knowledge, tax administration and practices. Research in countries that have

yet to administer similar studies are very much needed as the findings can provide more evidence on the importance of tax compliance costs and compliance behaviour.

7.7 Conclusions

Dealing with taxation matters, particularly in the emerging economies, remains a challenge due to issues such as limited awareness, administrative flaws and lack of government commitment. This study has systematically identified and analysed the areas that deserve due attention focusing in this case, on the tax compliance costs and compliance behaviour of corporate taxpayers. To this end, it is believed that the findings of this thesis have made a valuable contribution to the relevant body of knowledge, as well as to the tax policy makers in devising specific measures to minimise taxpayers' compliance costs burden and enhance their voluntary compliance. Future tax initiatives should incorporate research findings and suggestions made in this study and existing studies as well as experiences from other tax regimes both in the advanced and emerging economies.

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APPENDICES

Appendix 2.1

Summary of Major Tax Compliance Costs Studies on Corporate Income Taxation

No.	1. Author(s) (Year) 2. Title/Purpose 3. Source	1. Subject 2. Country 3. Year(s) Studied	1. Method 2. Sampling Frame 3. Response (Rate)	Finding(s) and Limitation(s)
1	1. Haig (1935) 2. The Cost to Business Concerns of Compliance with Tax Laws 3. Management Review	1. Incorporated businesses 2. USA 3. 1934	1. Mail survey 2. 1600 members of American Management Association 3. 163 (10%)	<ul style="list-style-type: none"> TCC was 2.3% of tax liability for all Federal and State taxes (9.5% CIT). Trade off between compliance and administrative costs. Costs related to number of states in which corporation traded. Studies conducted during the depth of depression where CIT revenue were abnormally low, distorting the ratios of compliance costs to tax liabilities. Poor response rate, large firms and manufacturers over-represented.
2	1. Sandford, Godwin & Hardwick (1989) 2. Administrative and Compliance Costs of Taxation, 3. Bath, UK: Fiscal Publications.	1. Corporation 2. UK 3. 1986-1987	1. Mail survey 2. 3,000 businesses (sample from IRB) 3. 680 (24%)	<ul style="list-style-type: none"> TCCs of CIT were £300m (2.22% of revenue yield). Around 50% of TCCs were external fees to advisers. Regressive: TCCs ranged from 0.48% of taxable turnover for the smallest firms to 0.01% for the largest. CFBs exceeded compliance costs as large firms gained from improved cash flow (NCCs: 0.98% of revenue). Poor response rate due to long and complex questionnaire.
3	1. Pope & Fayle (1991) 2. The Compliance Costs of Public Companies' Income Taxation in Australia 1986/87: Empirical Results 3. Australian Tax Forum	1. Public companies 2. Australia 3. 1988	1. Mail survey 2. 1,837 PLCs 3. 298 (16%)	<ul style="list-style-type: none"> Gross TCCs were between AUD646m and AUD1.341m (11.4% to 23.7% of public companies' tax revenue). Mean compliance costs of AUD271,694 per company and regressive. Computational costs 55% and planning costs 45%. Focused on client and preparer related items. Not supported by ATO and low response rate.
4	1. Sandford & Hasseldine (1992) 2. The Compliance Costs of Business Taxes in New Zealand 3. Institute of Policy Studies, Wellington	1. Businesses 2. New Zealand 3. 1990-91	1. Mail surveys 2. 9,541 businesses; (sample from IRD) 3. 2,594 (31%)	<ul style="list-style-type: none"> TCC was 2.5% of GDP for all taxes studied. Regressive: Cost/business income ratio: less than NZD30,00013.4; more than NZD50m: 0.03. Simpler tax procedures are associated with lower compliance costs. Compliance costs are 5 times IRD administration costs; particularly high for small firms. Comprehensive study on all business taxes and TCCs for corporations was not reported.

No.	1. Author(s) (Year) 2. Title/Purpose 3. Source	1. Subject 2. Country 3. Year(s) Studied	1. Method 2. Sampling Frame 3. Response (Rate)	Finding(s) and Limitation(s)
5	1. Pope, Fayle & Chen (1994) 2. The Compliance Costs of Companies' Income Tax in Australia 3. Australian Tax Research Foundation, Sydney	1. Companies 2. Australian 3. 1990- 1991	1. Mail survey 2. 2531 corporations 3. 571 (23%)	<ul style="list-style-type: none"> Gross TCCs were between AUD3,245.9m or 22.9% of corporate tax revenue. CFBs were AUD1,194m or 8.4% of corporate tax revenue. NCCs were AUD2,052m or 14.5% of corporate tax revenue. Regressive. Not supported by ATO, bias cover letter, no validation of accuracy.
6	1. Ariff, Loh & Talib (1995) 2. Compliance Costs of Corporate Income Tax in Singapore 3. Accounting Research Journal	1. Listed companies 2. Singapore 3. 1994	1. Mail survey 2. 200 Singapore Stock Exchange Listed Corporate Taxpayers 3. 65 (33%)	<ul style="list-style-type: none"> Mean compliance costs of SGN78,396 per listed company. Higher proportion of external costs (58%). The computational-planning portion is almost equal. Compliance costs were "reasonable" compared to other countries. Regressive.
7	1. Slemrod & Blumenthal (1996) 2. The Income Tax Compliance Cost of Big Business 3. Public Finance Review	1. Largest US Corporations 2. USA 3. 1992	1. Mail survey 2. 1,329 corporations 3. 365 (27%)	<ul style="list-style-type: none"> The aggregate costs for all 1329 companies estimated to be USD2.08b (3.2% of revenue yield). Mean compliance costs of USD1.57m per company. The state ratio (5.6%) is higher than the federal (2.6%), reflecting non-uniformity of state tax systems. Tax reform Act 1986 increased compliance costs. Limited to largest corporations and covers post filing costs.
8	1. KPMG (1996) 2. Tax Simplification: A Survey of UK Listed Companies 3. KPMG London (as cited in Evans, 2003a)	1. UK listed company 2. UK 3. 1996	1. Mail survey 2. 1,200 companies 3. 266 (22%)	<ul style="list-style-type: none"> TCC for UK listed companies was approximately £265m. TCC have increased by 33.6% for the period of 1991-96. Main factors were complex, uncertain and badly drafted legislation.

No.	1. Author(s) (Year) 2. Title/Purpose 3. Source	1. Subject 2. Country 3. Year(s) Studied	1. Method 2. Sampling Frame 3. Response (Rate)	Finding(s) and Limitation(s)
9	1. Evans, Ritchie, Tran-Nam, & Walpole (1997) 2. A Report into Taxpayer Costs of Compliance 3. Australian Government Publishing Service, Canberra.	1. Business taxpayers 2. Australia 3. 1994-5	1. Mail survey 2. 7,496 businesses 3. 2,464 (33%)	<ul style="list-style-type: none"> ▪ SCC for business taxpayers: AUD8,874m, or 17.90% of tax revenue, 1.95% of GDP. ▪ TCC for business taxpayers: AUD4,647m, or 9.3% of tax revenue and 1.02% of GDP. ▪ Comprehensive study on all business taxes.
10	1. Slemrod (1997) 2. Measuring Taxpayer Burden and Attitudes for Large Corporations 3. Office of Tax Policy Research	1. Largest US Corporations 2. USA 3. 1996	1. Mail survey 2. 1,697 Corporations 3. 309 (18%)	<ul style="list-style-type: none"> ▪ Mean compliance costs of USD1.90m per company. ▪ In real terms the estimate in 1996 was 8.1% higher than the 1992 estimates.
11	1. Ariff, Ismail & Loh (1997) 2. Compliance Costs of Corporate Income Tax in Singapore 3. Journal of Business Finance and Accounting	1. Singapore Stock Exchange 2. Singapore 3. 1995	1. Mail survey 2. 234 listed companies 3. 62 (26%)	<ul style="list-style-type: none"> ▪ Reduction in mean compliance costs to SGN54,615 per listed company as compared to the 1995's study. ▪ The lower compliance costs estimates of larger firms were as a result of simplification. ▪ The reduction was due to lower computational costs.
12	1. Loh, Ariff, Ismail, Shamsher, & Ali (1997) 2. Compliance Costs of Corporate Taxation in Malaysia 3. Pacific Accounting Review	1. Kuala Lumpur Stock Exchange 2. Malaysia 3. 1997	1. Postal survey 2. 300 PLCs 3. 80 (27%)/ Usable 48 (16%)	<ul style="list-style-type: none"> ▪ Mean compliance costs of MYR68,836 per company. ▪ Compliance costs were regressive. ▪ Computational and planning costs ratio of 61:39. ▪ 72% of TCC was paid to external tax advisers.

No.	1. Author(s) (Year) 2. Title/Purpose 3. Source	1. Subject 2. Country 3. Year(s) Studied	1. Method 2. Sampling Frame 3. Response (Rate)	Finding(s) and Limitation(s)
13	1. Erard (1997) 2. The Income Tax Compliance Burden on Canadian Big Business 3. Working Paper for the Technical Committee on Business Taxation, Department of Finance, Ottawa	1. Large Canadian corporations 2. Canada 3. 1995	1. Mail survey 2. 250 firms members of Tax Executive Institute 3. 59 (24%)	<ul style="list-style-type: none"> ▪ TCC of top 500 corporations were CAD250m, between 4.6% and 4.9% of revenue yield; 0.03% of gross receipts. ▪ Mean compliance costs of CAD507,000 per company. ▪ Regressive. ▪ Natural resources sector incurs higher costs. ▪ Costs increase with the number of provinces and foreign operations. ▪ Covered big Businesses.
14	1. Plamondon & Zussman (1998) 2. The Compliance Costs of Canada's Major Tax Systems and the Impact of Single Administration 3. Canadian Tax Journal	1. Canadian business taxpayers 2. Canada 3. 1996	1. Panel discussions & telephone 2. n/a. 3. n/a.	<ul style="list-style-type: none"> ▪ TCC of Canada's major tax systems was approximately CAD3.4b a year. ▪ 0.4% of GDP or 1.5% of tax revenue. ▪ Include all Canadian business taxes (Sales tax, CIT, Payroll taxes, Excise taxes). ▪ A single tax administration would reduce annual compliance costs by between CAD171m and CAD285m.
16	1. Chan, Cheung, Ariff & Loh (1999) 2. Compliance Costs of Corporate Taxation in Hong Kong 3. International Tax Journal	1. Hong Kong Stock Exchange 2. Hong Kong 3. 1995-96	1. Mail survey 2. 496 listed companies 3. 75 (15%)	<ul style="list-style-type: none"> ▪ Mean compliance costs of HKD346,483 per company. ▪ Established a positive relationship between company size & compliance costs & regressive. ▪ A large portion of compliance costs are related to external tax fees (70%). ▪ Average compliance costs were relatively high compared to Singapore and Australia mainly due to low administrative costs, difficulties with territorial source basis & higher level of external costs. ▪ No major industry variations in patterns of compliance costs

No.	1. Author(s) (Year) 2. Title/Purpose 3. Source	1. Subject 2. Country 3. Year(s) Studied	1. Method 2. Sampling Frame 3. Response (Rate)	Finding(s) and Limitation(s)
17	1. Bertolucci (2002). 2. The Compliance Costs of Taxation in Brazil: A Survey of Costs in Brazilian Public 3. University of Sao Paulo, Unpublished Thesis.	1. Brazilian public companies 2. Brazil 3. 1999	1. Mail and e-mail surveys 2. 211 listed companies 3. 25 (12%)	<ul style="list-style-type: none"> TCC were RUSD7.2b, or 0.75% of GDP. Highly regressive. Internal compliance costs approximately 80% of all costs.
18	1. Slemrod & Venkatesh (2002) 2. The Income Tax Compliance Costs of large and Mid-Size Business 3. A report to the IRS Large and Mid-Size Business Division	1. Corporations and tax advisers 2. USA 3. 2001	1. Mail survey 2. 2,499 large and mid-sized businesses 3. 225 (9%)	<ul style="list-style-type: none"> TCC in aggregate were between USD21b and USD22.3b or between 28% & 29.6% of tax revenue. Mean compliance costs of USD254,451 per company & regressive. Compliance costs of corporations required to file as "non-US corporations" were, on average, higher than for other similar sized corporations. Compliance costs of firms in the media, communications and technology industry had the highest average total compliance costs and those in the retail, food and healthcare group had the lowest average amount. 75% of mean compliance costs comprised of internal costs. Internal compliance activities: 38.8% pre-filing, 50% filing and 11.2% post filing.
19	1. Chattopadhyay & Das-Gupta (2002) 2. The Income Tax Compliance Costs of Indian Corporations 3. New Delhi: National Institute of Public Finance and Policy (NIPFP).	1. Companies 2. India 3. 2000-2001	1. Mail survey 2. 3,913 companies 3. 45 (1%)	<ul style="list-style-type: none"> Gross TCC around 5.6% to 14.5% of corporate tax revenues. Net TCC were expected to be decreased/increased between - 0.7% and + 0.6% of corporate tax revenues.

No.	1. Author(s) (Year) 2. Title/Purpose 3. Source	1. Subject 2. Country 3. Year(s) Studied	1. Method 2. Sampling Frame 3. Response (Rate)	Finding(s) and Limitation(s)
20	1. Klun (2004) 2. Taxation Compliance Costs for Companies in Slovenia. 3. Economic and Business Review for Central and South- Eastern Europe	1. Companies 2. Slovenia 3. 2002	1. Mail survey and interview 2. 200 Companies 3. 126 (64%)	<ul style="list-style-type: none"> Mean compliance costs of SIT 1.5m per company; 4.2% of tax revenue; 1.0 percent of GDP. The compliance costs represented by: CIT (23%), VAT (67%) and Payroll (10%).
21	1. Blazic (2004) 2. Tax Compliance Costs of Companies in Croatia. 3. Ekonomický časopis	1. Companies 2. Croatia 3. 2001/2002	1. Interview survey 2. 1200 Companies 3. 339 (28%)	<ul style="list-style-type: none"> TCC in aggregate level was HRK2,038.6m representing around 1.2 percent of GDP. Mean compliance costs of HRK27,113m per company; 11.76% of tax revenue.
22	1. Abdul-Jabbar, H. (2009). 2. Income tax non-compliance of small and medium enterprises in Malaysia: Determinants and tax compliance costs 3. Unpublished doctoral dissertation, Curtin University of Technology	1. Corporate SMEs 2. Malaysia 3. 2006	1. Postal survey 2. 1,300 corporate SMEs 3. 175 (15.7%)	<ul style="list-style-type: none"> Mean compliance costs of MYR9,295 per company. TCC of SMEs under SAS decreases by 58%. TCC in aggregate level were MYR1,084m. Computational and planning costs ratio of 74:26. 41% of TCC was paid to external tax advisers. The offsetting benefits was approximately 18% of TCC

Sources: Compiled by authors

Note:

1. CIT: Corporate Income Tax, IRD: Inland Revenue Department, TCC: Tax Compliance Costs, TCB: Tax Compliance Benefits, NCC: Net Compliance Costs
2. Regressive: TCCs as a percentage of business income are smaller for larger firms; total compliance costs as a percentage of sales turnover decreases as company size increases.

Appendix 3.1

Questionnaire: Corporate Taxpayers

Compliance Costs of Taxation Taxpayer Survey



MONASH University
SCHOOL OF BUSINESS



Faculty of Business & Accountancy

Confidentiality

The views expressed in the completed questionnaire will be treated in the strictest confidence. Any information identifying the respondents will not be



TABLE OF CONTENTS

Section A: Internal Tax Compliance Costs

This section refers to the cost of compliance incurred within your company, both inside and outside the company's tax department, over the 12 month period. If you completely outsource all accounting and tax-related activities, please proceed to **Section B**.

For your convenience, we outline below what we consider to be components of the tax compliance cost.

The time and cost **should include**:

- The amount spent collecting and processing information needed to process income tax returns.
- The amount spent on amended returns and other related activity even though these activities refer to prior-year returns.
- The amount spent on any activities relating income taxes for example staff training.

The time and cost **should not include**:

- The cost of activities that would be conducted if the tax system did not exist. For example, the time and cost of preparing a balance sheet should not be reflected.
- The time and effort involved in dealing with matters not related to the Corporate Income Tax. For example sales tax and services tax.

For the purpose of this survey only, qualification costs for government incentives provided through the tax system refers to the costs incurred to secure tax incentives provided under the Income Tax Act, 1967. It includes reinvestment allowance, approved service projects, operational headquarters, foreign fund management companies and double deduction.

Section B: External Tax Compliance Costs

This section asks for information about the cost of having a tax professional to prepare your business income tax return. Please note that if your company has an internal tax department that handles all tax matters, and if you incur NO costs to any outside firms, please proceed to **Section C**.

Please note that while the external firm might handle more than just the preparing of tax returns for your company, we would like information only about the time and cost of complying with the corporate income tax.

Section C: Perceptions and Opinions

This section requests for your perceptions and opinions on tax compliance issues. Most of the questions require your view or opinion measured on a six-point scale.

Section D: General Information and Suggestions

This section refers to questions on general information and overall issues on tax compliance burden faced by companies. This section will help us understand the nature and scope of the tax compliance costs. Your answer to the questions in this section will help us identify our survey population better and enable us to answer question such as:

- Do some industries face higher compliance cost than others?
- Are these particular characteristics of businesses that cause them to have more complex tax return?

SURVEY BEGINS ON THE NEXT PAGE

SECTION A: INTERNAL TAX COMPLIANCE COSTS

Kindly fill in an approximate estimated time, monetary amount and/or breakdown of the following internal costs of complying with corporate income tax:

- How much **time** within the company was spent entirely on additional or exclusive work for company income tax purposes for 2009?

	No. of Staff	Total hours/ month
Finance Director / CFO / CFC	<input type="text"/>	<input type="text"/>
Accountant / Tax Manager	<input type="text"/>	<input type="text"/>
General / Non-Financial Manager	<input type="text"/>	<input type="text"/>
Accounting Staff	<input type="text"/>	<input type="text"/>
Other (please state) _____	<input type="text"/>	<input type="text"/>

- Does your company incur any other **additional non-staff costs** in meeting the income tax requirements for the year of assessment 2009? (For example: Stationery, postage and travelling)

☐ No, continue to question 3 ☐ Yes, please respond to the following question:

Briefly describe the nature of the costs:

.....

Please estimate the additional costs involved in 2009:

RM

- Of all the time spent and costs incurred internally in complying with corporate income tax laws for 2009, state approximately how much (in percentage) was related to the following work:

Routine Income Tax Return work (annual return)	<input type="text"/> %
Income Tax Planning work (longer term)	<input type="text"/> %
Other (please state) _____		<input type="text"/> %
Total		100%

- Of the time spent and costs incurred internally on routine income tax returns work and income tax planning work (if appropriate) in Question 3, state approximately how much (in percentage) was related to the qualification costs for **government incentives** provided through the tax system:

Routine Income Tax Return work (annual return)	<input type="text"/> %
Income Tax Planning work (longer term)	<input type="text"/> %

5. In which of the following areas is your company facing **difficulties**?
(Please tick: if more than one, please rank in order of importance using 1 as most important).

	Tick	Rank
Estimating income tax payable	<input type="checkbox"/>	<input type="checkbox"/>
Understanding income tax legislation	<input type="checkbox"/>	<input type="checkbox"/>
Implementing the income tax changes	<input type="checkbox"/>	<input type="checkbox"/>
Maintaining records for income tax purposes	<input type="checkbox"/>	<input type="checkbox"/>
Cash flow position when paying monthly tax instalments	<input type="checkbox"/>	<input type="checkbox"/>
Short period of time to lodge the tax return	<input type="checkbox"/>	<input type="checkbox"/>
Dealing with the tax authority	<input type="checkbox"/>	<input type="checkbox"/>
Dealing with the external advisor (such as tax agents)	<input type="checkbox"/>	<input type="checkbox"/>
Other (please state)	<input type="checkbox"/>	<input type="checkbox"/>

6. If your company could have avoided all the paper work and inconvenience in the past twelve months by paying someone else to attend to your company's tax affairs, how much more would your company have been prepared to pay?

RM

SECTION B: EXTERNAL TAX COMPLIANCE COSTS

Kindly please tick one box or provide an appropriate response to the following questions related to the external costs of complying with corporate income tax:

7. Does your company (or group) employ **external tax professionals** to handle income tax matters in 2009?

☐ Yes, please continue to Question 8 ☐ No, please go to Question 14 (Section C)

8. The **source** of external advice were:
(Please tick: if more than one, please rank in order of importance using 1 as most important).

	Tick	Rank
Professional Accountants	<input type="checkbox"/>	<input type="checkbox"/>
Lawyers/Legal Advisor	<input type="checkbox"/>	<input type="checkbox"/>
Accountants/Tax agents	<input type="checkbox"/>	<input type="checkbox"/>
Financial Consultants	<input type="checkbox"/>	<input type="checkbox"/>
Inland Revenue Board (IRB)	<input type="checkbox"/>	<input type="checkbox"/>
Other (please state)	<input type="checkbox"/>	<input type="checkbox"/>

9. Please provide or estimate the **external tax fees** incurred by your company for the corporate income tax activities in the financial year 2009:

RM

10. Of all the costs incurred externally in complying with corporate income tax laws for 2009, state approximately how much (in percentage) was related to the following work:

Routine Income Tax Return work (annual return)	_____	<input type="text" value=""/>	%
Income Tax Planning work (longer term)	_____	<input type="text" value=""/>	%
Other (please state) _____		<input type="text" value=""/>	%
Total			100%

11. Of all the time spent externally on routine income tax returns work and income tax planning work (if appropriate) in Question 10, state approximately how much (in percentage) was related to the qualification costs for **government incentives** provided through the tax system:

Routine Income Tax Return work (annual return)	_____	<input type="text" value=""/>	%
Income Tax Planning work (longer term)	_____	<input type="text" value=""/>	%

12. What is the main reason for using **external assistance**?

(Please tick: if more than one, please rank in order of importance using 1 as most important).

		Tick	Rank
Income tax law is too complicated	_____	<input type="checkbox"/>	<input type="checkbox"/>
It is more cost effective to use external tax professionals	_____	<input type="checkbox"/>	<input type="checkbox"/>
For income tax planning	_____	<input type="checkbox"/>	<input type="checkbox"/>
To reduce the chance of being audited by IRB	_____	<input type="checkbox"/>	<input type="checkbox"/>
The depth of technical knowledge is not available internally	_____	<input type="checkbox"/>	<input type="checkbox"/>
Independent expert opinion is required	_____	<input type="checkbox"/>	<input type="checkbox"/>
To improve understanding of financial and tax-related matters	_____	<input type="checkbox"/>	<input type="checkbox"/>
Other (please state) _____		<input type="checkbox"/>	<input type="checkbox"/>

13. In addition to any amount your company may have paid for tax advice, how much more would your company have been prepared to pay to relieve your company of all the inconvenience of having to attend to your company's tax affairs, including any time you may have had to spend with your adviser.

RM

SECTION C: PERCEPTIONS AND OPINIONS

14. Kindly respond to the following statements to indicate your **opinion** to each of the statements. There are no right and wrong answers.
(Please tick one box on a 6 point scale for each statement.)

	LEVEL OF IMPORTANCE							
Personally, I consider that the preparation of corporate income tax return is difficult.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
Corporate income tax law is relatively simple to understand.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
Complexity in tax law is necessary so that companies are treated fairly.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
A 'fair' tax rate should be the same for every company regardless of their size (small, medium or large).	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
Large companies have a greater ability to pay income tax, so it is fair that they should pay a higher rate of tax than small and medium companies.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
It is fair that high profit companies should pay a higher rate of tax than low profit companies.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
If there was a discrepancy in the annual tax return, how likely is that it would be audited?	Very Likely	⑥	⑤	④	③	②	①	Very Unlikely
If your company was to be chosen for compulsory audit, how likely would a discrepancy be identified?	Very Likely	⑥	⑤	④	③	②	①	Very Unlikely
If discrepancies were discovered during an audit, how severe are the penalties?	Very Severe	⑥	⑤	④	③	②	①	Not Very Severe
The chances of being audited (tax audit) are so low that it is worthwhile trying to economize a little on corporate income taxes for various reasons.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
I believe that each company's officers have a moral obligation to report all of their company's income and pay the correct amount of corporate income tax.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
Do you believe that the move to self assessment made corporate tax laws more or less fair?	Much more fair	⑥	⑤	④	③	②	①	Much less fair
Overall, has the move to self assessment made the distribution of the corporate income tax burden among small, medium and large companies more or less fair?	Much more fair	⑥	⑤	④	③	②	①	Much less fair
Do you believe that as a result of changes in corporate income tax during the past five years, large companies are paying more or fewer taxes?	Much more taxes	⑥	⑤	④	③	②	①	Much fewer taxes
The tax compliance requirement may have caused stress and anxiety to taxpayers. Indicate your position with respect to the psychological costs caused by the income tax system.	Very Stressful	⑥	⑤	④	③	②	①	Not Very Stressful

15. Read the following and kindly indicate your opinion (by way of a tick) to the following scenario based on your experience:

Mr. A, a self-employed businessman is considering not disclosing a cash sale of RM100,000 as his business income in his 2009 tax return. Legally, the cash receipts of RM100,000 should be included as a business income. However, he is almost certain that the tax authority will not audit him and would not know if the amount is not disclosed.

- (a) What is the probability that Mr. A will not report the RM100,000 of cash sale on his business income?

10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

- (b) Taking into account all known and likely business circumstances, to what extent do you agree with Mr. A's possible action of not reporting that cash sale of RM100,000 as his business income?

Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
----------------	---	---	---	---	---	---	-------------------

- (c) Would he be likely to report only part of the RM100,000 as business income?

Very Likely	⑥	⑤	④	③	②	①	Very Unlikely
-------------	---	---	---	---	---	---	---------------

16. Read the following and kindly indicate your opinion (by way of a tick) to the following scenario based on your experience:

Mr. B, a self-employed businessman, had incurred RM10,000 to repair his personal van. In preparing his 2009 tax return, he is thinking about claiming the costs of repair as if the van was used in his business. Legally, such claim is not allowable, but he is almost certain that he will not be audited and that the tax authority would not be able to detect the deduction.

- (b) What is the probability that Mr. B will claim the RM10,000 cost of repair as his business deduction?

10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

- (c) Taking into account all known and likely business circumstances, to what extent do you agree with Mr. B's possible action of claiming RM10,000 as his business deduction?

Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
----------------	---	---	---	---	---	---	-------------------

- (d) Would he be likely to deduct only part of the RM10,000 as a business deduction?

Very Likely	⑥	⑤	④	③	②	①	Very Unlikely
-------------	---	---	---	---	---	---	---------------

SECTION D: GENERAL INFORMATION AND SUGGESTIONS

Kindly tick the most appropriate responses or fill in the appropriate details in the space provided.

17. What is your company main business **activity**?

- | | |
|--|--|
| <input type="checkbox"/> Manufacturing | <input type="checkbox"/> Plantation and Agriculture |
| <input type="checkbox"/> Services | <input type="checkbox"/> Finance and Banking |
| <input type="checkbox"/> Property and Construction | <input type="checkbox"/> Others (please state) _____ |

18. What was the **turnover** of the company in 2009:

- | | |
|--|--|
| <input type="checkbox"/> Less than RM100 million | <input type="checkbox"/> RM500,000,001 – RM1,000,000,000 |
| <input type="checkbox"/> RM100,000,000 – RM500,000,000 | <input type="checkbox"/> More than RM1,000 million |

19. How much company **income tax** in total, in relation to the 2009 year of income did the company remit to the Malaysian Inland Revenue Board?

- | | |
|---|---|
| <input type="checkbox"/> Nil (no tax liability) | <input type="checkbox"/> Between RM5 million and 10 million |
| <input type="checkbox"/> Less than RM5 million | <input type="checkbox"/> More than RM10 million |

20. The **period** your company has been in business is: _____ years

21. Since company is paying income tax in advance monthly instalments, would your company expect a **tax refund** for the year of assessment 2009?

- ☐ No ☐ Yes, please estimate the amount of tax refund: RM _____

22. Compared with other companies in your industry, the estimated level of income tax compliance burden of your company is:

Very High	⑥	⑤	④	③	②	①	Very Low
-----------	---	---	---	---	---	---	----------

23. If your company could claim from the government for the time and money spent in dealing with corporate income tax for the financial year 2009, how much would you claim as fair compensation?

RM

24. Please state if you have any suggestions for reducing the tax compliance costs of companies.

(Please attach note if insufficient space)

Thank you for taking time to participate in this survey.

Appendix 3.2

Questionnaire: External Tax Professionals

Compliance Costs of Taxation Tax Professional Survey



MONASH University
SCHOOL OF BUSINESS



UNIVERSITY OF MALAYA
The Leader in Research & Innovation
Faculty of Business & Accountancy

Confidentiality

*The views expressed in the completed questionnaire will be treated in the strictest confidence.
Any information identifying the respondents will not be disclosed*

SECTION A: GENERAL INFORMATION

I would like to start by asking you a few simple questions about your background. Kindly tick the most appropriate responses or fill in the appropriate details in the space provided.

1. Where do you work or practice?

<input type="checkbox"/> Big-Four Accounting Firm	<input type="checkbox"/> Tax Firm / Tax Agent
<input type="checkbox"/> Non Big-Four Firm	<input type="checkbox"/> Others (please state) _____

2. What is your current position in the firm?

<input type="checkbox"/> Partner	<input type="checkbox"/> Senior/ Junior
<input type="checkbox"/> Manager	<input type="checkbox"/> Others (please state) _____

3. Are you a member of a professional body? If so, which one? You may tick more than one box.

<input type="checkbox"/> MIA	<input type="checkbox"/> Malaysian Bar Council
<input type="checkbox"/> CTIM	<input type="checkbox"/> Others (please state) _____

4. How many years of experience do you have in tax?

<input type="checkbox"/> Less than 10 years	<input type="checkbox"/> 10 to 20 years	<input type="checkbox"/> More than 20 years
---	---	---

5. For the past three years, what is the approximate percentage of corporate tax clients engaged by your firm? (Please state the approximate percentage).

Small and Medium Enterprise (SME)*		%
Large Companies		%

**A company is classified as SME company if the annual turnover is RM25 million or less for manufacturing sector and RM5 million or less for services/primary agriculture sector.*

6. For large companies' tax clients engaged by your firm, what is the approximate percentage of the sales turnover? (Please state the approximate percentage)

Less than RM100 million		%
RM100 million to RM500 million		%
More than RM500 million		%
Total		100%

7. For large companies' tax clients engaged by your firm, what is the approximate percentage of the main business activities? (Please state the approximate percentage)

Manufacturing		%
Services		%
Property and Construction		%
Finance and Banking		%
Others (please state) _____		%
Total		100%

SECTION B: COMPLIANCE BURDEN

This section refers to the activities carried out on behalf of, and the fee you would charge a company to comply with the corporate income tax and the compliance behaviour of taxpayers.

4. Please state the range of average tax fees charged to the companies for their corporate income tax activities in the financial year 2009.

Between and

5. Please estimate the percentage breakdown between routine income tax preparation and income tax planning work conducted for large companies' tax clients engaged by your firm.

Routine Income Tax Return work (for annual return)	<input type="text" value=""/>	%
Income Tax Planning work (longer term)	<input type="text" value=""/>	%
Other (please state)	<input type="text" value=""/>	%
Total			100%

6. Of the percentage breakdown between routine income tax preparation and income tax planning work as in Question 9, state approximately how much (in percentage) was related to the qualification costs for government incentives provided through the tax system*:

Routine Income Tax Return work (for annual return)	<input type="text" value=""/>	%
Income Tax Planning work (longer term)	<input type="text" value=""/>	%

**For the purpose of this survey only, qualification costs for government incentives provided through the tax system refers to the costs incurred to secure tax incentives provided under the Income Tax Act, 1967. It includes reinvestment allowance, approved service projects, operational headquarters, foreign fund management companies and double deduction.*

7. In your opinion what are the main reasons for large companies to engage tax professionals?
(Please tick: if more than one, please rank in order of importance using 1 as most important).

		Tick	Rank
Income tax matters are too complicated	<input type="checkbox"/>	<input type="text"/>
It is more cost effective to use external tax professionals	<input type="checkbox"/>	<input type="text"/>
For corporate income tax planning	<input type="checkbox"/>	<input type="text"/>
To reduce the chance of being audited by IRB	<input type="checkbox"/>	<input type="text"/>
The depth of technical knowledge is not available internally	<input type="checkbox"/>	<input type="text"/>
Other (please state)	<input type="checkbox"/>	<input type="text"/>

8. In which of the following areas are your large companies' tax clients facing difficulties?
(Please tick: if more than one, please rank in order of importance using 1 as most important)

		Tick	Rank
Estimating income tax payable	<input type="checkbox"/>	<input type="text"/>
Understanding income tax legislation	<input type="checkbox"/>	<input type="text"/>
Implementing the income tax changes	<input type="checkbox"/>	<input type="text"/>
Maintaining records for income tax purposes	<input type="checkbox"/>	<input type="text"/>
Dealing with the tax authority	<input type="checkbox"/>	<input type="text"/>
Other (please state)	<input type="checkbox"/>	<input type="text"/>

SECTION C: PERCEPTIONS AND OPINIONS

9. Kindly respond to the following statements to indicate your opinion to each of the statements. There are no right and wrong answers.
(Please tick one box on a 6 point scale for each statement).

	LEVEL OF IMPORTANCE							
Personally, I consider that the preparation of corporate income tax return is difficult.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
Corporate income tax law is relatively simple to understand.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
Complexity in tax law is necessary so that companies are treated fairly.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
A 'fair' tax rate should be the same for every company regardless of their size (small, medium or large).	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
Large companies have a greater ability to pay income tax, so it is fair that they should pay a higher rate of tax than small and medium companies.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
It is fair that high profit companies should pay a higher rate of tax than low profit companies.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
If there was a discrepancy in the annual tax return, how likely is that it would be audited?	Very Likely	⑥	⑤	④	③	②	①	Very Unlikely
If your tax client was to be chosen for compulsory audit, how likely would a discrepancy be identified?	Very Likely	⑥	⑤	④	③	②	①	Very Unlikely
If discrepancies were discovered during an audit, how severe are the penalties?	Very Severe	⑥	⑤	④	③	②	①	Not Very Severe
The chances of being audited (tax audit) are so low that it is worthwhile trying to economize a little on corporate income taxes for various reasons.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
I believe that each company's officers have a moral obligation to report all of their company's income and pay the correct amount of corporate income tax.	Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
Do you believe that the move to self assessment made corporate tax laws more or less fair?	Much more fair	⑥	⑤	④	③	②	①	Much less fair
Overall, has the move to self assessment made the distribution of the corporate income tax burden among small, medium and large companies more or less fair?	Much more fair	⑥	⑤	④	③	②	①	Much less fair
Do you believe that as a result of changes in corporate income tax during the past five years, large companies are paying more or fewer taxes?	Much more taxes	⑥	⑤	④	③	②	①	Much fewer taxes
The tax compliance requirement may have caused stress and anxiety to taxpayers. Indicate your opinion with respect to the psychological costs causes by the income tax system.	Very Stressful	⑥	⑤	④	③	②	①	Not Very Stressful

10. Read the following and kindly indicate your opinion (by way of a tick) to the following scenario based on your experience:

Mr. A, a self-employed businessman is considering not disclosing a cash sale of RM100,000 as his business income in his 2009 tax return. Legally, the cash receipts of RM100,000 should be included as a business income. However, he is almost certain that the tax authority will not audit him and would not know if the amount is not disclosed.

- (d) What is the probability that Mr. A will not report the RM100,000 of cash sale on his business income?

10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

- (e) Taking into account all known and likely business circumstances, to what extent do you agree with Mr. A's possible action of not reporting that cash sale of RM100,000 as his business income?

Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
----------------	---	---	---	---	---	---	-------------------

- (f) Would he be likely to report only part of the RM100,000 as business income?

Very Likely	⑥	⑤	④	③	②	①	Very Unlikely
-------------	---	---	---	---	---	---	---------------

11. Read the following and kindly indicate your opinion (by way of a tick) to the following scenario based on your experience:

Mr. B, a self-employed businessman, had incurred RM10,000 to repair his personal van. In preparing his 2009 tax return, he is thinking about claiming the costs of repair as if the van was used in his business. Legally, such claim is not allowable, but he is almost certain that he will not be audited and that the tax authority would not be able to detect the deduction.

- (a) What is the probability that Mr. B will claim the RM10,000 cost of repair as his business deduction?

10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

- (b) Taking into account all known and likely business circumstances, to what extent do you agree with Mr. B's possible action of claiming RM10,000 as his business deduction?

Strongly agree	⑥	⑤	④	③	②	①	Strongly disagree
----------------	---	---	---	---	---	---	-------------------

- (c) Would he be likely to deduct only part of the RM10,000 as a business deduction?

Very Likely	⑥	⑤	④	③	②	①	Very Unlikely
-------------	---	---	---	---	---	---	---------------

SECTION D: COMMENTS AND SUGGESTIONS

The following questions are about general and overall issues on tax compliance burden faced by companies. Kindly tick the most appropriate responses or fill in the appropriate details in the space provided.

12. In your opinion, what is the estimated level of income tax compliance burden of companies in Malaysia:

Very High	⑥	⑤	④	③	②	①	Very Low
-----------	---	---	---	---	---	---	----------

13. If your client could claim from the government for the time and money spent (both internally and externally) by them in dealing with corporate income tax for the financial year 2009, how much would you view as fair compensation?

RM

14. Do you have any specific suggestions for reducing tax preparation work and documentation in respect of corporate income tax for companies?

--

(Please attach note if insufficient space)

15. In the light of your experience, do you think the company income tax system could be improved?

☐ Yes ☐ No

If "YES", please elaborate:

--

(Please attach note if insufficient space)

Thank you for taking the time to participate in this survey.

Appendix 3.3

Human Ethics Certificates of Approval



MONASH University

Monash University Human Research Ethics Committee (MUHREC)
Research Office

Human Ethics Certificate of Approval

Date: 15 January 2010

Project Number: CF09/3732- 2009001994

Project Title: Evaluation of Tax Compliance Costs under the self assessment System

Chief Investigator: Professor Dr Jeyapalan Kasipillai

Approved: From: 15 January 2010 To: 15 January 2015

Terms of approval

1. The Chief investigator is responsible for ensuring that permission letters are obtained, if relevant, and a copy forwarded to MUHREC before any data collection can occur at the specified organisation. **Failure to provide permission letters to MUHREC before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research.**
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by MUHREC.
4. You should notify MUHREC immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project (including changes in personnel):** Requires the submission of a Request for Amendment form to MUHREC and must not begin without written approval from MUHREC. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any further correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. MUHREC should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by MUHREC at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.



Professor Ben Canny
Chair, MUHREC

cc: Ms Noor Sharoja Sapiei

Postal – Monash University, Vic 3800, Australia
Building 3E, Room 111, Clayton Campus, Wellington Road, Clayton
Telephone +61 3 9905 5490 Facsimile +61 3 9905 3831
Email muhrec@adm.monash.edu.au www.monash.edu/research/ethics/human/index/html
ABN 12 377 614 012 CRICOS Provider #00008C

Appendix 3.4

Covering Letter and Explanatory Statements
Corporate Taxpayers Survey

Dear Respondent

A Study on Tax Compliance Costs of Companies under the Self Assessment System

Thank you for taking the time to consider my survey. My name is Noor Sharoja Sapiei and I am conducting a research project under the supervision of Professor Jeyapalan Kasipillai who is attached to the School of Business, Monash University Sunway Campus. Currently, I am pursuing a doctoral degree at Monash University and a lecturer at the Faculty of Business and Accountancy, University of Malaya.

The aim of the research and possible benefits

The aim of this study is to estimate and identify the determinants of corporate taxpayers' compliance costs under the self assessment system. Tax compliance costs are the costs incurred by taxpayers, over and above their tax liability, in fulfilling their tax obligations. These include three major components: money costs, time costs and psychological costs. I envisage that the results of this study will provide valuable information which may influence government policy with regards to tax compliance burden of companies.

Why and how I chose you

As this research study is to investigate the nature and extent of tax compliance costs of companies, participation from corporate taxpayers would be most valuable to provide insights into the study. Your organisation's contact details were obtained from the 'Malaysian Top 500 Largest Listed Corporations 2008-2009' published directory.

What does the research involve?

This study involves a structured questionnaire that focuses on tax compliance costs of corporate taxpayers. The questionnaire comprises of 4 sections (Sections A, B, C, and D) displayed over 6 pages. It will take you approximately 30 - 35 minutes to answer all questions. The researcher will distribute questionnaires personally, explain about the research and provide some clarification with respect to certain questions if required by the respondent. The researcher and respondent will then agree upon a specific time at which the self-completed questionnaires will be picked up.

Can I decline to participate or withdraw from the research?

Participation in this study is completely voluntary. You are under no obligation to consent to participation and if you agree to participate, you may withdraw at any stage, or avoid answering questions which are felt to be too personal, sensitive or intrusive. A decision not to participate in the research, or to withdraw at any time, will not disadvantage you and your organisation in any way.

Confidentiality/results and storage of data

It must be stressed here that the data obtained from this survey is solely for academic purposes and all the information will be strictly confidential. No findings that could identify any individual participant will be published. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years. The completed questionnaire will be de-identified before storage.

Inconvenience and discomfort

In the unlikely event that you should feel anxious or distressed while completing the questionnaire, you may suspend or withdraw from being a participant.

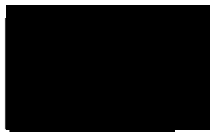
What if I have query or a complaint?

If you would like to contact the researchers about any aspect of this study, please contact the primary supervisor:	If you have a complaint concerning the manner in which this research is being conducted (project no: CF09/3732-2009001994), please contact:
Professor Jeyapalan Kasipillai Chair of Malaysian Business School of Business Monash University Sunway Campus Jalan Lagoon Selatan 46150 Bandar Sunway, Selangor Tel. + [REDACTED] (Direct Line) + [REDACTED] (General Line) Fax. + [REDACTED] email: [REDACTED]	Joyce Tang Monash University Sunway Campus Jalan Lagoon Selatan 46150 Bandar Sunway Selangor Darul Ehsan Malaysia Tel. + [REDACTED] (Direct Line) + [REDACTED] (General Line) Fax. + [REDACTED] email: [REDACTED]

Publication of results

A report relating to the study may be submitted for publication in an academic journal or conference paper, but personal anonymity of all participants will be maintained under all circumstances. If you would like to be informed of the aggregate research finding or contact the researchers about any aspect of this study, please contact Noor Sharoja Sapiei by telephone, fax or email using the contact details provided below.

Thank You



Noor Sharoja Sapiei
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Appendix 3.5

Covering Letter and Explanatory Statements
External Tax Professionals Survey

Dear Respondent

A Study on Tax Compliance Costs of Companies under the Self Assessment System

Thank you for agreeing to participate in this study concerning the tax compliance costs of corporate taxpayers. My name is Noor Sharoja Sapiei and I am conducting a research project under the supervision of Professor Jeyapalan Kasipillai, the Chair of Malaysian Business and Deputy Head of School (Education) in the School of Business towards a Doctor of Philosophy degree at Monash University. I am also a lecturer at the Faculty of Business and Accountancy, University of Malaya.

The aim of the research and possible benefits

The aim of this study is to estimate and identify the determinants of corporate taxpayers' compliance costs under the self assessment system. Tax compliance costs are the costs incurred by taxpayers, over and above their tax liability, in fulfilling their tax obligations. These include three major components: money costs, time costs and psychological costs. I envisage that the results of this study will provide valuable information which may influence government policy with regards to tax compliance burden of companies.

Why and how I chose you

As this research study is to investigate the nature and extent of tax compliance costs of companies, participation from tax professional would be most valuable to provide insights into the study. Target respondents for this research are the tax advisers of companies in Malaysia. You and your organisation's contact details were obtained from the list of tax agents from the Inland Revenue Board's website.

What does the research involve?

This study involves a structured questionnaire that focuses on tax compliance costs of corporate taxpayers. The questionnaire comprises of 4 sections (Sections A, B, C, and D) displayed over 5 pages. It will take you approximately 25 - 30 minutes to answer all questions. The researcher will distribute questionnaires personally, explain about the research and provide some clarification with respect to certain questions if required by the respondent. The researcher and respondent will then agree upon a specific time at which the self-completed questionnaires will be picked up.

Can I decline to participate or withdraw from the research?

Participation in this study is completely voluntary. You are under no obligation to consent to participation and if you agree to participate, you may withdraw at any stage, or avoid answering questions which are felt to be too personal, sensitive or intrusive. A decision not to participate in the research, or to withdraw at any time, will not disadvantage you and your organisation in any way.

Confidentiality/results and storage of data

It must be stressed here that the data obtained from this survey is solely for academic purposes and all the information will be strictly confidential. No findings that could identify any individual participant will be published. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years. The completed questionnaire will be de-identified before storage.

Inconvenience and discomfort

In the unlikely event that you should feel anxious or distressed while completing the questionnaire, you may suspend or withdraw from being a participant.

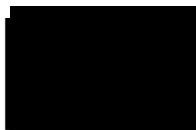
What if I have query or a complaint?

If you would like to contact the researchers about any aspect of this study, please contact the primary supervisor:	If you have a complaint concerning the manner in which this research (project no:) is being conducted, please contact:
Professor Jeyapalan Kasipillai Chair of Malaysian Business School of Business Monash University Sunway Campus Jalan Lagoon Selatan 46150 Bandar Sunway Selangor Darul Ehsan Malaysia Tel. + [REDACTED] (Direct Line) + [REDACTED] (General Line) Fax. + [REDACTED] email: [REDACTED]	Joyce Tang Monash University Sunway Campus Jalan Lagoon Selatan 46150 Bandar Sunway Selangor Darul Ehsan Malaysia Tel. + [REDACTED] (Direct Line) + [REDACTED] (General Line) Fax. + [REDACTED] email: [REDACTED]

Publication of results

A report relating to the study may be submitted for publication in an academic journal or conference paper, but personal anonymity of all participants will be maintained under all circumstances. If you would like to be informed of the aggregate research finding or contact the researchers about any aspect of this study, please contact Noor Sharoja Sapiei by telephone, fax or email using the contact details provided below.

Thank you



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Appendix 5.1

Rotated Component Matrix for Factor Analysis: Corporate Taxpayers Survey

Wordings of the Statements	Tax Attitudinal Aspect			
	Complex	Rate	Sanction	Fair
Personally, I consider that the preparation of corporate income tax return is difficult. <i>[Complex 1]</i>	0.834			
Corporate income tax law is relatively simple to understand. <i>[Complex 2- Reverse Coded]</i>	0.847			
Complexity in the tax law is necessary so that companies are treated fairly. <i>[Complex 3]</i>	0.801			
A 'fair' tax rate should be the same for every company regardless of their size (small, medium or large). <i>[Rate 1]</i>		0.852		
Large companies have a greater ability to pay income tax, so it is fair that they should pay a higher rate of tax than small and medium companies. <i>[Rate 2]</i>		0.423		
It is fair that high profit companies should pay a higher rate of tax than low profit companies. <i>[Rate 3]</i>		0.890		
If there was a discrepancy in the annual tax return, how likely is that it would be audited? <i>[Sanction 1]</i>			0.703	
If your company was to be chosen for compulsory audit, how likely would a discrepancy be identified? <i>[Sanction 2]</i>			0.569	
If discrepancies were discovered during an audit, how severe are the penalties? <i>[Sanction 3]</i>			0.660	
The chances of being audited (tax audit) are so low that it is worthwhile trying to economize a little on corporate income taxes for various reasons. <i>[Sanction 4]</i>			-	
I believe that each company's officers have a moral obligation to report all of their company's income and pay the correct amount of corporate income tax. <i>[Fair 1]</i>				-
Do you believe that the move to self assessment made corporate tax laws more or less fair? <i>[Fair 2]</i>				0.889
Overall, has the move to self assessment made the distribution of the corporate income tax burden among small, medium and large companies more or less fair? <i>[Fair 3]</i>				0.904
Do you believe that as a result of changes in corporate income tax during the past five years, large companies are paying more or fewer taxes? <i>[Fair 4]</i>				0.638

Notes:

1. Extraction Method: Principal Component Analysis. Rotation method: Varimax with Kaiser Normalization.
2. The Kaiser-Meyer-Olkin (KMO) Statistic was 0.648, suggesting that sampling in this study was adequate. Bartlett's Test of Sphericity was highly significant ($p=0.000$), indicating that factor analysis is appropriate for these survey data.

Appendix 5.2

Detailed Key Findings on Tax Attitudinal Aspects: External Tax Professionals Survey

<i>Attitudinal Aspect</i>	<i>Item</i>	<i>Mean</i>	<i>Median</i>	<i>Standard Deviation</i>
Tax Complexity	Complex 1	3.25	3.00	1.35
	Complex 2	3.27	3.00	1.41
	Complex 3	3.00	3.00	1.46
Tax Rate Structure	Rate 1	3.34	3.00	1.85
	Rate 2	3.46	4.00	1.70
	Rate 3	3.38	3.00	1.71
Tax Deterrence Sanctions	Sanctions 1	3.85	4.00	1.49
	Sanctions 2	3.52	4.00	1.41
	Sanctions 3	4.79	5.00	1.15
	Sanctions 4r	3.67	4.00	1.33
Tax Law fairness	Fair 1	4.94	5.00	1.30
	Fair 2	3.56	4.00	1.49
	Fair 3	3.48	4.00	1.32
	Fair 4	3.75	4.00	1.39
Tax Psychological Costs	Psychological	4.81	5.00	1.20

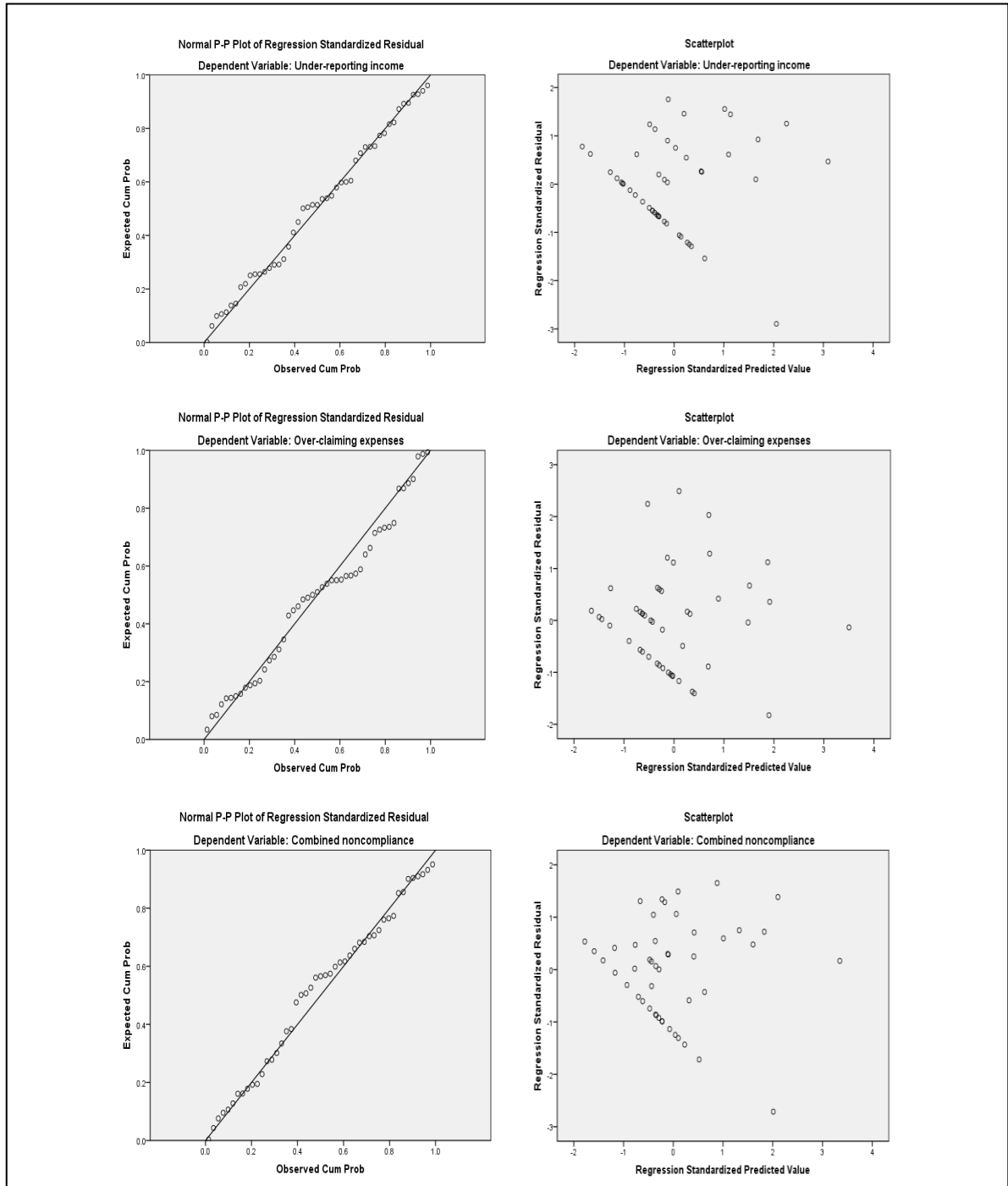
Notes:

1. Number of respondents are 48.
2. Description used is similar to corporate taxpayers' survey however it is in the context of tax professional. Please refer to Appendix 3.2 for the exact wording in the questionnaire.
3. Sanctions 4r was a reverse-phrased items and the original mean score is 2.33.
4. Sanction 3 and Fair 1 were taken out from the analysis to get an acceptable alpha value.

Appendix 5.3

Assessment on Appropriateness of Multiple Regression Analysis: External Tax Professionals Survey

Figure A Normal Probability Plot and Scatter Plot Diagrams



Source: PASW output of the current study

This appendix presents the assessment of the four assumptions underlying regression analysis, namely, normality, linearity, homoscedasticity, and multicollinearity for the multiple regression analysis of external tax professionals' survey. The assessment based on annual sales turnover as a company size measure found that all the four underlying assumptions for multiple regressions were not violated. The normal probability plots and scatter plot diagrams of residual versus predicted values for all the three dependent variables, namely under-reporting of income, over-claiming of expenses and the combined non-compliance are presented in Figure A.

First with regards to normality assumption, the normal probability plots for all the three dependent variables show no significant departures from the straight diagonal line indicating that the dependent variables used in this study are normally distributed. Thus, there is no violation of the normality assumptions. Second concerning linearity assumption, the scatter plot of residuals graphs for all the three dependent variables showed no evidence of linearity as the dots are evenly dispersed around zero. Hence, linearity assumption is not violated. Third, based on the same scatter plots diagrams, the assumption of homoscedasticity is not violated as the plots do not demonstrate any clear patterns. Finally, Collinearity diagnostics using variance inflation factor (VIF) and tolerance value measures are utilized. The VIF value in relation to compliance behaviour regression ranges from 1.156 to 1.308 (tolerance value of between 0.764 and 0.865), thus multicollinearity assumption is not violated (Table A).

Table A Test for Collinearity of Independent Variables

<i>Variable</i>	<i>Colinearity Statistics</i>	
	<i>Tolerance</i>	<i>VIF</i>
Tax Complexity	0.764	1.308
Tax Rate Structure	0.845	1.184
Tax Deterrence Sanctions	0.813	1.230
Tax Law Fairness	0.806	1.240
Tax Psychological Costs	0.865	1.156

Source: PASW output of the current study