The previous chapter presented the background of the research and the statement of research problems in respect of the introduction of SA for individual taxpayers in Malaysia. The objectives for investigating the compliance behaviour of these taxpayers were also identified. In this chapter, a review of literature is presented from which a set of research questions and a theoretical framework for investigating and analysing tax compliance behaviour are developed. That is, the research questions and theoretical framework are directed at addressing the statement of problems in relation to SA in Malaysia, as set out in Chapter 1.

As SA in Malaysia is still in its infancy stage and as the objective of this research is to explore the influence of SA on the compliance behaviour of individual taxpayers in Malaysia, a review of the Malaysian SA system in relation to the readiness of these taxpayers in facing the new tax system is first presented. This is followed by a review and analysis of SA in eight other tax regimes to identify any lesson that Malaysia may find relevant and useful.

The next two sections of this chapter provide a brief review of various compliance models, including theories and factors associated with compliance behaviour. The review provides significant input to the development of a theoretical model for investigating tax compliance behaviour in the Malaysian setting. Finally, a theoretical model for personal income tax compliance in the context of Malaysia is developed and presented.67 This model represents a refinement of the model presented in Chapter 1. It provides the basis for the development of the research questions and the research design that would then be presented in Chapter 3.

2.1 Self-assessment in Malaysia

As early as the 1980s, there were calls in Malaysia for the introduction of SA, and in particular, for it to be modelled on the Japanese SA system (Yong P 1983). This was in line with the Malaysian Government’s then ‘Look East’68 policy. The principal objective of the calls for the introduction of SA was to enable the IRB69 to deploy its

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67 The theoretical model is constructed and developed to address the research problems that were identified in Chapter 1 (see 1.3), a summary of which was presented in Figure 1.1.
68 In the 1980s, the Malaysian Government launched the ‘Look East’ policy in respect of labour, management and productivity. ‘Look East’ particularly referred to looking at the Japanese. However, this did not incorporate ‘looking at’ the Japanese tax system.
69 See above n 3.
staff to more productive functions and to encourage taxpayers to better understand and know their tax affairs (Singh V 1993b; Kasipillai 1998b).

However, it was only in the year 2000, as one aspect of tax reform, that the Malaysian Government introduced SA (Butler 1993; Cowdroy 1998; Kasipillai 1998b; Ong 2001) to replace, in stages the OAS. The implementation of SA commenced with companies in 2001; followed by sole proprietorship business, partnerships and cooperatives in 2003 and SW in 2004.\(^\text{70}\) To streamline the implementation of SA for taxpayers other than companies (i.e. sole-proprietorships, partnerships, co-operatives and SW), a Bill\(^\text{71}\) was introduced and passed, coming into effect on 1 January 2004.

Another aspect of tax reform in the year 2000 was the introduction of the current year basis of assessment to replace the preceding year basis of assessment. Although income is now assessed on the current year basis, annual tax returns on income derived in a particular year will only be filed in the following year. To facilitate the operations of the current year basis of assessment, companies are required to furnish the tax authority with statements of their estimated tax liabilities for the current year and to pay taxes based on the estimates. For SW, it is a statutory requirement that employers withhold income taxes upon paying remunerations to their employees on the ‘Pay As You Earn’ (PAYE) basis. When tax returns are filed in the following year, based on the actual and known income, the actual amount of taxes assessed are reconciled with the taxes already paid or deducted at source.

### 2.1.1 Implementation

SA can be defined as a ‘do it yourself’ process (Cornell 1996:12) whereby taxpayers are required to file their tax returns, reporting their respective income that is assessable to tax and determining their respective tax liabilities on the basis of their tax returns (Butler 1993; Silvani & Baer 1997; Rehan 1998; Cowdroy 1998; Singh & Bhupalan 2001; Hansford & McKerchar 2004). Under SA, the onus is placed squarely on the taxpayers to understand, interpret and apply the laws to their own circumstances (Lim 2002). In addition, taxpayers are responsible for timely and accurate reporting and to make payment of taxes by the due date. Hence the SA

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\(^{70}\) See above n 1.

\(^{71}\) The Bill refers to the Income Tax (Amendment) Bill 2001 on the implementation of the SA system.
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regime makes it imperative that taxpayers are adequately conversant with the tax legislation, guidelines, rulings and administrative procedures in order to ensure appropriate compliance. SA also places on taxpayers greater responsibilities in relation to their tax affairs. Thus with the change to SA the onus is on taxpayers to comprehend, interpret and to comply with the relevant provisions of the tax law that are applicable to their respective circumstances (Shanmugam 2003), while the IRB’s onus is to review and verify tax returns based on the IRB’s interpretation and application of the tax law.

Prior to the implementation of SA, taxpayers were only required to file their returns and report their incomes that were assessable to tax. The IRB would assess the taxpayers’ tax liabilities and would issue notices of assessment. Upon receipt of the notices of assessment, taxpayers would be required to pay their respective taxes within 30 days from the issue date. Under SA, the tax returns filed by taxpayers are deemed as notices of assessment, and the IRB is not required to issue any such notices. Taxpayers are therefore required to pay whatever taxes that are due to the IRB by the specified due dates.72

2.1.2 Rationale

The main objectives of adopting SA in Malaysia were to enhance voluntary compliance among taxpayers, to minimise administrative cost and to lessen the burden of the IRB (Kasipillai 1998b; Saad, Mansor & Ibrahim 2003). Under the OAS, the rate of compliance in terms of lodgement of returns was regarded as unsatisfactory, as it was reported that, in 1997, the compliance rate of returns73 filed was only 69.2 per cent (Kasipillai et al 1999). Further, it was reported that from 1990 to 1996, approximately 20 to 30 per cent of the returns filed were not finalised by the end of the year by the IRB (Kasipillai 1998a, 1998b). This trend continued, as it was reported that in the year 2002, although nearly 3 million tax returns were finalised, they represented only 61.8 per cent of returns lodged (IRB 2002);74 and in

72 Section 103(1), ITA (1967) states that “…tax payable under an assessment for a year of assessment shall be due and payable on the due date...”. Section 103(12), ITA (1967) states that ‘Due date’ means “…30 April in the year following the year of assessment”. This is applicable to any taxpayer (other than company, trust body or co-operative society).
73 There were about a total of 2.6 million tax returns issued.
74 For the year 2000, out of the nearly 3 million tax return forms issued by IRB, only about 70 per cent of the returns were lodged (Mottiakavandar et al 2003).
more recent years the IRB processed only about 80 per cent of the tax returns lodged (Shanmugam 2003).

The OAS therefore was considered to be costly, inefficient and complex to administer, especially since the assessment and appeal processes placed a heavy burden on the IRB. The high volume of returns lodged resulted in backlogs of unassessed cases, and delays in processing and issuing of returns. This was also partly attributed to by the dependence on the correctness and completeness of the information submitted by taxpayers. Weak enforcement due to lack of qualified staff and shortage of staff to carry out enforcement activities added to the administrative problems experienced by the IRB under the OAS (Kasipillai 1998b, 1998c; Shanmugam 2003). Several studies (Barr, James & Prest 1977; Sandford & Wallschutzy 1994a, 1994b; James 1996) indicated that SA could successfully address such problems and the IRB apparently also subscribed to such a view judging from the three very vague objectives that were set for SA (IRB 2006).\(^75\) The benefits of SA are still debatable, if not illusory (Baldry 1999a, 1999b; Inglis 2002a, 2002b; Hansford & McKerchar 2004).

The IRB reported that with the implementation of SA, income tax collections had increased from RM13.9 billion in 2000 (under OAS) to RM20.8 billion in 2001\(^76\) and that the increase was attributable to the implementation of SA (Abdul Razak & Mohd Foad 2002). However, the increase in income tax collections could have been due to other factors including the improved economic situation after the 1997/1998 downturn and financial crisis. Another contributing factor could have been that the taxes collected were based on estimated tax payable under the newly introduced current year basis of assessment, and the IRB might have had to refund the excess collections. That is, while the introduction of SA may have had a positive impact on collections, it is unlikely to have been the only factor.

2.1.3 Objectives and strategies of IRB

The IRB listed three main objectives for adopting SA. Firstly, to modernise and to coordinate tax administration; secondly to create a system that is more efficient and

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\(^75\) See above n 3 and 2.1.3 for the three objectives.

\(^76\) An increase of RM6.9 billion in revenue collected as reported by the Minister of Finance (Abdul Razak & Mohd Foad 2002).
for a more timely collection of tax; and thirdly, to enhance the rate of tax compliance (IRB 2006). Other implicit objectives appeared to be the reduction of collection costs, the acceleration of tax payments and the reduction of tax arrears (Singh & Bhupalan 2001; Shanmugam 2003).

Various plans and strategies for the implementation of SA had been formulated to ensure that the above objectives were achieved. These plans and strategies included the issue of simple and clear interpretations of tax legislations and procedures; the installation of a new computerised system; the restructuring of the IRB's responsibilities and functions; and the preparation of taxpayers and tax agents for the implementation of SA (Ridzuan 2003).

The issuing of simple and clear interpretations of tax legislation included the issuance of public rulings,\textsuperscript{77} guidelines and the provision of information through various forms of media including the IRB website. The installation of the new computerised system would allow the IRB to develop an integrated database on taxpayers including their profiles, information on returns filed and the status of taxpayers' ledgers. As SA places the onus and responsibility on taxpayers to assess their own tax liabilities; hence, in the absence of a reviewing process, the IRB could deploy its personnel to undertake enforcement functions, such as tax audits and investigations.

To ensure a smooth transition to SA, the IRB had actively conducted extensive consultative meetings and dialogues with the professional bodies\textsuperscript{78} with the aim of obtaining feedback on technical and administrative matters in relation to the implementation of SA (Ridzuan 2003).

\textbf{2.1.4 Self assessment for companies in Malaysia}

Companies in Malaysia commenced SA effective from the YA 2001. A survey\textsuperscript{79} found that a sizeable number of respondent companies were not prepared to successfully move to SA, even though a majority of 90.7 per cent of the respondents

\textsuperscript{77} As at 31 March 2006 the IRB has issued 36 public rulings including three revised rulings (see Appendix III).

\textsuperscript{78} The professional bodies include Malaysian Institute of Taxation, Malaysian Institute of Accountants and the Malaysian Institute of Auditors.

\textsuperscript{79} This survey was carried out in 1999 by Ernst and Young Malaysia and themed 'Self Assessment-Being prepared'.
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acknowledged that SA was a significant business issue at the time of its introduction (Banoo 1999). More than a year after the implementation of SA for companies, there were still uncertainties and anxieties as the IRB and tax practitioners were still adjusting to and familiarising themselves with the technicalities and processes of SA (Lim 2002; Shanmugam 2003).

To facilitate the payment of income tax on the current year basis under the SA system in Malaysia, companies are required to furnish an estimate of their tax payable to the IRB not later than 30 days before the beginning of the basis period for a particular YA. Should a company estimated that it would have no tax liability for a particular YA, it is also required to furnish the ‘estimated zero’ tax payable within the stipulated time frame (IRB 2006). Based on the estimates, taxes would be paid through monthly instalments. Taxpayers may make revisions to the estimation of taxes payable in the 6th and 9th month of the basis period for a YA by furnishing the revisions in a prescribed form80 together with the revised monthly instalments. For a company that had just commenced its business operations in a particular year, an estimate of its tax liabilities needs to be furnished within 3 months from the date of commencement of its business operations.

Similar to the practices in other developed countries,81 companies in Malaysia are required to submit their completed Income Statement Form to the IRB. In addition, companies are required to maintain proper records, as these may be used as evidence in the event of reviews or audits by the IRB. Although taxpayers assess their own tax liabilities, the IRB does subject the submitted tax returns to scrutiny, especially in the case of companies suspected to have a high risk of default in tax payment (CPA 2002b).

2.1.5 Self assessment for individuals in Malaysia82

In the year 2005, for the first time in Malaysia, individuals were required to file their tax returns under the SA system. Income tax is assessed on the current year basis with assessments to be filed by 30 April of the following year. Hence, for income

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80 CP204 for estimation and revision of tax payable.
81 In the UK, companies are required to submit a Statement of Account. For further detail, see 2.2.2.8.
82 Individuals include salary and wage earners and self-employed who are subject to personal taxation.
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derived in the calendar year 2004, assessments would have to be filed by 30 April 2005.

The implementation of SA for individual taxpayers is based on the concept of ‘Pay, Self-Assess and File’ (IRB 2006). Currently, for SW, monthly tax deductions are made through the Schedular Tax Deduction (STD)\textsuperscript{83} scheme. Under the STD scheme, it is mandatory for employers to deduct tax from their respective employees’ remuneration. The amount of tax to be deducted is based on a schedule issued by the IRB. The amounts of taxes so deducted are remitted by employers to the IRB. SW are still required to file their tax returns and assess their own tax liabilities in accordance with the provisions of the income tax law. The amount of taxes deducted at source during a particular YA are reconciled with the amount of taxes so assessed for that particular year. For any taxpayer, should the amount of taxes deducted exceed the self assessed tax liabilities, there is an entitlement to a refund. Should there be a short fall, the taxpayer is required to pay the difference to the IRB.

SE taxpayers are required to pay their taxes in six bi-monthly instalments commencing in March of the respective year. The instalments are based on the notice of instalment payments issued by the Director General of IRB (DGIR) (IRB 2006). The amount payable by any individual taxpayer is only an estimate. Amendment to any estimated tax payable is allowed via an application that an individual concerned may make before 30 June each year (Lim 2002; Chow 2004). Similar to the SW, a SE taxpayer needs to file his/her tax return, as well as assessing his/her own tax liability and pay the difference of tax due. In contrast with SW, tax returns submitted by SE taxpayers must be accompanied by a profit and loss account of their business operations, the tax computations and details of the capital allowances pertaining to assets used in the business operations. In addition, proper records\textsuperscript{84} must be maintained at all times as these records form the basis of all

\textsuperscript{83} Under the STD scheme, income taxes are deducted from employees’ monthly remuneration. The amount of deduction is based on a prescribed schedule provided by the IRB. It is a form of withholding tax that is similar to PAYE or PAYG as practised in other developed countries such as Australia, NZ and the UK. However, the amount of tax deducted is not the final tax, and it varies with different taxpayers. The taxpayer’s marital status, the numbers of children and the amount of monthly remuneration are factors that determine the amount of tax to be deducted.

\textsuperscript{84} For SE taxpayers, the necessary records include records of all sales, purchases, stock and other business expenses; receipts, bill, bank statements and cheque butts; analysis of subcontracts received if business is involved with subcontracts and any other relevant document. SW taxpayers must ensure that the Statement of Employment Income (EA/EC Form), monthly pay slips showing the STD by
information filed in the tax returns. Complacency in not maintaining proper records would place the taxpayers at a greater risk in the case of being reviewed or investigated (Kasipillai 2002).

2.1.5.1 Preparedness of individual taxpayers

Under the Malaysian SA regime, taxpayers are required not only to be honest in disclosing their income and expenditure, they must also be aware of all the tax laws, rules, guidelines and administrative procedures of the IRB. Should there be discrepancies in any return, pleading ignorance of the law is not an acceptable excuse (CPA 2002a). To be aware of these compliance requirements, taxpayers must possess a reasonable level of tax literacy.

In the early 1990s, under the then OAS, it was found that more than 50 per cent of taxpayers surveyed were ‘tax illiterate’ (Bardai 1992). Even years later, the rate did not vary much as tax knowledge among secondary school teachers in Sarawak was found to be quite low (James G 1998), while lecturers at a tertiary education institution in Klang Valley were found to be unaware of their obligations to file tax returns (Mohd Nor 1996) in spite of the fact that teachers and lecturers possess higher education qualifications. Observations by Sheikh Obid (1996) indicated that individuals who were SE and who traditionally possessed very low educational standards were ignorant of the tax law. In comparison, factory workers in the Klang Valley, who generally possessed lower educational qualifications, were found to have a relatively high level of tax knowledge in relation to allowable tax relief (Darus 1996).

A study on sole proprietors and partners in Sarawak revealed that the level of taxpayers’ education was linearly and significantly associated with the level of tax knowledge (Madi 1999); which is consistent with the contention that a low level of tax knowledge among taxpayers would not contribute to a higher level of compliance (Saad, Mansor & Ibrahim 2003). With regards to SA, a recent study revealed that

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85 Sarawak is one of the states in the Federation of Malaysia and is geographically situated on the island of Borneo.
86 Klang Valley is the geographical area consisting of the Federal Capital of Kuala Lumpur, and the area approximately within a radius of 40 kilometre of Kuala Lumpur.
very few salaried taxpayers in Sarawak were able to demonstrate high tax literacy. Further, a majority of them were not aware of the implementation of SA and still preferred the IRB to assess their tax liabilities (Madi & Kamaluddin 2003). These findings indicate that salaried individuals might not be prepared for SA.

Likewise, in the northern states of Peninsular Malaysia, although more than half of the individuals surveyed indicated that they were able to compute their own taxes, almost all were in favour of receiving more tax instructions from the IRB. This is so as the majority of them indicated that the income tax law was ambiguous and subject to frequent changes (Kasipillai et al 1999).

2.1.6 Compliance

One of main criteria for a successful adoption of SA is appropriate compliance among taxpayers. Appropriate compliance is

"...taken to mean that one's tax liability is correctly computed,...after taking into account all factors that have a bearing on the tax liability, and that the person who prepares the tax return should be competent to comprehend the relevant tax laws, rules, regulation, guidelines and the IRB's administrative procedures" (Loo & Ho 2005:46).

Since SA presupposes that taxpayers will be honest, it would be reasonable to state that most of them are likely to comply. In fact, Malaysian taxpayers supported the need to comply, agreeing that violating tax law was unethical and that a penalty should be imposed if returns were not filed within the stipulated period (Kasipillai, Mat Udin & Ariffin 2003). Although in a study, strong positive co-relationship was found between tax knowledge and the level of compliance (Kasipillai et al 1999), another study (Mottiakavandar et al 2003) covering the northern states of Peninsular Malaysia revealed that the level of tax knowledge had no effect on non-compliance behaviour. Instead, there were positive co-relationships between attitude towards one's own compliance with the attitude towards other taxpayers' compliance, effectiveness of the IRB and fairness of the overall tax system (Mottiakavandar et al 2003).
Nevertheless, for taxpayers to understand their compliance obligations and to file their returns accurately, they need to be informed (Singh & Bhupalan 2001). Thus, compliance under SA was expected to place an onerous burden on taxpayers, particularly the burden of having to learn and understand the tax laws (Saad, Mansor & Ibrahim 2003).

2.1.7 Tax audits and penalties

While taxpayers need to understand their compliance obligations, the IRB too needs to ensure that the taxpayers comply with the provisions of the tax law. The IRB has adopted the traditional approach of recognising penalties and probability of detection (through tax audit) as the important variables to ensure compliance among taxpayers (Singh V 1993b). Apparently, tax audits appeared effective in relation to taxpayers’ compliance (Kasipillai 2002) and penalties were an effective form of deterrence among taxpayers. However, taxpayers’ compliance behaviour is not influenced only by penalties or tax audits, but also by the perception of fairness, taxpayers’ grievances and inadequate enforcement strategies (Kasipillai 1998b). Further, uncertainty of the tax law appears to be the main concern of Malaysian taxpayers as currently there are conflicting explanations and interpretations in relation to public rulings and related decisions of case law (Singh & Bhupalan 2001; Somasundram 2002; Choong 2005b; Josef 2005).  

2.1.7.1 Tax audits

Under the SA regime in Malaysia, tax returns would be accepted by the IRB at face value. However, there is the likelihood of increased exposure to some form of review or audit. The conduct of tax audits would be expected to be a common and regular feature under SA, as emphasis would be placed on post-assessment audit and examination (Singh V 1993b; Lim & Chang 1999). Such post-assessment activities are likely to be stepped up with the shift of focus and duties of IRB staff.

87 Public rulings would help taxpayers considerably if they gave explicit guidelines. Some of the IRB’s rulings are ambiguous, and “…often making implications and leaving the public to draw inferences from the guidelines given” (Josef 2005:38). In fact, there are contentions that a particular ruling (Public Ruling 1/2004) clearly violates “…the established principles of law, an act tantamount to contempt of Court” (Choong 2005b:11).

88 Currently, under SA, the IRB carries out two types of audits, namely desk audit and field audit. A desk audit requires the taxpayer to be present at the IRB office and usually deals with straightforward issues and some tax adjustments. A field audit involves checking of the taxpayer’s business and non-business records, and usually takes place at the taxpayer’s premises.
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Tax audits essentially serve as a policing function to ensure that taxpayers comply with the law (Lim & Chang 1999). In line with this ‘policing function’, a Tax Audit Division was set up by the IRB to monitor the expansion of audit activities. The Division also coordinates the audit programme and the education and training activities\(^{89}\) that together are aimed at promoting voluntary compliance (Ridzuan 2003; IRB 2006).

Although there is a time frame for the review of assessments, self assessed returns are considered open ended in that there is no certainty of finality until the expiration of the specified time frame. In the Malaysian scenario, after a taxpayer has filed his/her return with full and true disclosure, and the return is accepted without being questioned or challenged, the taxpayer needs to wait for six years after filing before an assessment becomes final and conclusive. In the event of being reviewed or audited, the onus of adequate compliance is on the taxpayer.

2.1.7.2 Penalties

As with tax audits, penalties also play significant roles in the SA system. The penalty\(^{90}\) sanctions under the SA system remained similar to those under the OAS. For instance, a late payment penalty\(^{91}\) is raised if taxpayers do not pay their taxes within the stipulated period. If a tax audit is carried out and it is discovered that there has been underreporting or omission of income, a penalty up to 60 per cent of tax undercharged may be imposed (Lim 2002; Kasipillai 2002). A similar penalty may be imposed on any taxpayer who does not comply with the interpretation of the IRB and does not make proper disclosure in his/her tax returns. In addition, severe penalties may be imposed on any taxpayer or any person who knowingly assists the taxpayer in understating his/her tax liability (CPA 2002a).

As with other tax regimes, some teething problems could be expected in Malaysia as a result of the switch from OAS to SA. Under SA, taxpayers are faced with a more difficult task as compared to the OAS. It is only when these problems are overcome that the IRB and the taxpayers might be able to benefit from the system.

\(^{89}\) As at June 2003, a total of 1536 seminar and talk sessions under the taxpayers’ education programmes had been conducted.

\(^{90}\) Summary of offences and penalties is available in Appendix IV.

\(^{91}\) Under OAS, a 10 per cent penalty would be imposed if the tax is not settled within 30 days after notice of assessment being issued and a further 5 per cent if the balance remains unpaid after 60 days.
Nevertheless, for the SA system to be successful, the cooperation and joint responsibility between the IRB, tax professionals and the taxpayers are of utmost importance.

As several other tax regimes are already practising SA, it is not a new phenomenon. The experiences of these other tax regimes in introducing and practising SA may provide valuable lessons for Malaysia. Thus, a comparative analysis of SA in eight other regimes was undertaken as part of the literature review and is presented in the next section.

2.2 Self assessment in other regimes

Canada and the United States of America (US) first implemented SA in the 1910s, followed by Japan in 1947 (Ishi 2001). Over the last two decades there has been considerable growth in the adoption of SA by tax regimes in both developed and developing countries. For example, Sri Lanka introduced SA in 1972, Pakistan in 1979, Bangladesh and Indonesia in 1984, Australia in 1986-87, New Zealand (NZ) in mid 1980s and the UK in 1996-97 (Cornell 1996; Rehan 1998; Cowdroy 1998; Baldry 1999a, 1999b; Kasipillai et al 1999; Singh & Bhupalan 2001). There have been variations in the extent of adoption of SA, with some regimes moving to full adoption, while others have adopted SA only in part.

2.2.1 Principles of self assessment

Across the regimes identified, namely Canada, US, Sri Lanka, Pakistan, Bangladesh, Indonesia, Australia, NZ and the UK, the objectives for adopting SA have generally been to simplify the tax assessment system and to encourage voluntary compliance. While the reasons for adopting SA vary, the most fundamental (and common) reason appears to have been the desire to achieve administrative cost savings. It is envisaged that SA would improve the efficiency and effectiveness of tax administration; reduce tax administration cost and tax evasion and ensure timeliness in tax collections (James & Nobes 2000; Sarker 2003). With the introduction of SA, taxpayers have to assume greater responsibilities and need to be more aware of their own tax affairs, which in turn should encourage and enhance voluntary compliance
and reduce non-compliance\(^{92}\) (Cornell 1996; Kasipillai 1998a, 1998b, 1998c; NAO 2001; Sarker 2003). This also represents "...a transfer of costs from the Revenue to the taxpayers" (Sandford 1994:679). Evidence shows that with the introduction of SA there is commonly an increase in the percentage of taxpayers using the services of tax agents, thereby increasing monetary compliance costs (Bird 1993; Nasir 2001; The Treasury 2004).

To the tax authority, SA should be more cost effective as the tax authority needs only to select certain cases for scrutiny rather than having to assess all returns as practised under a traditional assessment system. Hence, SA releases the tax authority from its assessment functions; encourages an earlier and timely collection of taxes and may reduce corruption practices among its personnel. Further, the more timely collection of taxes should enable the tax authority to implement a more efficient tax administrative system (James & Nobes 2000; Sarker 2003).

From the taxpayers’ perspective, SA allows for the democratic exercise of taxpayers’ rights, resulting in an increased involvement by the taxpayers in their own tax affairs (Sarker 2003). However, two possible negative outcomes under SA could arise, namely, increased taxpayer compliance costs and increased tax evasion (Sandford 1994; James 1996; IEA 2003; Hasseldine & Hansford 2003; Turnier & Little 2004). Increased evasion could result from the low probability of being detected under SA compared to the traditional assessment system. This is so simply because under SA, audits tend to be random in nature compared with the thorough checking of every return as practised under a traditional assessment system. However, there is a lack of reliable evidence that SA leads to increased tax evasion (Sandford 1994).

### 2.2.2 Tax reforms and self assessment in practice

Regardless of the advantages or disadvantages that SA might bring about to the tax authority or the taxpayers, SA nevertheless has been part and parcel of tax reforms in many countries. Hence, it is relevant to examine the series of tax reforms that have been undertaken together with the implementation of the SA in a number of countries. The following sections highlight the introduction, implementations and

\(^{92}\) The meaning of compliance may include filing compliance (i.e. timely lodgement of returns), paying compliance (i.e. paying the correct taxes) or reporting compliance (i.e. reporting the true income).
practices of SA and related tax reforms in eight developed and developing countries in chronological order based on the year when SA was first implemented.

2.2.2.1 United States

Historically, income tax in the US was first introduced during the Civil War in the 1800s. When the Civil War ended in 1872, the war income tax ceased to be imposed (Miller 1895; Egger 1982; IRS 2006). About two decades later, in 1894, the US Congress attempted to impose a similar tax by passing the Tariff Act (1894) (Miller 1895). However, in 1895, the US Supreme Court ruled that the imposition of income tax was unconstitutional. The constitutional requirement to enable the imposition of income tax was put in place in 1913 by the Sixteenth Amendment, and hence the imposition of a Federal Income Tax was re instituted (IRS 2006). Since then taxes have been imposed on a full SA basis, that is, taxpayers assess their own tax liability and pay taxes or receive a refund. This system is premised on 'voluntary compliance' (The Treasury 2004).

A series of tax reforms and changes had taken place in the US since the introduction of SA almost a century ago. These reforms have been aimed at improving the convenience of payment and collection of taxes; reducing evasion and underreporting; and at having a faster response to revenue lag (the timing of collection). They included the introduction of a withholding tax system (i.e. deduction of tax at source) in July 1940 by the Income War Tax Act (1940) followed by the 'Pay As You Go' (PAYG) system in 1943 (Lent 1942; IRS 2006). In the 1940s, wage-earners were assessed half-yearly on the basis of their earnings as reported by their employers for each half-year, ending in April and October respectively. The annual returns then had to be filed in September or October by employees (Lent 1942). The limitations of the system at that time were in relation to coverage and yield; exemptions; annual equalisation; the 'cost of compliance'; the administrative problems pertaining to record keeping; the problems of transition and the incidence of tax. Further, the adoption of withholding tax was found to be unfavourable among certain taxpayers (Lent 1942).

The then income tax administration was being shaped by a few major events such as the development of the standard deduction, per capita exemption, PAYG withholding
tax and the reorganisation of the income tax administration in 1951 and 1952. As a result, in 1953, the Bureau of Internal Revenue was replaced with the Inland Revenue Service or IRS (Cohen 1966; IRS 2006). Subsequently, automatic data processing was introduced in 1959 together with the introduction of legislation for direct filing of tax returns.

With the formation of the IRS, tax collection costs were reduced and it was reported that only half a cent was expended for every dollar of tax collected (Cohen 1966). Deterrence of tax evasion and avoidance among corporations and the rich were significant tax compliance problems. In order to put a stop to corporations and the rich from avoiding taxes, the Tax Reform Act (1969) was introduced (IRS 2006).

Reforms were also instituted in respect of tax administration to improve training and equipment, and to modernise facilities to cope with the increasing workload. An automatic data processing system was implemented, not to minimise the impact of voluntary compliance, but to be used as a valuable tool by tax auditors in performing systematic checks. The automatic processing system encompassed three principal features: a master file of taxpayers, a taxpayer account numbering system and a system of employer identification numbers (Caplin 1962; IRS 2006).

It was claimed that the success of tax structure lay with “...the confidence of the American people in its administration and their faith in the democratic tradition” (Cohen 1966:269). In actual fact, after World War II, the income tax base was converted from a narrowly-based tax affecting some 8 million taxpayers to a broadly-based tax that affected about 70 million taxpayers (Cohen 1966). Due to the inability to audit all tax returns, taxpayers were required to assess their own tax liabilities and to send in their returns together with their payments of tax.

During the 1960s and 1970s, SA was viewed with national pride and regarded as the great strength of the American tax system (Caplin 1962; Cohen 1966; Smith W 1970). Even without direct enforcement activities, 97 per cent of total revenue collected came from self-assessed or voluntary compliance. The remaining three per cent was collected by direct enforcement (Caplin 1962). The good compliance rate among taxpayers was attributed to patriotism, good citizenship and common honesty (Smith W 1970).
In terms of voluntary compliance, early efforts were centred on the service programme for auditing returns (Smith W 1970). This programme relied heavily on the Taxpayer Compliance Measurement Programme (TCMP) which was launched in the mid 1960s and designed to nurture and support the SA system (Cohen 1966). The IRS also utilised computer processing to replace the heavy manpower commitment involved in selecting returns for audit. For those classes of returns characterised as ‘low level of compliance’, audits were carried out - 50 per cent of which were carried out in the field and the remainder were carried out in the offices of the IRS (Smith W 1970; Egger 1982).

The audit programme was then expanded to cover taxpayers who had previously not been examined. This approach comprised three major elements, namely pre-identification of large corporate taxpayers; coordinated control to assure prompt audit results and the use of audit teams to conduct uniform audits (Caplin 1962).

The US tax administration’s policy was focused on three main goals, namely seeking more reasonable and responsive interpretations of the tax laws; providing better service to American taxpayers and continuing a vigorous enforcement programme to discourage and deter tax abuse. To ensure that the IRS’s employees possessed the appropriate knowledge and skills to achieve these objectives, classroom and on-the-job training were provided. Consultants were employed to help to improve on the clarity and polite tone of letters and notices sent to taxpayers (Cohen 1966; Smith W 1970).

However, the TCMP was discontinued indefinitely in October 1995 (Horn 1995), citing budget concerns and a congressional cost-benefit review of the programme. In May 2000 a new taxpayer compliance measurement project entitled ‘National Research Programme (NRP)’ was launched to replace the TCMP (White 2001; Mills 2004). The main difference between the audit approach under the two programmes was that NRP auditors appeared ‘more friendly’ by requesting ‘reasonable substantiation’ for income and deductions claimed by taxpayers. The objectives of NRP were wide ranging and included the provision of compliance data, determination of the compliance rate on voluntary reporting and improving IRS operations by providing specific information about non-compliance.
The IRS then endeavoured to speed up and improve the resolution of tax cases; to streamline the management of refund cases; to perfect audit procedures and to strengthen district conference procedures. In addition, the Restructuring and Reform Act (1998) provided the IRS with more flexibility to handle personnel issues (such as the termination of any personnel for misconduct) internally and to implement a new training programme emphasising customer service (White 2000).

The early philosophy of the IRS was to let taxpayers help themselves (Cohen 1966). The current mission statement of the IRS is to “...provide America’s taxpayers top quality service by helping them understand and meet their tax responsibilities and by applying the tax law with integrity and fairness to all” (IRS 2006:4). As such, the IRS has taken steps to monitor and to improve its taxpayers’ assistance and education programmes (Caplin 1962; White 2001). Various programmes, including the Public Information Programme, have been introduced to educate school children. In addition, revenue rulings\textsuperscript{93} are made available to taxpayers. It was envisaged that taxpayers might be able to learn about their responsibilities through the education process and the mass media (Caplin 1962; Cohen 1966; Smith W 1970; IRS 2006). Moreover, the Restructuring and Reform Act (1998) had greatly expanded taxpayers’ right and established a Taxpayer Advocate Service to assist taxpayers with problems that remained unsolved through normal channels (IRS 2006).

The tax returns and instructions have been simplified. Common problems encountered by taxpayers, particularly in relation to the type and colour of return, were identified through national surveys. As a result, different taxpayers are issued with different forms and instructions to accommodate their needs (Caplin 1962; Smith W 1970; IRS 2006).

Although income tax compliance is better in the US than in most other countries, the IRS estimated roughly 15 per cent of individuals’ income remained unreported (Pechman 1990). The annual tax gap\textsuperscript{94} is estimated to be $200 billion of which three-quarters is attributed to individual taxpayers (Dubin 2004), with non-filers representing a significant problem (Rady 1989; Rosage 1996; Erard & Ho 2001).

\textsuperscript{93} Individual rulings were originally issued to specific taxpayers. However, if any were found to be generally applicable, these individual rulings would be converted to revenue rulings.  
\textsuperscript{94} Tax gap is defined as the difference between taxes owed and taxes paid.
There was also concern that the growth of American affluence might have heightened the motives and opportunities for fraud. One survey showed that fraud occurred most frequently among low and middle income taxpayers. Numerous complaints about taxes imposed on taxpayers appeared to motivate non-compliance (Smith W 1970). It was found that the low penalty\(^{95}\) for not filing contributed to its increase (Erard & Ho 2001). Thus a withholding tax may be a better option in terms of both improving compliance and reducing administrative costs (Pechman 1990; Turnier & Little 2004).

There were concerns that the US tax system was too complex, with unclear rules with which taxpayers had difficulty keeping abreast. For instance, there were more than 800 changes to the existing tax code released by the Tax Relief Act (1997) (Rady 1989; IRS 2006). Filing errors among taxpayers have been found to be very significant. The frequent causes of tax filing errors included failure to indicate dependent status and the incorrect calculation of the standard deduction (Minarik 1988). The conduct of the IRS in undertaking its audit activities had, to some extent, actually caused emotional stress to some taxpayers (Banoff & Lipton 2004). It appeared that “…the public wants simplicity…low withholding and big refunds…high taxes on today’s rich and low taxes on future rich” (Minarik 1988:296).

To date, instead of concentrating on taxpayers as a whole as part of its continuing effort to ensure tax compliance, the IRS had taken steps to ensure that its employees meet their tax filing and payment obligations so as to accommodate the statement by the Commissioner of the IRS that “…enforcement begins at home” (IRS 2004:1).

SA has been in place in the US for almost a century. Thus the operations of the implementation of SA are no longer critical issues to the IRS, instead the issue of compliance seems to be the central focus of SA in the US.

2.2.2.2 Canada

Although the tax systems of the US and Canada have some differences, they actually have remarkable similarities in many important areas, as one seems to have borrowed

\(^{95}\) The penalty for not filing is five per cent of the unpaid tax liability for each month of delay in filing the return, subject to a maximum of 25 per cent.
from the other. Their similarities became even more significant after the radical reform [Tax Reform Act (1986)] of the US system. The Reform Act (1986) had brought the two systems closer in areas such as corporate profits and taxes, and individual tax rates (Boidman & Gartner 1986).

However, the US Federal-State and the Canada Federal-Province tax systems are not as similar in design. For instance, since 1931, the Province of British Columbia had imposed taxes at source of 1 per cent on all income over 14 dollars per week (Lent 1942:720). In contrast, the Province of Quebec had its own separate statute by which individuals determine their tax liability according to provincial income tax statutes although the tax base is the same as that arising from the Federal Statute (Boidman & Gartner 1986; Plamondon & Zussman 1998). In 1998, several Provinces\(^{96}\) introduced reductions in personal income tax, except Ontario, which continued to implement the multi-year reduction. In addition to federal taxes, individual taxpayers in Canada need to pay provincial or territorial taxes.

Just as in the US, taxes were first imposed in Canada during the Civil War in the early 1800s. Until the Confederation in 1867, the Colonial Governments in Canada collected and sent taxes to England and France. After the Confederation, the provinces began to impose various taxes until the introduction of the Income War Tax Act (1917) and the commencement of SA (The Treasury 2004). With the commencement of the imposition of Federal Income Tax in Canada, the Department of National Revenue, currently known as Canada Revenue Agency (CRA), was created in 1927.

Since 1970, the personal income tax system has undergone a series of reforms; among these were the major reforms of 1971 and 1987. However, the tax structure has undergone little change (Perry 1996). The current personal tax system is a hybrid system comprising of a combination of a consumption tax and a comprehensive income tax (Dahlby 2001). In spite of various reforms that had taken place, it has been claimed that the current tax system (compared to a flat tax system) is a failure based on the principles of Canadian tax policy namely efficiency, fairness and simplicity (Clemens, Emes & Scott 2001).

\(^{96}\) British Columbia, Alberta, Saskatchewan and Manitoba.
SA is considered to be the most economical and efficient way to collect income tax. Under SA, taxpayers are responsible to pay their taxes according to the Income Tax Act (R.S.C. 1985). For the convenience of taxpayers, three modes of filing returns, namely NETFILE (filing through internet), TELEFILE (filing via telephone) and mail filing of return are available. Taxpayers must file their tax returns by 30 April, except for cases that are granted exceptions under the Fairness Provision (CRA 2006).

The objective of the Fairness Provision is to ensure that fair treatment be given to taxpayers. Taxpayers must apply in writing and explain in detail the reasons for not filing on time. The CRA, in exercising its discretionary authority, would conduct the necessary reviews and decide on whether the penalty imposed for late submission be cancelled or waived, or the late return(s) be accepted. Returns must be filed together with payments, or alternatively, taxpayers may make payments electronically (CRA 2006). The CRA issues notices of assessment after tax returns are filed. Taxpayers are then allowed to amend their returns after receiving the notices of assessment, following which notices of reassessment are issued (CRA 2006).

Decades ago, issues pertaining to compliance problems were closely related to the complexity of tax law and the government. During that time, the SA system in Canada required taxpayers to collect the necessary information before filing their returns. It was assumed that taxpayers knew what to do without realising that the law was too complex and that taxpayers might not know how to correctly apply the law. In fact, complexity of the tax law was not only confined to the Federal tax code but applied also to the provincial tax laws. In the eyes of Canadian tax authority, "...ignorance is not bliss" and the taxpayer "...who does not comply through misunderstanding or lack of knowledge is guilty regardless" (Dancey 1982:220).

Taxpayers felt that they had to play too many 'tax games' and that the tax laws were unfair. Taxpayers also perceived that the government did not treat them equally and

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97 This Act may be cited as the Income Tax Act (R.S.C. 1952) <http://laws.justice.gc.ca>.
98 This provision is meant for taxpayers who were unable to file their return on time due to extraordinary circumstances or difficulties such as a natural disaster, error in CRA publications, disruption of services (e.g. postal strike) or financial hardship.
99 The amendments could be in relation to increases in deductions.
100 The government means Department of Finance, the Department of National Revenue (Revenue Canada) and ultimately Parliament.
fairly. It appeared that in Canada, the upper and middle-income earners and the rich were taxed more heavily than lower income earners (Dancey 1982; Speirs 1999).

Various measures to overcome the problems have since been taken. For instance, the CRA conducts an annual Review Programme among taxpayers to promote awareness of compliance with the tax laws. Taxpayers’ common areas of misunderstanding are highlighted through the client educational programme. As part of customer service, vision-impaired taxpayers are able to download the Braille version of information from the CRA website. To ensure a high standard of public compliance, vigilant and continuous inspection of returns is maintained. A matching programme is used to compare certain information in the returns with other returns from other sources such as employers, banks and corporations that paid interest and dividends. Just like other SA regimes, the keeping of records is essential. In Canada, these need to be kept for a period of six years (CRA 2006).

Non-compliance among salary and wage earners in Canada seem to be relatively low, as their taxes due are collected through payroll deductions and their income is verified by references submitted by their employers. Hence, less audit activity is conducted on these taxpayers. Instead, the audit programmes are targeted at the self-employed, professionals, corporations and trusts. In addition, a post assessment review programme is carried out to discourage tax avoidance (CRA 2006). In the post assessment review, comparison is made of deductions claimed by taxpayers with those in the previous years’ returns, and with third party sources and other databases.

2.2.2.3 Japan

Japan first introduced SA in 1947 to replace the authoritarian assessment system as a result of a post-war wave of democratisation. The main objective of SA was to raise the rate of appropriate tax filings and payment of taxes through taxpayers’ cooperation. Initially, the Japanese tax authority encountered difficulties in trying to achieve a high level of compliance due to the low level of tax literacy among taxpayers and poor management by the tax authority. Over the years, the situation has improved as a result of taxpayer education programmes and the tax authority’s efficiency in handling tax issues (Yong P 1983; Ishi 2001; Sarker 2003).
In addition to the establishment of SA, two other systems were established namely the ‘Blue Return’ System and the Guidance (or ‘White Return’) System. Under the Guidance System, taxpayers are called to the tax authority and informed of the amount of tax payable, which had been determined in advance through tax audits. This system focused on those who failed to file their returns or had filed false or incorrect returns. To some extent, the Guidance System is contradictory to SA. Hence, attention is more focused on the Blue Return System to encourage small business to set up simple books of account. The Blue Return System normally does not require reassessments to be made unless the tax authority found errors in the entries of taxpayers’ accounting records (Yong P 1983; Kaizuka 1992; Ishi 2001; NTA 2006).

The earlier sources of revenue in Japan had been primarily from indirect taxes. However, based on the recommendation of the Shoup Mission\(^{101}\) (1949-1950), a consistent application of comprehensive income taxation was introduced (Kaizuka 1992; Ishi 2001; NTA 2006). The Shoup Mission recommended an overhaul to the Japanese tax system in order to attain vertical equity. The tax base shifted to a heavy reliance on direct taxes, which in turn resulted in fluctuations in revenue collections due to the phases of business cycles (Hatta 1992; Kaizuka 1992; Ishi 2001). The tax system had also moved from the schedular tax system to the single system, with a reduction in the top tax rate from 85 per cent to 55 per cent. Further, credit was allowed at personal tax level for dividend income received. Overall, the whole tax system was focused on voluntary compliance in assessing tax liabilities (Kaizuka 1992; Ishi 2001; NTA 2006).

Soon after the implementation of Shoup Report\(^{102}\) in 1951, a modification to the original recommendation of the Shoup Mission took place whereby collection of taxes at source was restored. The modification included treatments on gains or losses from securities where such transactions were no longer treated as coming under income tax but would come under the security transaction tax. The personal income tax system reverted back from the single system to the schedular tax system (Kaizuka 1992). As a consequence of this modification, the actual structure of taxes

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\(^{101}\) Members of the Shoup Mission included Carl Shoup, William Vickery and Howard R. Bowen (Hatta 1992:231).

\(^{102}\) A report prepared by the members of the Shoup Mission.
was considerably different from those proposed by the Shoup Mission. Nonetheless, too much reliance on withholding taxes had resulted in an inequitable tax system, an inefficient tax administration and where the self-employed routinely evaded taxes through underreporting (Kaizuka 1992; Ishi 2001; NTA 2006).

Meanwhile, in 1989, Value Added Tax (VAT)\textsuperscript{103} was implemented through a series of tax reforms under the Nakasone-Takeshita Tax Reform (NT Reform) (Hatta 1992; Ishi 2001). The implementation of VAT reduced the unfairness associated with different compliance rates and subsequently enhanced horizontal equity. The NT Reform brought about two major changes; firstly, the establishment of a flat rate of tax (20 per cent) on interest income, thereby ending income tax exemptions for small savers and a large deduction on the personal income tax rate. Secondly, a PAYG system was introduced for all salary and wage workers.

The tax compliance\textsuperscript{104} rates under SA in Japan were “...about 90 per cent for salary workers, 60 per cent for non-farm self-employed workers and 40 per cent for farmers” (Hatta 1992:233). The poor compliance rate among the self-employed was due to four basic reasons. Firstly, there was no system of identification such as practised in the US social security system; thus it was possible that, in Japan, an individual was able to open saving accounts and hold financial assets under fictitious names. Secondly, there was a lack of enforcement in relation to penalties on tax evasion. It was reported that only 10 people were imprisoned annually for tax evasion. Thirdly, the budget allocation for a computerised system was low, only about 10 per cent of that budgeted for in the US. Lastly, there was a severe shortage in tax collectors even though the number of businesses filing tax returns had increased threefold since the Shoup Mission. Statistics showed that the ratio of tax collectors in Japan was 1 to every 2200 people, which was comparable with that in the US, where the ratios was 1 to every 2600 people. In other countries such as the UK, West Germany and France, the ratio was 1 to every 500 (Hatta 1992).

Currently, SA is firmly established as part of the Japanese tax system. The success of the SA system has been due to the efficiency of the Japanese tax administration in

\textsuperscript{103} A similar VAT system was recommended by the Shoup Mission, but it was deferred by the Japanese Government at that time. Even so, the introduction of VAT was encountered with strong opposition based on the comprehensive income tax (Kaizuka 1991, quoted in Kaizuka 1992:222).

\textsuperscript{104} In this context, compliance refers to paying compliance.
taking both legislative and administrative measures to support the system. These measures include appropriate implementation of withholding taxes and provisions for proper bookkeeping requirements. The introduction of the national tax comprehensive management system known as Kokuzei Sougou Kanri (KSK system) has also contributed to the success of SA in Japan.

The KSK system is a computerised or automatic data processing system that is able to store taxpayers’ information, carry out administrative tasks, present statistical information and issue certificates for taxpayers who pay their taxes promptly. The system is able to identify deficient returns and classify them into two categories: those that require tax officials’ visits and those that do not require tax officials’ visits to premises of taxpayers (Ishi 2001; Sarker 2003).

The Japanese tax system continuously focuses on enhancing tax compliance through having good relationships with customers (taxpayers) and undertaking enforcement activities. For instance, taxpayers may choose to submit their returns by postage-free filing or through electronic filing. Where taxpayers require more explanation, taxpayer information services (including tax counselling) are provided. In terms of enforcement, strong and disciplined audit teams conduct three types of examination: General Examination (where basic details are required), Special Examination (dealing with complicated and tax evasion matters) and Point Examination (covering field examination of specific items). For delinquent taxpayers, an appropriate audit would be conducted coupled with the imposition of a range of penalties.

In terms of improving voluntary compliance, SA has been successful in Japan through the focus of the tax authority on the ‘four pillars of tax compliance’ (Sarker 2003:20); namely public relations, tax education, tax consultation and guidance and examinations.

For public relations, the media is widely used to keep taxpayers up to date on changes to tax law. A ‘know your tax’ week is organised for similar purposes. Tax education is also provided to students who are presumably future taxpayers. For this purpose, supplementary textbooks on tax education, classes and sponsorship of essay writing competitions on tax topics are provided, while seminars on public finance
and the economy are conducted for students (Yong P 1983; Kaizuka 1992; Ishi 2001; NTA 2006).

As for tax consultation, a formal consultation service, ANSER\textsuperscript{105} is provided through telephone or Internet. Lastly, the tax authority, assisted by private cooperative organisations such as Blue Return Associations, Corporation Associations and the Indirect Tax Association, provide guidance on, and examinations of, taxpayers' record keeping to improve standards and the compliance of tax returns (Sarker 2003).

The success in implementing SA in Japan has not come about overnight. It is as a result of almost half a century of experience, coupled with strong co-operation between the tax authority and taxpayers.

2.2.2.4 Pakistan

Upon gaining independence in 1947, Pakistan adopted the Indian Income Tax Act (1922). Numerous amendments have since been made through the various Finance Acts or Finance Ordinances. Revenue collections were derived mainly from withholding and presumptive taxes regimes even though the number of taxpayers has grown to around one million in year 2000 (CBR 2006).

SA\textsuperscript{106} was introduced under the Income Tax Ordinance (1979) with the view of keeping pace with the economic and social development of the country. SA was applicable to only certain categories of taxpayers such as companies, registered and unregistered firms, Hindu undivided Families and Association of Persons. Not long after the implementation of SA, the Central Board of Revenue (CBR) excluded companies and financial institutions from SA, but taxpayers having income above RS2 Million were still subjected to SA (Rehan 1998).

For the YA 1995-96, a change in legislation required all taxpayers, other than companies, to file returns under SA irrespective of the quantum of income declared. The returns were to be filed voluntarily by 30 September 1995 and there were many

\textsuperscript{105} Automatic Answer Network System for Electrical Request.
\textsuperscript{106} SA in Pakistan is referred to as Self Assessment Scheme rather than Self Assessment System.
other conditions\textsuperscript{107} imposed including that the taxes to be paid must be 20 per cent higher than those of the preceding year.

Despite SA being operational for more than two decades, it is interesting to note that repeated public reminders have been made regarding its implementation. For instance, the Finance Act (1998) promulgated SA for the YA 1998-1999. Since then, an annual circular\textsuperscript{108} has been issued with regards to the scope of the implementation of SA and variations appeared to be applicable from year to year. Such problems arose because of the absence of thorough measures when a particular policy was to be implemented, frequent and \textit{ad hoc} changes in legislation and administration, and the hasty manner of implementation of certain policies (Nasir 2001; CBR 2006).

Although previous governments attempted to reform both the tax system and the tax collection machinery, and in spite of considerable efforts to enhance the efficiency of the tax administration, there has been an ongoing lack of alignment between the administrative framework and changes in tax policy. For example, the switch to full SA was not accompanied by increased enforcement activity such as proper tax audits (CBR 2006).

Problems of compliance under SA persisted and currently the relationship between taxpayers and tax collectors is largely adversarial. Very often, there are allegations of coercion and collusion. In addition, Pakistan’s fiscal crisis has caused a crisis of confidence between taxpayers and the government. This has led to the appointment of a task force to review the tax administration and make recommendations for improvement (CBR 2006).

There have been further reforms and revamps to the CBR and the tax administration such as the introduction of the Universal SA Scheme (USAS) by the Income Tax Ordinance (2001). The USAS has proven to be a useful scheme (Amjad 2003; Hussain A 2004) and also “…the cornerstone of the reform strategy of CBR” (Mughal 2004:2).

\textsuperscript{107} Other conditions include: a) if the declared income is greater than RS1 million, wealth tax return under the Wealth Tax Act (1963) had to be filed together with an income tax return; b) the tax payable under Section 54 must be paid; c) the income declared was not a lump sum figure and d) the taxpayer was not involved in any pending appeal cases.

With the objective of attaining uniformity and equity, the USAS is an optional scheme that is available to all existing and new taxpayers. Under the USAS, tax returns are accepted, provided submissions are made within the stipulated time periods, and taxes due are paid along with the returns. Assurances have been given that “...there would be no arbitrary selection of cases for audit or scrutiny” (Hussain S 1999:2). Instead, counselling by the Regional Commissioner would be carried out in cases of possible concealment or evasion by taxpayers before any proceeding would be taken under the law. These benefits are not applicable to certain taxpayers. With regards to returns, three copies of returns are required for qualified non-corporate taxpayers.

The USAS has not received favourable responses from owners of large businesses or from tax practitioners (Rizvi 2001; Rana 2002; Raza 2003). Tax practitioners are of the view that the USAS has caused losses in revenue rather than increases in tax collection, as the tax authority would accept any return irrespective of whether losses or profits were declared by large business taxpayers. Furthermore, only 15 per cent of these large business taxpayers would be selected for detailed audit. This has created the feeling of unfairness on the part of those who have been selected for audit.

Nevertheless, for the YA 2002, under SA, taxpayers needed to file their returns that would be accepted under the similar conditions as for the YA 1998-1999. All submissions had to be accompanied by relevant documents such as salary statements. Business and professional taxpayers needed to furnish relevant accounts to the CBR. Tax returns (other than those reporting income from salary and property) would be subjected to selection for tax audit. The selection would be through a

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109 These include non-residents, public companies quoted on the stock exchange, banking companies, leasing companies, Modarabas, cases in relation to income under declared and those cases on appeal.
110 Ibid.
111 Para 12 (a) Circular no. 18 of 1999 states “...one copy to be retained by the Bank, the other by the department & the third copy shall be signed and stamped by designated Income Tax Authority”.
112 This was stated in the circular No 7 of 2002 as SA rather than USAS.
113 Some taxpayers are considered ineligible for SA and are subject to total audit if a) loss has been declared in the return; b) income reported as a lump sum figure; c) the taxpayer is a non-resident; d) pending appeal cases; e) there is evidence of concealment of income or f) the return has been selected for total audit.
114 These accounts are copies of trading/manufacturing, profit and loss accounts, balance sheet, receipts and expenditure statement, and depreciation schedule (if applicable).
computerised balloting system, where 20 per cent of the tax returns would be selected either randomly or parametrically as deemed fit by the CBR (Ahmad 2002).

The success of SA or USAS in Pakistan will depend heavily on the simplicity of the tax structure, the tax educational level of taxpayers, the efforts made by the tax authority to gain the confidence and co-operation of taxpayers and the willingness of taxpayers to comply with the tax law. In addition, reducing the discretionary power and corrupt practices among tax officers would likely contribute towards the enhancement of tax compliance in Pakistan.

2.2.2.5 Bangladesh

Income tax in Bangladesh originated in 1886 via the Indian Income Tax Act. It was subsequently streamlined by the Income Tax Act (1922). Over the decades, until 1984, income tax was imposed under the Income Tax Act (1922) albeit with modifications.

In 1984, the Income Tax Ordinance, which is the current legislation, came into effect. The SA system was introduced by the Finance Act (1981) along with the existing OAS. Thus, the current income tax system is a combination of the OAS and SA. The initial intention for the introduction of SA was to relieve marginal taxpayers from the statutory formalities of the OAS (Sarker 2003). Seven years later, in 1991, SA was extended to include all taxpayers other than companies and directors holding more than 5 per cent of shareholdings. Those exempted were still assessed under the OAS (Sarker 2003).

With the introduction of SA in Bangladesh, the major problem encountered was the filing of returns.\textsuperscript{115} In fact, the majority of taxpayers were still submitting their returns through the OAS. While in other countries the emphasis of SA was on taxpayer compliance, it appeared that in Bangladesh, the objective of the SA system was to increase the number of taxpayers using SA instead of the OAS (Sarker 2003).

The problems faced by the Bangladeshi tax administration in implementing SA included the narrowness of the tax base, the existence of excessive evasion and

\textsuperscript{115} In 2000-01, it was reported that of the total tax returns submitted, only about 20 per cent were done so via SA (NBR Research and Statistics 2000, quoted in Sarker 2003).
avoidance of tax and an inadequate\textsuperscript{116} tax administration. While the higher income group\textsuperscript{117} contributed the most in terms of income tax revenue, this was principally collected in the form of withholding taxes and indirect taxes (Sarker 2004).

The excessive levels of evasion and avoidance were due to several reasons. Generally, the earnings of taxable individuals were not transparent. The tight family structure with high dependency\textsuperscript{118} on the taxpayer has contributed to this problem as the taxpayer would always have the "…motivation to avoid and evade tax because he thinks for other family members who are dependent on him" (Chowdhury 2003:1). The discrimination felt by the employees of private firms also encourages tax avoidance and evasion.\textsuperscript{119} Therefore, it appeared that in Bangladesh the "…SA system encourages underreporting and tax evasion" (Sarker 2003:17).

In terms of tax administration, there was an enormous backlog of cases with some of those listed as pending by the National Board of Revenue (NBR) being dated as far back as 10 years. The backlog was largely due to the 'freedom' available for taxpayers to appeal if they were not satisfied with the NBR's rulings, or where taxpayers might file a writ of petition if they were charged for tax evasion (Byron 2004). The tax administration appeared to be weak and its control mechanisms such as audit, investigation and inspection did not function independently of the assessment process (Chowdhury 2003).

As a result, the Finance Act (1999) introduced drastic changes to tax administration in Bangladesh. The changes included simplifying SA in that taxpayers lodging returns via SA were required to submit their returns together with the taxes due. A computerised system is used to randomly select 20 per cent of tax returns submitted for audit. If the income reported in any return was 15 per cent greater than the preceding year's, no audit would be needed (Sarker 2003, 2004; NBR 2006).

\textsuperscript{116} In terms of resources, skill, size and efficiency in carrying out assessment.
\textsuperscript{117} It was reported that for fiscal year 1999-2000, there were nearly 700,000 individual taxpayers. However, only about 73 per cent of personal income tax was collected from 13 per cent of the taxpayers having income above 125,000 Taka and also having high marginal rates (NBR Annual Report 2000). A large number of registered taxpayers remained in the lower income group and basically pay very minimal tax. This is due to the excessive incentives and exemptions available to this group of taxpayers (Sarker 2004).
\textsuperscript{118} Bangladesh has among the highest dependency ratio in the world. High dependency means having family members or relatives who are dependent on the taxpayer as the family breadwinner.
\textsuperscript{119} Income taxes for government employees are deemed paid by the Government of Bangladesh. However, for employees in the private sectors, similar payments would be subjected to additional tax (Sarker 2004).
As for a business operator, a certificate carrying the taxpayer’s Tax Identification Number (TIN) has to be displayed at the taxpayer’s business premises. To differentiate the types of taxpayers, a separate numbering system is used for those involved with VAT. It is proposed that the TIN and VAT numbers be merged in the near future so as to minimise the overall administrative costs.

A ‘Spot Assessment’ system was also introduced to target non-filers (Sarker 2003). Should a non-filer be identified (i.e. ‘spotted’) by tax investigators, an ‘on the spot’ filing would be required. In addition to adopting the above strategies, other strategies were also implemented to enhance compliance. For instance, in order to eliminate corruption and to simplify the assessment system, recognitions and prizes are awarded to those tax officials who manage to collect extra revenue. Recognitions and prizes have also been proposed for taxpayers who comply promptly. The Commissioner of Taxes would only conduct direct purview on a certain percentage of SA cases, and thus would be able to reduce the discretionary powers among the tax officials. Other strategies include tax counselling for taxpayers and the use of the mass media and Internet to educate taxpayers.

Needless to say, the current practice of operating parallel assessment systems, i.e. both SA and the OAS, has failed to achieve a satisfactory level of compliance. There is a need in Bangladesh to change to a fully fledged SA system. To effectively implement SA, first and foremost, there is a need to have a proper process of auditing tax returns. Secondly, non-compliant taxpayers should be dealt with justly and swiftly so as to encourage others to comply. Thirdly, taxpayers’ level of tax education needs to be raised so that they would be better able to comprehend and understand the tax law and their tax obligations. Fourthly, proper accounting standards and record keeping among business operators must be enforced. Lastly, to ensure compliance, there must be a balance between the elements of incentives and disciplinary action (Chowdhury 2003).

2.2.2.6 New Zealand

SA was introduced in NZ as a result of tax reform in the mid 1980s (The Treasury 2004). Tax reform was an integral part of an economic restructuring and liberalisation process to meet market forces. Basically, tax reform was necessary due
to the failure of the then existing system to collect sufficient revenue to finance government expenditure. The old system offered too many tax incentives and loopholes, and was too costly to administer. The high tax rates\textsuperscript{120} on personal income tax had resulted in tax avoidance and evasion (McCaw 1982, quoted in Stephens 1993). Furthermore, the introduction of SA was expected to "...add and enhance other improvements being made to simplify tax administration" (IRDNZ 2001:1).

The NZ tax administration adopted the practice of SA for many years before implementing the necessary legislative changes. The government felt that this situation caused deficiencies in the tax system and gave rise to a duplication of responsibilities in the sense that taxpayers would self-assess their own tax liabilities, but the Commissioner was still required by the then existing legislation to make an assessment. This duplication in actual fact caused inefficiencies and thus was uneconomical in terms of administration (Birch 1998).

Subsequently, the SA system was legislated effective from 1 April 1999. This reform was essential to bring the Tax Administration Act (1994) in line with existing administrative practice. The legislation provided a legal framework that was consistent with the other administrative reforms such as penalty provisions, disputes resolution procedures and binding rulings legislation\textsuperscript{121} (Birch 1998; IRDNZ 2001).

Although SA in NZ has been legally established, taxpayers are given the option of either assessing their own tax liability or electing for the tax authority to undertake the assessment. This seems to be inconsistent with the objective of SA as practised in other countries. The argument put forward by the Commissioner was that the Inland Revenue Department (IRD) was merely doing a service by assessing the tax liabilities on behalf of taxpayers. This would effectively help in establishing the date of notice of assessment, as the date of filing the return is deemed to be the date of the

\textsuperscript{120} Over the years from 1984 to 1990, the tax system has moved from a 19-tier scale to a 5-tier/bracket personal tax rate scale where the highest rate was reduced from 66 per cent to 33 per cent (Stephens 1993). The top rate of 33 per cent was applied until the year of 2000 and then increased to 39 per cent. Currently, the personal tax rate is utilising a 3-tier scale with the lowest rate of 19.5 per cent and the highest rate remaining at 39 per cent (IRDNZ 2006).

\textsuperscript{121} The system of binding rulings was introduced before the legislation of SA.
notice of assessment. The tax authority only issued a statement\textsuperscript{122} confirming the amount of tax due, as no notice of assessment is issued (Birch 1998).

In addition to the assessment of tax liability, SA (as legislated) also allows for an assessment of any net loss and terminal tax or refund due (IRDNZ 2001). In the case of adjustments to the returns, a two-month period from the date of return being lodged is given to taxpayers who may wish to make any necessary amendment in respect of their respective tax returns. In contrast, the tax authority requires a four year period\textsuperscript{123} to refund any excess tax to taxpayers. These are examples of some of the issues causing ongoing disputes between the IRD and taxpayers.

The issue of disputes arose even before the SA system was legislated and has since become a major concern. Consequently, in July 2003, a discussion document entitled ‘Resolving Tax Disputes: A Legislative Review’ was issued. The purpose of this discussion document was to review the dispute provisions introduced in 1996. The aim of the dispute resolution process was to have fairer, more efficient and quicker legislative and administrative practices in the tax system before a case was brought to a court of law (KPMG 2004). The tax authority recognised that taxpayers’ compliance was generally affected by their perceptions of fairness and the speed with which disputes were resolved. There was also concern that the tax legislation need to be consistent with the act of self assessing (Pallot 2006:2). To achieve this, the legislative changes\textsuperscript{124} came into effect on 1 April 2005 to enhance the implementation of SA (Pallot 2006).

The NZ SA system is firmly established with extensive reliance on the tax withholding system for wages, salary, interest and dividends. Many taxpayers are not required to file tax returns but are required by the Tax Administration Act (1994) to keep and maintain certain records. In some specific circumstances, the Commissioner has the discretion to require further accounts or records to be kept or maintained. In the case of ‘non-filing’ taxpayers, the NZ SA system is similar to that

\textsuperscript{122} A Personal Tax Summary or Statement of Earning is issued upon request and the taxpayers are required to confirm the correctness of this statement.

\textsuperscript{123} Prior to legislation for SA, an eight year period was needed.

\textsuperscript{124} Following the proposal outline in the government discussion document entitled “Legislation for self assessment of tax liability” issued in April 1998.
of the UK in relation to the finality of an assessment. A non-filer\textsuperscript{125} is to "...be considered to have assessed their tax liabilities for an income year to ensure their respective tax positions for a year become certain and final in the same way as for filing taxpayers" (IRDNZ 2001:5; James 1996; Hale & Chien 2003).

2.2.2.7 Australia

The introduction of SA was part of the tax reform process in Australia, which began in 1986, and has been well integrated into the overall Australia taxation system (Sandford 1994; Cowdroy 1998). The Australian Tax Office (ATO) recognised that the traditional assessment system of 'checking and ticking' (Sandford & Wallschutzky 1994b; Marshall, Smith & Armstrong 1997) was not cost effective and had little effect on the overall compliance with the income tax law (D'Ascenzo 2001).

SA was expected to provide a better avenue for improvement in the efficiency and effectiveness of ATO as well as operating as a vehicle for enhancing taxpayer compliance (Cooper 1995; ATO 2006; Inglis 2002a). Although the move to SA by the ATO was reflective of an adaptive and responsive organisation (D'Ascenzo 2001), the essence of SA was explicitly meant to shift the burden of assessment from the tax authority to taxpayers.

In Australia, SA was introduced on a piecemeal basis. Firstly, it was applicable in part only to individual taxpayers, but was subsequently extended in full\textsuperscript{126} to companies and superannuation funds. Individuals taxpayers are currently still subjected to a modified form of SA i.e. a hybrid between a traditional assessment system and a true SA regime\textsuperscript{127} (Dirkis & Payne-Mulcahy 2002) where taxpayers complete and lodge their returns and the ATO computes the tax liabilities.

Subsequent to the implementation of SA, modifications to improve the system were carried out in 1992. The modifications included the introduction of public and private rulings, interest for under payment or late payment of tax and a new penalties

\textsuperscript{125} Taxpayers having only wages, salary, interest or dividend income would not be required to file any returns as their tax payments have been withheld by their employers or banks.

\textsuperscript{126} Full SA means the lodging of a return is deemed as an assessment issued.

\textsuperscript{127} The true SA regime means a full SA where taxpayers will assess their own tax liabilities and pay the taxes due. In other words, the tax authority does not compute the tax liability.
regime (Sandford & Wallschutzky 1994a; Cooper 1995; Dirkis 2002; D’Ascenzo and Poulakis 2002). Public\textsuperscript{128} and private rulings are meant to deal with specific and different circumstances encountered or likely to be encountered by taxpayers. As such, different public rulings such as product rulings\textsuperscript{129} and class rulings\textsuperscript{130} were subsequently introduced (Meredith 2002). In addition, a shorter period of review for individual resident taxpayers with simple tax affairs was implemented with the intention of reducing record keeping obligations (D’Ascenzo & Poulakis 2002).

Under SA, the tax returns filed by non-individual taxpayers are deemed as an assessment issued by the Commissioner of Taxation for various purposes under the Income Tax Assessment Acts. For individual taxpayers, a notice of assessment is issued by the ATO. The ATO accepts most returns at face value and processes them without any review. Instead, emphasis has shifted to taxpayers’ advisory services and post assessment checking including tax audit. The ATO may query or audit any claim made, and may impose penalties and/or charge interest on unpaid taxes that may be discovered (D’Ascenzo & Poulakis 2002; Inglis 2002a; The Age 2003).

After nearly two decades since the implementation of SA in Australia, it has enabled the ATO to better utilise its resources and to focus on taxpayer services and post-assessment compliance activities (D’Ascenzo 2001; D’Ascenzo & Poulakis 2002). The ATO’s success in implementing SA is partly attributed to its comprehensive compliance programmes.\textsuperscript{131} The annual compliance programme is drawn up by the ATO for various categories of taxpayers. The programme sets out the ATO’s compliance priorities and approaches in tackling aggressive tax planning and spells out clearly what it intends to do to ensure the integrity of the tax system (Paddock & Oates 2003). This programme also adopts a general approach to providing assistance and education to support taxpayers in self-assessing their taxable income and entitlements. The information needed is made available through publications such as ‘Taxpack’, ‘e-tax (electronic lodgement)’, ‘Retirees TaxPack’ and ‘Short tax return’

\textsuperscript{128} As of year 2002, the ATO issued approximately 3,500 public tax rulings (Inglis 2002a:5).
\textsuperscript{129} Product rulings usually deal with an investment product, whereby the Commissioner rules publicly on the availability of any tax benefits.
\textsuperscript{130} Class rulings enable the Commissioner to provide legally binding advice in response to a request from an entity in relation to a specific class of persons regarding a particular arrangement.
\textsuperscript{131} In the year 2005, the ATO published for the fourth year the general compliance programmes with the goal to openly share with the community the strategies and the results achieved in the previous year (ATO Compliance Program 2005-2006).
in which explanations on common mistakes are included. To ensure that taxpayers comply with the law, complex audits and reviews or enquiries before returns being lodged or assessments issued were conducted. Finally, to assist taxpayers in understanding their rights and how they might be dealt with by the ATO, the Taxpayers’ Charter and the compliance model guide were issued (ATO 2006).

Business owners are required to prepare their own activity statements with regards to goods and service tax and income tax and also to understand their obligations in maintaining adequate records. An electronic tool was developed to enable them to self-assess their record keeping capabilities and identify possible weaknesses (ATO 2006).

Various procedural changes have also been made in order to enhance compliance. Among these, an option to move from monthly to quarterly lodgement of business activity statements for some employers withholding PAYG was given. The ATO also endeavours to identify patterns of poor compliance; competency issues among tax agents in performing their duties; and to focus on key compliance features such as tax evasion and fraud, aggressive tax planning, international tax issues and overdue debt. Taxpayers who either do not lodge or lodge late are also highlighted for further action. Lastly, for those who lodge returns and may be involved in the cash economy, their financial performance would be scrutinised against industry norms.

The introduction of SA in Australia had led to changes in the administration of the ATO (Marshall, Smith & Armstrong 1997; Baldry 1999a, 1999b) and changes in enforcement strategies by the ATO whereby post assessment activities such as audit have become significantly more important (Baldry 1999a, 1999b; Inglis 2002a). Further, the ATO, in its approach also aims to influence people’s decisions in meeting their obligations (ATO 2006).

Unfortunately the major shortcoming of the SA system lies in the complexity\(^\text{132}\) of the Australian tax laws, where taxpayers have many and various opportunities to deal with uncertainty (Cooper 1995). As a result of uncertainties in interpreting and

\(^{132}\) A survey carried out by Ernst and Young (2002, quoted in Inglis 2002a:5) noted that the Income Tax Assessment Act 1936, the Income Tax Assessment Act 1997 and the Schedule to the Taxation Administrative Act (1953) contained approximately 8,500 pages of legislation.
applying the tax law, and increased enforcement activities under SA, Australian taxpayers tend to rely heavily on tax professionals for advice and also to seek assistance of tax agents to file their returns (Marshall, Smith & Armstrong 1997; Russell 2000). While the ATO has endeavoured to educate taxpayers and simplify the law (Cowdroy 1998), the “…tax administration and law still remain contentious, complex and ambiguous…” and has resulted in increases “…in appeal against penalties, tax rulings and tax law interpretations” (Niemirovski, Baldwin & Wearing 2001:207).

Even with the successful implementation of SA, improvement remains a key focus of the ATO. Consequently, the Australian Treasury released a discussion paper entitled ‘Review of Aspects of Income Tax Self Assessment'\textsuperscript{133} to provide avenues for discussion and to review possible changes to SA for both corporate and personal taxation. The review\textsuperscript{134} had identified and addressed several features in the existing SA including improving the accuracy and timeliness of ATO’s advice, reducing the period of uncertainty pertaining to the finality of an assessment, achieving a more balanced penalty arrangement and ensuring that taxpayers have a better understanding of their obligations under SA.

2.2.2.8 United Kingdom

The Australian SA model is frequently being cited in discussions in the UK public administration, and the UK tax system does appear to be heavily influenced by the ATO’s practices (James 1996). Following the introduction of SA in Australia, there had been suggestions that the UK should move to SA (James & Nobes 2000). Arguments for SA were provided in the two consultation documents published by the Inland Revenue (IR) in 1991 and 1992. Subsequently, on 16 March 1993, the UK Government proposed the adoption of SA as an option to the tax system, particularly for individual taxpayers under the PAYE system.

The introduction of SA seemed to be the most fundamental reform of the personal taxation system and the biggest single change in the UK since the implementation of PAYE in 1944 (Smith D 1999; James & Nobes 2000; Hasseldine & Hansford 2003; Moneyextra 2004). As such, the introduction of SA required at the outset extensive

\textsuperscript{133} Copy of the discussion paper can be obtained via \url{http://www.selfassessment.treasury.gov.au}.
\textsuperscript{134} Detail report of the review is available at \url{http://selfassessment.treasury.gov.au}.
and ongoing consultation with both the public and the representative bodies on operational issues (James 1996; Barbour 1997; Hansford & McKerchar 2004).

SA was originally referred to as ‘A Simpler System For Taxing the Self-Employed’\(^{135}\) and ‘A Simpler System For Assessing Personal Tax’\(^{136}\) (Thompson & Teviotdale 1999:274). The objective of SA was to make the tax system simpler, easier and fairer to taxpayers, to make it possible for the IR to accept the Statement of Accounts without further review, and to allow taxpayers to pay the right amount of taxes at the right time without intervention by the IR. In addition, SA was expected to allow taxpayers to understand and to have more control over their own tax affairs (James 1996). This was expected to eventually open up ways for further reforms to simplify, unify and improve the system of personal taxation especially in relation to customer services through greater co-operation between taxpayers and the IR (Brodie 1999; Thompson & Teviotdale 1999).

However, it appeared that the real objective of SA was to reduce administrative costs.\(^{137}\) It was reported that the administrative cost of the UK tax system as a percentage of tax revenue was much higher compared with that of Canada and Australia.\(^{138}\) Further, it was reported that the cost of collection from the self-employed was 3.7 times higher as compared with the employed (Thompson & Teviotdale 1999).

Currently, SA in the UK is only applicable to one-third of those taxpayers who are required to lodge returns.\(^{139}\) The remaining two-thirds (including employees and pensioners) are subjected to the PAYE system with withholding tax on their income and are not required to lodge returns (Sandford & Wallschutzky 1994b; Brodie 1999; IR 2004; Whiting 2004; Cicutti 2004). It was proposed that SA be extended to the whole population of the PAYE system in order to give these taxpayers the

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\(^{135}\) This was the first consultative document aimed at self-employed taxpayers, as salary and wage taxpayers were not required to file returns as they were subject to the PAYE system.

\(^{136}\) This appeared to be the second consultative document.

\(^{137}\) The IR estimated that over the 15-year period to 2007-2008, SA would result in administrative savings of £500 million (IR 2001).

\(^{138}\) For 1986/87, it was 1.53 per cent in UK as compared to 1.13 per cent in Canada and Australia.

\(^{139}\) Individuals who are required to lodge returns include the self-employed, company directors, partners in a partnership, employees with complicated tax affairs (e.g. someone using a company car), employees in receipt of income other than salary (e.g. freelance consultant) and high tax bracket taxpayers (Whiting 2004; Cicutti 2004). In addition, those whose declared income which are not subjected to withholding tax also need to furnish returns to the IR.
opportunity to comprehend their tax responsibilities. The argument against this extension was that it would result in an increase in administrative costs associated with the PAYE system; particularly in relation to the issuance of returns, as currently no tax returns were issued to those taxpayers under the PAYE system (Sandford 1994; Brodie 1999).

Similar to the NZ SA system, for those UK taxpayers who are required to lodge returns, there is a choice to opt for either assessing their own tax liability or to have the IR calculate the tax due. In the latter case, a taxpayer would furnish a similar tax return and the IR would assess the taxpayer's tax liability. This option requires taxpayers to submit their returns four months earlier than the normal stipulated time i.e. by 30 September (Cornell 1996; Turnier & Little 2004).

The operation of SA involves the submission of a Standard Accounts Analysis by those who are self-employed or in business, other than a corporation (Stylianou 1997; William 1999; Brodie 1999; Cicutti 2004). Returns submitted without the Standard Account Analysis may be rejected, in which case the taxpayer is required to revise the return and resubmit by 31 January of the following year. Penalties are imposed for late submissions. The filing of returns is based on the current year basis i.e. the accounting year of the business, which appears to be confusing to new and untrained taxpayers who still preferred the fiscal year basis as practised in Australia (Sandford 1994; Thompson & Teviotdale 1999).

Under the traditional assessment system, collection was fragmented with the balance amount only being paid after settlement of the assessment (or appeal) between both the IR and taxpayer; or a year later as it was under the preceding year basis. Under SA, with the current year basis being practised, tax is paid in three parts with the majority collected on 31 January each year (Thompson & Teviotdale 1999).

The self-employed, partners in partnership and landlords (owning rental properties) are required to keep and maintain records for five years after filing of returns, while

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140 This is applicable to business taxpayers.
141 Briefly, payments on account fall on 31 January and 31 July. Should there be any balance, it needs to be paid in the following 31 January. A prudent assessment of the liability for the year will mean that there is some balance to pay and so on 31 January there is the current year payment on account plus the balance from the previous year.
other taxpayers need to keep their records for a period of 22 months after the end of the respective tax year.

There is a new reporting requirement for business owners to report the benefits provided to their employees from other associated businesses and vice versa (Cornell 1996). In such an event, SA significantly eases the administrative burden of business owners and employees as employee benefits or expenses given dispensation are no longer required to be included in the tax return. However, the employer must first seek dispensation from the Inspector of Taxes, so that the non-taxable expenses need not be filled in the new forms¹⁴² (Cornell 1996; Cicutti 2004).

Continuous efforts to enhance compliance have become essential under SA. The current pay and file system, coupled with increased interest and penalties for non-compliance is in many ways a half-way house to SA (Collier-Keywood et al 1998; Blythe7 2004). Under the SA regime, the IR has a 12-month period after the normal filing date to commence enquiries and the tax officials do not need to furnish any reason or evidence as to why an enquiry is opened. Such practices are clear indications that the IR acts as a checker rather than as a primary assessor (Hansford, Pilkington & Lymer 2004; Collier-Keywood et al 1998). Such practices also give more enquiry powers to the tax authority, and this supports the perception that “…there is the claim that the IR sought to increase their powers via the introduction of SA…” (Thompson & Teviotdale 1999:282).

From the perspective of practitioners, research¹⁴³ had revealed a number of problems encountered, particularly in relation to procedures arising from the implementation of SA (Hansford 1999; William 1999). Firstly, many problems were encountered in completing the Statement of Accounts of which the IR acknowledged the need to make improvement (Smith D 1999: NAO 2001). Although the IR proposed that the Statement should be similar to that of the ‘credit card statement’, in practice, this was still incomprehensible (Brodie 1999). Secondly, SA indirectly restricted the practitioners’ access to well-trained IR staff (Hansford 1999; William 1999). Thirdly, the reorganisation of Tax Service Offices and Tax District Offices coupled

¹⁴² P11D or P9D are forms related to information on benefits received or expenses incurred by an employee.
¹⁴³ A comprehensive research study was carried out by Hansford (1999) on behalf of the Chartered Institute of Taxation, UK.
with the reduction in staff and their inconsistent training, resulted in inconsistent practices at the IR (Thompson & Teviotdale 1999). Finally, the introduction of electronic lodgement of tax returns resulted in software-related problems and this led to increased costs incurred by practitioners. Tax practitioners were unable to electronically file other documents which need certification or client signatures.

From the perspective of taxpayers, problems encountered basically arose from enquiries. For instance, the average time taken for an oral enquiry to be attended to was between one and two hours; and the inappropriate tone of notices had resulted in worries and concern on the part of taxpayers. Some taxpayers reacted in horror when questioned by the IR but the IR regarded such practices as perfectly reasonable and normal (Hansford 1999).

Although the IR emphasised the importance of customer service, its practices actually caused more distress for taxpayers. For instance, the time frame for answering a taxpayer’s letter would normally take less than four weeks, however it appeared that more complicated letters would be set aside and might not be answered for months. Furthermore, some taxpayer services that had previously been personalised were to be undertaken by a team (Brodie 1999). This might have given rise to further fundamental conflict\(^{144}\) and operational conflict\(^{145}\) between the IR and taxpayers (Thompson & Teviotdale 1999).

In addition, the tax returns were quite difficult to master. The IR gave assurances of a simpler format but was not able to deliver as the tax system itself was too complex\(^{146}\) and the vocabulary used was too unfamiliar to taxpayers (Stylianou 1997; Hansford 1999; Brodie 1999; Hinks 2000; CIOT 2002; Roy-Chowdhury 2003). At TaxAid,\(^{147}\) some improvements have been detected, for example, taxpayers who sought considerable help in 1997 and 1998 were able to complete their own tax returns without much help in 1999 (Brodie 1999). However, the returns were still considered not flexible enough to accommodate the different needs of taxpayers,

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\(^{144}\) In that the IR set out to maximise tax collections and taxpayers wished to minimise their contributions.

\(^{145}\) Based on how the tax system operates in practice.

\(^{146}\) For example, tax allowances are given in two different ways - either as deductions or as credits. Income from savings and earned income are taxed at different rates.

\(^{147}\) TaxAid is a registered charity established in 1992 to provide free tax advice and assistance to individuals in financial need.
especially those that frequently shifted from the ‘employed individual’ status to ‘self-employed’ status, or vice versa (Brodie 1999).

In spite of the numerous problems faced by practitioners and taxpayers, the IR claimed that the objectives of SA, as set out by the IR, had been substantially achieved. The IR acknowledged that although there were some initial difficulties, taxpayers and practitioners had coped well with SA (James & Nobes 2000). The SA system had improved the administration of income tax, made assessment more straightforward and allowed for a more focused approach to compliance work (NAO 2001:2). SA had encouraged taxpayers to disclose their existence and bring their tax affairs up to date. Further, SA had brought about innovation (such as e-filing and Orderline for national forms); education programmes for practitioners and employers; publicity and branding; and consultation with external bodies on an unprecedented scale (Smith D 1999; NAO 2001).

Needless to say, there remains room for improvement in the implementation of SA in the UK, particularly in relation to the efficiency of the IR in carrying out its operations and in dealing with taxpayers. The IR needs to adopt a more open approach to achieve better communication, liaison and consultation and to change the existing culture of tax officers (Hansford 1999; Brodie 1999; Hinks 2000; IFA 2004). In order to ensure the success of SA in the UK, acceptance by, and cooperation between taxpayers, tax practitioners and tax administrators is essential.

2.2.3 Summary of operations of self assessment

The review of SA in the eight countries revealed that SA requires voluntary compliance and that strategies to enhance voluntary compliance are needed. These strategies include the provision of tax education and the provision of consultation and counselling services to taxpayers. In terms of the time basis for filing tax returns, some countries adopted the fiscal year basis, while others adopted the current year basis. In addition, there is a move towards electronic filing in these countries. It is also noted that other than in Canada and Australia, no notices of assessment were issued. The key characteristics of the operations of SA in these eight countries as compared with that of Malaysia are summarised in Table 2.1.
Table 2.1: A summary of operations of SA

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<th>Japan</th>
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Notes: FY=fiscal year; CY=current year; ST=compliance rate is high; M=compliance rate is average; W=compliance rate is low; (a) other forms such as advance rulings; (b) is either a PAYE or PAYG; (c) at time of tax return filed; (d) applicable to ‘white return’ taxpayers; (e) active; (f) 1 July-30 June; (g) compliance programme; (h) unlimited time limit if taxpayers found to have committed tax fraud, however in UK for the similar offence, the time limit is 20 years & 10 month; (i) depends on the accounting year end; (j) 1 April-31 March; (k) compliance model-see Appendix V; (l) working with community, family assistance; (m) online consultation for SME; (n) email; (o) for registered tax agent only/ir file for employer; (p) not necessarily calendar year; (q) NRP; (r) mainly online education; (s) taxpayer advocate service; (t) in CD-rom; (u) community volunteer Income Tax Programme to help tax-filer; (v) income tax and benefit package; (w) named as payroll reduction; (x) not significant; (y) little and inconsistent; (z) financial year; (aa) service pack or brochures; (ab) when returns with error and possible evasion; (ac) more of Statement of Practice (ad) non-binding guidelines; (ae) non-binding technical interpretation practices; (af) one advance ruling for non-resident issued recently; (ag) so long as the contents of records are material; (ah) not available; (ai) calendar year.

2.2.4 Characteristics of self assessment

Based on the summary presented for the eight countries that have implemented SA, the majority exhibit a range of common characteristics that appear to be the essence
of SA. Discussions of these common characteristics follow, though it is recognised that other characteristics might exist that reflect the political and cultural background of the respective countries.

2.2.4.1 Staged implementation

SA is typically implemented in stages. At the introduction stage, SA tends to be restricted to certain categories of taxpayers, and subsequently implemented on a wider scale (Sarker 2003; Dirkis & Payne-Mulcahy 2002).

2.2.4.2 Burden shift

Under SA, taxpayers are typically required to lodge their returns together with detailed computations of their taxable income and income tax liabilities, with the exception of Australia.\textsuperscript{148} In other words, there is a shift of the burden and functions of assessment from the tax authority to taxpayers.

2.2.4.3 Tax rulings

In order to assist taxpayers in understanding the requirements of the tax law, rulings, such as public rulings, private rulings or other forms of rulings, are being issued. However, in some cases, conflicts between the substance of the rulings and the provisions of the tax law still exist. In the event of any such conflict, the provision of the tax law prevails.

2.2.4.4 Penalty provisions

Since "...SA is a natural extension of voluntary compliance and the associate philosophy that it is a taxpayer's responsibility to comply with the tax laws" (ATO quoted in Sandford & Wallschutzky 1994b:213), penalty provisions for non-compliance with the law pertaining to filing of returns or other related matters are introduced and enforced.

\textsuperscript{148} Individual taxpayers in Australia are not required to compute their tax liabilities, but are required to complete their tax returns.
2.2.4.5 Proper record keeping by taxpayers

Taxpayers are required to maintain proper records as evidence to substantiate and support the particulars and computations filed in their tax returns. These records need to be kept not only for a particular YA, but for a number of years after filing.

2.2.4.6 Emphasis on enforcement

Since SA does not require the tax authority to assess and review all tax returns filed, the emphasis of officials is shifted to, and focused on, enforcement activities such as tax audits and investigations (ATO 2006). The concept of having an audit system is to put in place a preventive system against intentional dishonesty or non-compliance (Asraf 2004).

However, different taxpayers may honestly encounter different circumstances in relation to unintentional non-compliance, which may arise under SA. Unintentional non-compliance arises as a result of a non-deliberate decision. This might be due to taxpayers inability to comprehend or keep abreast with the frequent changes of the tax law (McKerchar 2003). Furthermore taxpayers may be unaware of their entitlement with regards to deductions, allowances or relief available to them. Therefore “…the tax administration should be sufficiently flexible to allow for the equitable treatment of different taxpayers” (James 1996:22).

2.2.4.7 Education and support

SA requires taxpayers to have a good understanding of the tax law, rulings, guidelines and the tax authority’s administrative procedures. Hence, provision of other supporting materials and tax education programmes has become essential. The educational programmes should fully inform the public about the impact of SA and also counter disinformation about the system. As SA places heavier burdens on taxpayers, it is not only fair but also essential for the tax authority to educate the taxpayers on the understanding and application of the tax law (William 1999; Dirkis & Payne-Mulcahy 2002).
2.2.5 Successful implementation of self assessment

In the review of SA in the eight countries, several factors that had contributed to, or impeded the successful operations of SA were identified. As a relatively new SA regime, Malaysian policy makers should have a deep and full appreciation of the impact of these factors on the operation of SA, as the experiences encountered by the other SA regimes may serve as useful lessons.

One of the significant implications of SA is the transfer of the assessment functions from tax authorities to taxpayers, whereby lay taxpayers are now expected to exercise a function that was previously performed by trained tax office personnel. SA operates on the premise that every taxpayer is capable of comprehending the tax law and the related rulings and procedures, and capable of interpreting and translating them into a quantitative figure, i.e. the tax liability. In addition, SA has placed heavier burdens and responsibilities on taxpayers to keep and maintain adequate records, which ultimately will result in increased compliance costs to taxpayers in general.

For the tax authority, there is a need to revamp its operational structures to accommodate for the change to the SA to ensure the successful implementation and operation of the system. Tax authorities now focus their resources and functions on post assessment reviews and enforcement activities, rendering services to taxpayers in the contexts of issuing rulings and guidelines; providing counselling and conducting tax educational programmes. Although the implementation of the SA has been to some extent successful in the eight countries reviewed, there are also evidence of serious shortcomings.

Tax law complexity represents one of the major shortcomings of SA. Complexity of the law leads to increased compliance cost for taxpayers, while uncertainty and ambiguity of the law lead to increased opportunities for tax evasion in some countries. Ad hoc attempts to simplify the tax law and to plug the loopholes to reduce tax evasion has led to further complexities. In addition, constant and hasty changes to the already numerous tax codes has compounded the problem of tax law complexity, and in particular, this problem has been further exacerbated where taxpayers had a low level of tax literacy.
Inadequate trained staff, perceived and actual corrupt practices and the authoritarian and adversary approaches adopted by some tax authorities have led to an erosion of taxpayers’ confidence in the tax system. These shortcomings, together with poor tax administration (in that the administrative framework was not restructured or prepared to cater for SA) coupled with weak enforcement activities, have resulted in operational conflicts. Tediou resolution processes, the lack of transparency, the exercise of discretionary power and the lack of adequate infrastructure (for example, the inadequacies of electronic data processing system) to handle large numbers of tax returns are also significant shortcomings of SA that hinder compliance.

While countries implementing SA have encountered and experienced shortcomings, some have been successful in overcoming them by making adjustments, introducing and implementing appropriate measures, exercising on-going reforms, and focusing on new directions to nurture and support SA. In some cases, economical and efficient infrastructure was put in place, such as computerised systems to facilitate easy electronic filing and to ensure prompt processing of returns and refunds. Mechanisms for prompt audit processes and resolution of disputes, the issue of relevant guidelines and rulings, together with continuous and vigorous enforcement programmes, have contributed to the success of SA.

Other successful contributing factors appear to be the tax authorities’ development of good public relations with taxpayers, the provision of customer (i.e. taxpayer) service, the level of assistance rendered to taxpayers to enhance compliance, the provision of tax education and the collection of taxes at source. In terms of enhancing public relations, the more successful tax authorities have sought to adopt friendly, open approaches and better liaison, consultation and communication with taxpayers. They have taken steps to enhance taxpayers’ cooperation, to work with the community, to be more flexible in handling personal issues and to be reasonable in the interpretation of tax law. These measures have contributed to the improvement of taxpayers’ confidence in the tax system, and consequently led to better compliance.

Assistance rendered to taxpayers included advice on proper book keeping, provision of tax counselling, advice to taxpayers of their rights and the identification and highlighting of common compliance patterns. Tax education programmes, focusing
on both existing filers and non-filers as well as on future taxpayers, have also contributed towards enhancing compliance under SA.

Thus, the pillars for the successful implementation of SA lie very much with the tax authority. The development of good public relations with taxpayers, the promotion of tax education, assistance to taxpayers by way of counselling, guidance and services, along with appropriate enforcement activities are needed. In addition, taxpayers' confidence in the tax system must be developed through fair and transparent practices by the authority. Rulings and guidelines to provide for more consistency, certainty and fewer ambiguities, would help taxpayers in understanding complex tax codes. Shortcomings, such as irregular practices, confrontational approaches and the exercise of too much discretionary power on the part of the tax authority, should be avoided.

### 2.2.6 Lessons for Malaysia

In Malaysia, the tax law is exasperatingly complex, and public rulings\(^{149}\) have been issued purportedly to help overcome this problem (Somasundram 2005a). However rulings issued have to be binding,\(^ {150} \) and timely,\(^ {151} \) should not be complicated\(^ {152} \) nor contradictory,\(^ {153} \) and should give explicit direct advice.\(^ {154} \) Likewise, information and tax returns\(^ {155} \) issued by the IRB should be simple and clear to enable easy understanding and compliance.

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\(^{149}\) In Malaysia, only public rulings are issued. Also see above n 77.

\(^{150}\) In Malaysia, the “...public ruling and guidelines do not have the force of law. They merely reflect the IRB's approach and position...and are generally regarded as persuasive authority...” (Wong & Tan 2003:15).

\(^{151}\) In terms of timeliness, for example, Public Ruling No. 2/2005-Computation of Income Tax Payable By A Resident Individual. This 77-page ruling was issued on 6 June 2005, whereas in that year the deadline for filing tax returns by salaried individuals was 30 April 2005.

\(^{152}\) Due the complexity of the tax law, rulings should be intended “...to provide guidance...setting out the interpretation...in respect of...particular tax laws...that are to be applied...there is no need to explain complicated tax laws with complicated rulings” (Somasundram 2005b:15). It is significant to note that a tax consultant and advisor who was previously an IRB officer made this observation. Also see above n 87.

\(^{153}\) See Choong above n 87.

\(^{154}\) See Josef above n 87.

\(^{155}\) For example, SA tax returns “...could hardly be regarded as simple (but rather) complicated, with information requirements...that would easily puzzle the non-accounting businessman”, and “...filling the forms represents a daunting task for the first-timer, and is extremely time consuming - even for seasoned tax practitioners” (Yong K 2005:22-23).
Some form of "...Community Outreach Tax Assistance Programme..." (Shanmugam 1996:8) should be put in place to reach out to the general taxpaying public to enhance public confidence in the tax system and to build good public relations with taxpayers. Tax administrators should steer away from the adversary approaches when dealing with tax paying public.

In the event of any dispute, an equitable recourse should be available equally to both taxpayers and tax enforcers. However, the tax law in Malaysia "...confers broad powers in favour of the DGIR and its officers and is weighted heavily in favour of the DGIR" (Wong & Tan 2003:19). Appeal through the lengthy and costly legal process is the only recourse available to an aggrieved taxpayer. Thus, for dispute resolution, there is a need to put in place a faster, easier, cheaper and less tedious mechanism as an alternative to the appeal process. In the absence of such an alternative dispute resolution mechanism, the tax authority should emphasise negotiated settlement rather than resorting to lengthy and expensive legal process.

To achieve voluntary compliance, the IRB's emphasis is on penalties and enforcement. However "...the penalty system has created much concern among taxpayers ..." (Yong K 2005: 23).

SA may have its merits, but being newly introduced in Malaysia, there is concern that taxpayers are not aware of the new system and the rules, procedures and

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156 Provision of IRB's services are not easily accessible to the general taxpaying public, as "...IRB branches are concentrated in major cities, leaving smaller towns without coverage. The IRB website has been swamped by visitors, rendering downloads to a snail pace" (Yong K 2005:23). Another lesson from this experience is the need to upgrade IRB's infrastructure to assist taxpayers to meet their compliance obligations.

157 Another lesson is that the tax authority needs to adopt a friendly approach when dealing with taxpayers, rather than, for example, "...when it comes to allowing a claim for deduction, the attitude had been one of hostility (by the tax official who refuses to entertain the claim) and bitterness (by the taxpayer who suffers a disallowance)...." (Somasundram 2005a:20). Also see above n 152.

158 Litigation of tax dispute is cost and time consuming. Further the "...taxpayer also bears the burden of adducing evidence to specially prove..." his/her claim (Wong & Tan 2003:19).

159 In the absence of a dispute resolution mechanism other than appeal through the legal process and given "...the extensive power conferred on the tax enforcers under the ITA (1967), most taxpayers would rather settle the outstanding tax and penalty...rather than risking a skirmish with the Inland Revenue" (Chang 2002:14).

160 See above n 65.

161 The IRB's appears to favour litigation rather than negotiated settlement. Also see above n 64.

162 For more discussion, see 2.1.7.

163 Taxpayers are concerned because while "...such penalties are aimed at catching tax dodgers, genuine taxpayers who erred may also fall victim..." and innocent taxpayers would ask why "...they should be placed in the same category as fraudsters and tax evaders?" (Yong K 2005:23).
administrative mechanism that have been put in place. The IRB may have conducted awareness campaign among taxpayers, but are taxpayers prepared for SA? (Yong K 2005).

Given the lessons gained on the implementation and operation of SA in eight other regimes, and the discussion on the adoption and operation of SA in Malaysia, it is noted that as a result of the introduction, or of the change from traditional assessment system to SA, the responsibilities of assessing taxpayers’ tax liabilities were transferred from the tax authorities to the taxpayers. As such, the first research question that follows is ‘Has changing from OAS to SA system affected compliance behaviour of Malaysian individual taxpayers?’ Undoubtedly, the SA regime places the onus and responsibility on taxpayers to discharge their tax compliance obligations, such as filing accurate and timely tax returns. In the context of Malaysian taxpayers, it is expected that SA would affect individual taxpayers more than other category of taxpayers, such as companies and other incorporated entities.\(^\text{164}\) Hence, the compliance behaviour of individual taxpayers is the area of specific interest.

It is therefore appropriate to examine other tax compliance research and compliance models so as to provide a better understanding of taxpayers’ compliance behaviour and to further develop research questions associated with the introduction of SA and its impact on the compliance behaviour of individual taxpayers in Malaysia.

### 2.3 Tax compliance research and compliance models

Over the last three decades, studies on tax compliance behaviour have ventured into the domains of economics, psychology, accounting, political science, public administration, law, criminology and sociology. In terms of geographical domains, the issue of tax compliance behaviour had been investigated in almost every country where taxes have constituted one of the major sources of revenue.

The central focus of much of the research has been on intentional non-compliance i.e. tax evasion (See Spicer & Becker 1980; Richupan 1984; Kinsey & Smith 1986; Kinsey 1992; Slemrod 1992; Cooper 1993; Lee 1998; Hackbart & Ramsey 2001;

\(^{164}\) In Malaysia, these categories of taxpayers would have engaged the services of professional tax practitioners and thus would unlikely to encounter difficulties in filing tax returns (Loo & Ho 2004).
Beare 2002; Bloomquist 2003). Few studies however have gone beyond tax evasion by investigating the other dimensions of non-compliance i.e. unintentional non-compliance (McKerchar 2002, 2003; Ritsema, Thomas & Ferrier 2003).

Broadly, research into compliance behaviour can be aligned as being underpinned by one of two major types of models: either the economic models or the psychological-sociological models, each (and the various permutations) of which reflects the relevant underlying discipline. Economists assume that human beings generally would act rationally in evaluating the cost and benefit of any activity. On the other hand, psychologists and sociologists tend to model human behaviour as being more complex. From the psychologists’ and sociologists’ perspective, individuals’ tax compliance behaviour is also influenced by attitudes, demographic characteristics, cultural background as well as the individuals’ perceptions in relation to the government and the tax system (Wallschutzky 1992, 1993; Glen 1998; Chan, Troutman & O’Bryan 2000; Niemirowski, Baldwin & Wearing 2001).

2.3.1 Economic models

The economic models basically rely on economic theories of compliance that can be traced back to the work of Adam Smith in 1795 on law and punishment (quoted in Singh V 2003b:26). Very much later, this economic approach to compliance behaviour was tested by Becker (1968) using a ‘crime and punishment’ framework. Becker used a utility–maximising framework to explain the behaviour of criminals. His argument was that criminals would behave like all other individuals. They would commit a crime if the expected utility (‘reward’) was much greater than what would be gained through legitimate activity. In other words, taxpayers would evade tax so long as the expected cost of being caught and punished might be less than the pay-off of evading.

Becker’s model was a straightforward application of an individual’s choice under uncertainty. The model’s main contribution was its ability to demonstrate that optimal policies to combat illegal behaviour using an ‘economic’ framework were part of an optimal allocation of resources. Becker’s model, based on the modern risk theory, had become an influential piece of work on law and enforcement in taxation. While Becker stated that his general model was applicable to tax evasion, Allingham
and Sandmo (1972) were the first to formally analyse this model in the context of tax evasion.

2.3.1.1 Economic deterrence theories and models

Allingham and Sandmo (1972) developed a basic theoretical model on compliance based on economic deterrence, relying completely on the theoretical antecedents of tax evasion, such as tax rates and the probability of detection. The model assumed that taxpayers were perfectly moral, rational, risk neutral (or risk averse) decision makers who maximised utility. Allingham and Sandmo also assumed that the probability of detection was exogenous and independent of the amount that an individual reported. What might deter an individual from tax evasion was a fixed probability of being detected and a penalty imposed on actual tax liability if detected. Formally, the Allingham and Sandmo model was presented as:

$$E[U] = [1 - p]U(W - \theta X) + pU[W - \theta X - (W-X)]$$

Where

- $E[U]$ = expected utility
- $p$ = probability of detection
- $X$ = declared income
- $W$ = actual income
- $\theta$ = penalty if detected

The results of this model depended crucially on the probability of detection, $p$ and the amount of penalty, $\theta$. Assuming that the tax rate was $r$, the model predicted that, provided the expected payment on detection $p(W - \theta rX)$ was lower than the tax due when income was reported ($rX$), a taxpayer would not comply fully by reporting the actual income. This approach implied that the tax authorities should either increase penalties or introduce policies that would raise the probability of detection in order to reduce tax evasion among taxpayers. In other words, an individual's ability to get away with a given level of non-compliance was determined by the prevailing environment, particularly the effectiveness of the tax administration. Among the criticisms made of this model was that it "...is grounded in the belief that compliance decisions depend on moral views" of the taxpayer (Franzoni 1998:7). Nevertheless, the Allingham and Sandmo model remained as an important theoretical contribution and was largely expanded and refined in later research (Reinganum & Wilde 1985,

Subsequent studies on deterrence (Clotfelter 1983; Witte & Woodbury 1985; Dubin & Wilde 1988) found that the measure of detection risk was determined by audit rates, perceived detection risks and information reporting that might influence taxpayers’ compliance in an expected direction. However, the evidence varied in terms of the influence of penalties and tax rates.

Through survey and modelling of line-item on the data compiled by the IRS’s TCMP, Klepper and Nagin (1989a, 1989b) analysed how certain enforcement features of the tax laws shaped the perceptions of risks of detection and penalties on non-compliance. Their studies further examined the effect of these perceptions. Their main finding consistently revealed that the “...underlying premise of criminal opportunity theory, which holds that perceptions of risk of apprehension and punishment for a specific law breaking have some grounding in the realities of the enforcement process” (Klepper & Nagin 1989b:210). On one hand, they argued that the most powerful deterrence tool to non-compliance was the perceived risk of criminal prosecution. On the other hand, the survey showed strong support for the hypotheses developed concerning how perceptions might be affected by the enforcement process. Their results contradicted the findings of Graetz, Reinganum and Wilde (1986) and of Dubin and Wilde (1988), which showed that risk of detection was not exogenous but rather a function of the level of compliance.

The variables tested in the early analytical models yielded unambiguous conclusions. However, the assumption that, given the motivational concepts, behaviour was responsive to the consequence of costs and benefits, was criticised as being an inadequate explanation of the expected utility in this model (Weigel, Hessing & Elffers 1987; Alm 1991). A study by Schmit and Witte also identified the two most problematic assumptions i.e. “... (a) both gains and penalties can be monetarised and

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165 Similar research based on TCMP data was conducted by Tauchen, Witte & Beron (1989). They examined the individual level of data from the 1979-TCMP, and found that there were very limited evidence of any deterrence effect of audits on higher income taxpayers. Further, they were unable to detect any effect on other income classes. This may be due to the different data set used as their measure of audit rate was based on the data collected at the IRS’s District level.

166 There were eight hypotheses developed, mainly on the perceived probability of detection of non-compliance and the perceived probability of criminal prosecution for non-compliance on line items.
(b) that probabilities related to certainty of punishment can be stated as absolute” (Schmit & Witte 1984, quoted in Jackson & Milliron 1986:149). It was noted that if these were the only factors influencing taxpayer compliance, the overall compliance would be lower than what was observed (Alm 1991).

Despite numerous criticisms of the deterrence model by earlier researchers, the economic deterrence theory still ‘captures’ the interest of many researchers. In 1995, Carnes and Englebrecht (1995) used penalty levels proxies as the sanctions levels stipulated in the Inland Revenue Code for omission of income to determine whether penalties were effective deterrence and to investigate whether the change in magnitude was salient. They also measured the perceived detection risk and the influence of income visibility on compliance. Their findings indicated that low levels of penalty sanctions,167 perceived detection risk and income visibility influenced compliance behaviour, with the latter two variables being significantly related to compliance. These findings seemed to contradict that of the earlier research done by Jackson and Jones (1985) who found that the magnitude of penalty was more salient than the probability of detection when the probability of detection was very low.168 The contradictory findings could be due to the low probability rate used. Other evidence showed that more severe penalties were appropriate for larger evasion, particularly in the case of repeat offenders, but not in the case of the first-timer (Hite & Spicer 1990).169

In a departure from the utility function, Ali, Cecil and Knoblett (2001) adopted an econometric analysis approach to investigate the relationship between taxpayers’ compliance and audit rates, penalties if detected, tax rate schedule, income level, and source of self-employment income. While other earlier studies focused mainly on taxpayers in general, this study focused specifically on self-employed taxpayers by utilising the Annual Report and the Data Book published by the IRS between the years 1980 and 1995. Utilising the time series data enabled the researchers to investigate the trend in compliance behaviour and their findings indicated that both the audit rate and the penalty rate were effective deterrence to non-compliance. With

167 Increases in sanction levels appeared salient even with relatively small increases.
168 The rate of probability was 4 per cent or less.
169 The study employed a quasi-experimental design to investigate the effect of multi-years versus single-year audit rates by comparing the short-term probability of being audited in any one year with the probability of being audited in the long term (over 20 years). The study also examined different levels of appropriate penalties for first timers and repeat offenders.
the view that compliance varied across income group, they suggested that, "...the relationship to reported income is likely to be non-linear in income and that there may be some interactions of the variables, such as tax rate, penalty rate, and audit rate with income as well as with taxpayer classes" (Ali, Cecil & Knoblett 2001:191). The two structural equations\(^{170}\) for reported income and the reduced-form equation for the audit rate were developed as:

\[
\text{Reported Income} = \\
\beta_0 + \beta_1 S + \beta_2 AI + \beta_3 (AI)^2 + \beta_4 AR + \beta_5 (AR)(AI) + \beta_6 (AR)(S) + \beta_7 TR \\
+ \beta_8 (TR)(AI) + \beta_9 (TR)(S) + \beta_{10} (PR) + \beta_{11} (PR)(AI) + \beta_{12} (PR)(C) + \varepsilon_r
\]  

(1)

and

\[
\text{Audit Rate} = \\
\delta_0 + \delta_1 S + \delta_2 AI + \delta_3 (AI)^2 + \delta_4 TR + \delta_5 (TR)(AI) + \delta_6 (TR)(S) + \delta_7 PR \\
+ \delta_8 (PR)(AI) + \delta_9 (PR)(S) + \delta_{10} OC + \delta_{11} YEAR + \varepsilon_a
\]  

(2)

Where
- \(S\) = Schedule C
- \(AI\) = Actual Income
- \(AR\) = Audit Rate
- \(TR\) = Tax Rate
- \(PR\) = Penalty Rate
- \(OC\) = Operating Cost per return

Their findings revealed that reported income was the major determinant, of which at lower levels of income, the amount reported continuously rise, but at a decreasing rate, while at higher levels of income, the amount reported declined. Meanwhile, audit rate was found to be a significant deterrence to non-compliance. However, the effectiveness of these two policy instruments depended on the taxpayer’s level of income.

In general, their study was able to provide empirical evidence that taxpayers’ compliance behaviour was sensitive to audit rate, marginal tax rate and penalty rate; and that such behaviour varied across different levels of income as well as across taxpayer class. This appeared to be consistent with the earlier studies by Clotfelter (1983), Witte and Woodbury (1985) who found that compliance or non-compliance behaviour varied with the level of income and taxpayer’s class.

\(^{170}\) For detailed definition of the variables in both the equations as well as illustration on the data construction, see appendix of the article.
Compared with the earlier research that utilised other methods of data collection, the econometric model of Ali, Cecil and Knoblett appeared to be useful to describe tax compliance behaviour. However, measurement error in estimating the actual income of the representative data might occur especially if the sample was not a random selection (such as the IRS data that was mainly derived from non-compliance audit cases). Hence, overestimation of estimated actual income was likely to occur.

The deterrence models have provided the framework for analysing changes in tax compliance behaviour as responses to different deterrence policies. Various experiments conducted in previous studies showed that taxpayers tended to report a higher level of income than as predicted by the expected utility model (Alm, McClelland & Schulze 1992). The experiment by Alm, McClelland and Schulze (1992) found a substantial compliance rate with variation ranging between 5.3 per cent and 35.8 per cent. The average compliance rate was 20 per cent and this indicated that over weighting the audit probability or extreme risk aversion did not necessarily affect the compliance rate. This in fact would provide some insights and directions for future researchers in considering the need to expand their investigations and research beyond the traditional expected utility model and search for other relevant theories or perhaps other variables that might provide better insights into tax compliance behaviour.

While much of the previous research produced ambiguous results, one important universal prediction in the earlier economic deterrence models was that, an exogenous increase in the probability of detection and conviction, or an increase in the penalty rate, would increase compliance (Dubin, Graetz & Wilde 1987). In respect of criminal behaviour, certainty of punishment appeared to be more effective as a deterrence than the severity of formal sanctions (Klepper & Nagin 1989b).

2.3.1.2 Prospect theory

Advancing from utility theory, prospect theory proposed a slightly different view of behaviour under uncertainty that could be used to predict taxpayers’ attitudes towards risk. Prospect theory is based on the view that income might not be the sole factor in respect of taxpayers’ utility functions. A taxpayer’s utility function might differ for gains as compared for losses. Where tax payment was perceived as a
reduced gain, the utility function would likely have a concave shape. In contrast, where tax payment was perceived as a loss, a convex shape was expected (Chang, Nichols & Schultz 1987). In other words, prospect theory proposed that taxpayers’ decisions could be influenced by the way in which the decisions were ‘framed’ (Jackson & Milliron 1986; Hasseldine & Hite 2003a, 2003b).

Based on a theoretical model, Weigel, Hessing and Elffers (1987) proposed that conceptualised tax evasion behaviour was an outcome of interacting instigations and constraints operating within an individual and the confronting situations. It was argued that decision frame and opportunity were the two important variables which indicated that an individual would make different decisions depending on how the choices were being framed. In the context of prospect theory, when a gain was certain, an individual would avoid risks. On the other hand, an individual would be a risk taker in order to avoid losses.

Several researchers have argued that prospect theory was relevant for the understanding of taxpayers’ behaviour when evading taxes (Weigel, Hessing & Elffers 1987; Smith & Kinsey 1987; Caroll 1987). These arguments seemed to be consistent with the findings of the study conducted by the IRS (quoted in Robben et al 1990:345). In this study, under the withholding tax regime, the voluntary compliance rate reported was higher when the taxpayers anticipated refunds from the tax authority and lower when taxpayers anticipated tax liabilities. However, the voluntary compliance rate diminished as the refunds became smaller and diminished further when the balances of tax liabilities increased. The findings of these analyses are as presented in Figure 2.1.
Similarly, through a quasi-field experimental design, Chang, Nichols and Schultz (1987) supported the premise that decision frames were important for determining tax evasion behaviour. In their study utilising 56 middle-income executive MBA students with a series of hypothetical tax declaration situations,\(^{171}\) they found that taxpayers' attitudes towards risk could be affected by how they perceived tax payments as reduced income or as losses, the magnitude of tax savings and the penalty structure. The results of the study revealed that 65 per cent of the group with 'negative-payoff' opted to cheat as compared to 23 per cent of the subjects who framed their choices in terms of reduced gains.

Other researchers (White, Harrison & Harrell 1993; Yaniv 1999) also found consistency of reporting behaviour using the prediction of prospect theory, which posits that taxpayers were more aggressive in reporting behaviour in a loss position (balance due on tax liability) than taxpayers in a gain position (refund).

2.3.1.3 Other economic models

The work of Allingham and Sandmo (1972) has continued to occupy a central position in the modelling of tax compliance research. With modifications and extensions to the basic assumptions of the earlier models, the later models used were

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\(^{171}\) The tax declaration situations varied in terms of the magnitude of potential savings from opting not to report the income, the probabilities of being audited and the penalties involving severe financial burden if audited.
more complex and the approaches were different. Researchers adopting these models incorporated principal-agent theory (Reinganum & Wilde 1985) and game theory (Reinganum & Wilde 1986; Graetz, Reinganum & Wilde 1986; Rhoades 1999; Feltham & Paquette 2002; Alm & McKee 2004) into their research. Another study incorporated labour supply in the standard model of how taxes affected the labour-choice (Slemrod 2001).\footnote{This study tried to generalise how taxes affect the labour-leisure choice by allowing individuals to change both their labour supply and avoidance effort in response to tax changes. The model modified the effective marginal tax rate by adding an avoidance-facilitating effect that measured how the cost of avoidance changes with higher income. This model provides a conceptual structure for evaluating the extent and situations in which the opportunities for tax avoidance mitigate the real response to taxation.}

Agency theory was relied upon to explain the situation where an individual, the agent, is engaged by another individual, the principal, to carry out duties for the benefit of the principal. The principal-agent theory basically evolved from the management stewardship functions in relation to the owner-employee relationship. In the case of tax compliance, agency theory was applied in an attempt to describe the relationship between taxpayers, tax preparers and the tax authority.

With this theory as the underlying framework, Reinganum and Wilde (1985) examined optimal audit strategies by comparing alternative audit policy with the standard random audit policy. They focused on how the agent triggered an audit if the reported income was too low, or alternatively no audit would be required for those with ‘sufficiently high’ reported income. This model is rather theoretical. In their later study, Reinganum and Wilde (1986) incorporated the strategic behaviour agency into the formal analysis, providing a link between the tax authority’s audit policies and taxpayers’ reporting decisions.

Generally, under the game theory model (Graetz, Reinganum & Wilde 1986; Sansing 1993), the researchers used the tax authority’s audit strategy as the best response to taxpayer’s report of a single item, the net taxable income. Rhoades (1999) utilised multidimensional reporting to search for more related variables.

Graetz, Reinganum and Wilde (1986) developed a simple-binary model of taxpayers’ compliance by comparing the results under the assumption of risk-aversion versus risk-neutrality. The model indicated that risk aversion modified the optimal audit
policy according to the form of the taxpayer’s utility function. Taxpayers chose to report their income either high or low, based on a private observation of the true taxable income. The tax authority decided the audit strategy based on what the taxpayers reported. Even though auditing seemed to be costly, it helped to reveal the taxpayers’ true taxable income and showed that there were strategic interactions between the taxpayers and the tax authority. The result of their study remained qualitatively unaffected by taxpayers’ risk preference on the impact of changes in the model’s parameters on the taxpayers and the tax authority’s strategies, with the exception of risk aversion showing some ambiguous predictions.

Most importantly, the study of Graetz, Reinganum and Wilde (1986) relied solely on information reported by taxpayers that could lead to questionable findings. In contrast, Sansing’s (1993) model included an additional variable, the imperfect information that the tax authority has with regard to taxpayer’s taxable income.\textsuperscript{173} However, Sansing’s model still focused on the audit strategy as a single component whereby taxpayers had private information and that all other components remained fixed.

Rhoades (1999) presented a similar model of taxpayer compliance behaviour and tax authority’s audit strategies but within the context of a multidimensional reporting of taxable income. Specific attention was paid to analysing the impact of component reporting requirements on taxpayers’ incentives to misstate their tax liability. This model allowed the tax authority to tailor their audit policy to examine return components sequentially, where the auditing processes of the second component were subjected to the first component’s audit.

The results of the study indicated that in comparison to the earlier research using the single model, partitioning taxable income into multi-component reporting requirements reduced overall tax evasion and increased the tax authority’s net revenue collections. In spite of this, the impact on predicted evasion was not uniform among taxpayers. Nonetheless, the binary approach adopted by this model was applicable to various components within the tax return that appeared to be important to taxpayers. These components included the amount of income reportable

\textsuperscript{173} The authority has perfect knowledge about the reported income, but doesn’t know if the reported income figure is correct.
(or allowable deduction) and the amount of taxable income (or a deductible expenditure).  

Extending from prior literature, Feltham and Paquette (2002) incorporated the estimated tax payment decision into a tax compliance game. They argued that researchers using prospect theory considered the prepayment position as exogenous as taxpayers would normally have made the payment decision prior to the filing date.

Using a two-period game-theoretical model, Feltham and Paquette examined the effect of the estimated tax payments rules on taxpayers' incentives to evade and on the tax agency's audit strategy. The results of their study indicated that, in equilibrium, taxpayers' estimated decisions regarding tax payment depended on the uncertainty of their actual tax liabilities, the taxpayers' cost of capital and the interest on penalty. In addition, taxpayers with higher instalment payments were less likely to evade tax as compared to those with lower instalment payments.

For the tax agency, the audit probability tended to be higher for those with lower reported income and lower estimated instalment payments simply because the gain from auditing this group of taxpayers would give rise to higher returns in terms of penalty charged for evasion and also interest charged on deficient instalments of estimated tax. In other words, it was optimal for the tax agency to condition its audit strategies on both taxpayers' estimated tax payments and their reported tax liabilities. The study offered an alternative explanation by arguing that taxpayers' estimated tax payments position was endogenously determined and the estimated tax prepayment itself provided information on the taxpayer's actual tax liabilities to the tax agency, which enabled the tax agency to decide on its audit strategies.

This study claimed to examine taxpayers' compliance behaviour and tax agency's audit decisions in a broader and more realistic setting. However, the study conducted remained within the context of expected utility theory and included an additional assumption i.e. the tax agency's maximum expected benefits from auditing taxpayers exceeded its audit cost. In addition, the study has been criticised for the inaccuracy in attributing that there was greater audit intensity by the tax agency when there was

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174 This refers to questions such as whether a taxpayer qualifies for a home office deduction, and whether a loss on an asset disposition could be deducted during the year of disposal or must be deferred to a later year.
greater expected gain from auditing taxpayers who underpay their estimated tax as well as those who evaded. Apparently, the tax agency’s audit cost was affecting the reporting strategies of high-income taxpayers, but had no effect on the tax agency’s audit strategies (Sansing 2002). Smith and Stalans (1991) argued that compliance could be increased not only by deterrence or punishment, but also rather by improving the image of the tax agency and the treatment given to the taxpayers.

These studies had taken a step further by adding the tax agency’s perspective into the taxpayers’ behaviour as compared with the previous models. In all these models, taxpayers apparently showed similar willingness to cheat and what might make them different was their attitude towards risk and their opportunities to evade.

Erard and Feinstein (1994) modified the game-theoretical model of tax compliance developed by Reinganum and Wilde (1986) by firstly incorporating budget constraints for the tax agency and later extended the model to include both honest and dishonest taxpayers. Their argument for incorporating the honesty variable was that although some taxpayers undoubtedly approached their reporting decisions based on financial motivation, others were genuinely honest in reporting. Incorporating honesty into a taxpaying population appeared to be endogenous, “…depending on a variety of social norms and government policies” (Erard & Feinstein 1994:4). This view of the nature of human beings, as appearing to be inherently honest and willing to pay their tax liabilities regardless of whether there was any financial incentive available, was rather restrictive.

Nevertheless, Erard and Feinstein’s findings, supported by econometric evidence, showed that honest taxpayers substantially altered the equilibrium solution of the game and revealed a much-improved empirical prediction. They also found that the equilibrium solution of the extended model was different in several qualitative aspects compared with the initial model’s equilibrium solution and that this might resolve a number of troubling features of the initial solution and generate a different and novel policy implication. However, their solution was defined by a non-linear second-order differential equation that could not be solved analytically. Instead, it relied on numerical techniques to derive the results of the analysis. Similar to past

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175 This refers to “…the ‘endogeneity of honesty’ or, in other words, the social, psychological, and moral forces that induce individuals to pay their taxes in full” (Erard & Feinstein 1994:17).
studies involving game theory, Erard and Feinstein's model relied on the assumption that a continuum of taxpayers would correspond to a continuous true income distribution, but conducted in a different setting.

It is worth mentioning that the earlier economic and sociological studies on tax compliance had recognised the inherent honesty of taxpayers (Graetz, Reinganum & Wilde 1986; Smith & Stalans 1991). However, the earlier research did not appreciate the impact of honesty as a variable to tax compliance. This can be seen in the original analysis of Allingham and Sandmo, where they stated that taxpayers’ honesty had no effect on their reporting decisions even if being motivated by financial incentives.

In the context of taxpayer compliance behaviour, despite extensive innovations, the gap between theory and reality remained large. Economic theory predicted that an increase in perceived detection probability increased taxpayers’ compliance, and researchers had generally assumed that there was a relationship between these variables. However, past studies appeared to produce conflicting results with respect to these two variables.

Although different economic models had provided valuable insights into tax compliance behaviour, they failed to incorporate other institutional realities (Fischer, Wartick & Mark 1992). Coupled with the lack of variables in relation to social norms and non-monetary factors, these economic models were regarded as being insufficient to guide policy (Roth, Scholz & Witte 1989). That is, the economic models do not entirely describe the factors influencing compliance behaviour of taxpayers.

It followed that there was a need to go beyond the deterrence factors and to consider interdisciplinary perspectives which emphasised that social factors affected the basis of taxpayers’ decisions (Jackson & Milliron 1986; Roth, Scholz & Witte 1989; Casey & Scholz 1991). Furthermore, researchers had recognised social influences as another extrinsic motivational factor that influenced behaviour. The social influences that appeared to drive compliance behaviour included enforcement.

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176 Graetz, Reinganum & Wilde (1986) conducted a two-stage (high and low income) version of tax compliance game in which honest taxpayers were explicitly included. They found that change in proportion of honest taxpayers reduced the probability that dishonest taxpayers cheat in equilibrium.
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authorities, peer group, peer opinion, personal morality and legitimacy (Coleman 1999).

There is no doubt that the role of financial incentives has been the primary focus of economics literature on taxpayers’ reporting decisions. However, other literature such as from the disciplines of sociology, psychology and law, have consistently argued for a broader view of compliance behaviour, the review of which follows.

2.3.2 Psychological and sociological models

Psychological and sociological factors do affect compliance behaviour. Evidence pointed to such factors affecting compliance behaviour not only in relation to health compliance\(^{177}\) (Barth, Vertinsky & Yang 1979; Kyngäš 1999; Chan & Molassiotis 1999), but also in other behavioural compliance (Lee, Yang & Ran 2004)\(^{178}\) including tax compliance behaviour. The psychological and sociological models recognise that human behaviour is more complex than that as described in the economic models. In addition, the economic paradigm of research paid too little attention to the individual’s morality. Andreoni, Erard and Feinstein (1998) argued that in order to enhance the economic models of compliance, researchers might need to explore psychology, moral and social influences on compliance behaviour and integrate these factors into their models.

In fact, the early studies of general deterrence theory appeared within the sociology literature using a variety of statistical methods that focused “...on the effect of certainty and severity of punishment on criminal behaviour” (Gibbs 1968; Title 1969; quoted in Klepper & Nagin 1989c:134). The next wave of sociology literature concentrated on self-reporting data and penal data on crime.

The self-reported techniques were relatively easier, inexpensive and more practical in terms of data collection, which also “…eliminate a number of the ethical concerns

\(^{177}\) Utilising a health service campaign to promote behavioural change in Vancouver, Canada, Barth, Vertinsky & Yang (1979) attempted to identify several pertinent informational, psychological and demographic aspects relating to compliant behaviour induced by a genetic screening programme. The other two studies cited were related to studies into the compliance behaviour of diabetics. Kyngäš (1999) presented a theoretical model of compliance in young diabetics while Chan & Molassiotis (1999) examined the relationship between diabetes knowledge and compliance among Chinese with non-insulin dependent diabetes mellitus in Hong Kong.

\(^{178}\) This study identified the major factors that affect drivers’ compliance to information and evaluated their effects.
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associated with covert observation...” (Weigel, Hessing & Elffers 1987:217). However, the issue of reliability needed to be considered when using such techniques to solicit sensitive and potentially incriminating information so that misrepresentations did not occur.

Other studies (Clotfelter 1983; Witte & Woodbury 1985) analysed data from sample audits conducted by the IRS in the US. Clotfelter’s study measured tax evasion by looking at the difference between the taxable income after audit and the income reported by taxpayers. Witte and Woodbury extended their earlier study by incorporating the US progressive tax structure, multiple penalties and taxpayers’ attitude on non-compliance. This technique of using available data appeared to be more reliable than self-reported data, but might not have been able to detect or distinguish between those taxpayers who actually had unintentionally underestimated their income and those who were merely committing errors when submitting their tax returns.

Psychologists and sociologists later found that experimental designs might be a better solution to the study of tax compliance behaviour. The sole reason that psychologists and sociologists mainly concentrated on experimental designs was their interest in measuring taxpayers’ compliance in response to issues relating to societal rules and group norms. They did so by carrying out experiments on different groups of subjects in different environment settings (Hite 1989).

When referring to the psychology and sociology paradigm, the works of Ajzen and Fishbein (1975, 1977, 1980; 1988) have been influential. Ajzen and Fishbein’s (1977) Theory of Reasoned Action (TRA) stated that social psychology had witnessed a revival of interest in the relationship between attitude and action. The TRA predicted that attitudes were unbiased indicators of actual behaviour. The link of attitude-behaviour appeared critical in assessing the validity of much of the tax compliance research and to some extent, added justification to the self-reported behaviour. Ajzen and Fishbein’s TRA is presented in Figure 2.2.
The Theory of Planned Behaviour (TPB), an extension of the TRA, suggested that perceived control over behavioural achievement was a determinant of intention and behaviour (Ajzen & Madden 1986). Ajzen and Madden tested the TPB in two experiments. Using hierarchical regression analysis, the results showed that TPB permitted a more accurate prediction of intentions and goal attainment than TRA. Diagrammatically, TPB is shown in the Figure 2.3.

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179 Experiment 1 involved recording of college students’ attendance of class lectures over a 6-week period. Experiment 2 involved the assessment of attitudes, subjective norms, perceived behavioural control and intentions in respect of the behavioural goal to get an ‘A’ in a course. In both experiments, perceived behavioural control added significantly to the prediction of intentions.
2.3.2.1 Fiscal psychology model

Lewis (1982b) adopted Ajzen and Fishbein’s model and emphasised the importance of studying intervening perceptual and attitudinal variables in order to understand the fiscal preference of taxpayers. The major approach in this study relied on the fiscal psychology model of Schmölders (1959), which is from a branch of public finance. Milliron and Toy (1988) further supported this approach by emphasising that the fiscal psychology paradigm provided an alternative approach for studying tax compliance. The fiscal psychology model was based on the premise that the key to improving tax compliance was changing the tax structure.

Lewis proposed that in order to provide policy makers with more empirical findings that might substantiate taxpayers’ actual preferences and aversions, it was worthwhile adopting the social psychological approach. Lewis argued that psychology was more of an inductive science while economics leaned more towards a deductive approach. To achieve a better understanding of taxpayers’ behaviour, these two should work with each other. The inductive methods (derived from the psychology paradigm) would be able to develop some hypotheses while the deductive methods (evolved from economic models) were to be used to test the theories. However, Kinsey (1986, quoted in Collins & Milliron 1988:3) noted that Lewis’ model was not amenable to empirical investigation due to numerous simultaneous effects, feedback loops and unspecified transitions between aggregate and individual levels of analysis.

While fiscal psychology emphasised broad behavioural components in non-compliance behaviour, the precise behavioural variables were identified by Jackson and Milliron (1986). They used a meta-analysis to analyse various compliance literatures from which they identified fourteen factors\footnote{The relationship of these factors to compliance is further discussed in 2.4.} [age, sex (gender), education, income level, income source, occupation, peer influence, ethics, fairness, complexity, IRS contact, probability of detection, sanction and tax rate] that to some extent did influence the compliance behaviour of taxpayers.

Likewise, a study by Smith and Kinsey (1987) identified socio-legal attitudes and opinions, background and situational circumstances (including reference and
membership groups) and communication as factors that might play contributing roles in taxpayers' compliance behaviour. This indirectly refuted the findings of earlier research that non-compliance was the result of an action of a conscious and deliberate taxpayer. However, Erard and Feinstein (1994) argued that by excluding the taxpayers' motivations, most of the standard compliance models failed to explain compliance behaviour.

Weigel, Hessing and Elffers (1987) developed an untested model to explain the behaviour of Dutch tax evaders. They posited financial strain and personality as the primary instigators of tax evasion and proposed that every behaviour was simultaneously personal and situational. Hence, there was a need to analytically examine the situational influences and personal attributes that contributed to its occurrence. Moreover, the social psychological model of tax evasion significantly emphasised the effects of these two variables.

2.3.2.2 Social psychological model

Under the social psychological paradigm, an earlier study conducted by Song and Yarbrough (1978) found that taxpayers' compliance was determined by three major factors. The three factors were the overall legal environment (the legitimacy of the tax law), the citizen's tax ethics (understanding and acceptance of legal obligation) and other factors (such as level of income, unemployment rate, tax rate) operating at a particular time and place. All these major factors were interrelated to a certain degree. However, the Song and Yarbrough study did not provide any thorough discussion on how to operationalise the variables and also lacked discussion on statistical tests of the relationship between perceived detection probability and compliance.

Hanno and Violette (1996) tested the TRA on TPB. Taking TRA as the predecessor, the study hypothesised that behaviour could be predicted by intention to perform behaviour and this intention was influenced by personal evaluations and social pressure. They found that there was a strong link between intentions to comply, both in relation to self-reported and hypothetical tax compliance behaviour. The differences in compliance were apparently due to the differences in the underlying belief structures present between subjects exhibiting compliance and non-compliance.
tendencies. One limitation in this study was the use of non-randomised sampling in a concentrated geographical area that might not be representative. Nevertheless, the results “...represented one step in the process of developing an integrated model of tax compliance behaviour” (Hanno & Violette 1996:72).

Based on the argument that tax evasion was influenced by different individual’s motivations, Feld and Tyran (2002) utilised a one-shot experimental design to investigate which kind of moral reasoning led to specific outcomes. Their reason for using an experimental design was that a laboratory tax regime could significantly affect laboratory social norms and eventually affect the level of compliance.

They found that tax compliance was higher on average in an endogenous fine (penalty) treatment in which subjects were allowed to approve or reject the proposal of a fine as compared with an exogenous fine treatment. Their argument was that people showed higher tax morale if it was legitimate for them to vote on a fine. In addition, compliance rates were higher if the fine was accepted rather than rejected.

Overall, their results concluded that “…policies which enhance the legitimacy of a decision-making process that leads to changes of the parameters in the tax compliance game mitigate tax evasion. Thus, the constitutional framework shapes tax morale in a considerable way” (Feld & Tyran 2002:219).

In a similar study but using a different approach, Feld and Frey (2003) argued that tax morale did not depend only on the legal framework and constitutional environment, but also on the interaction of taxpayers with tax authorities. Based on survey data from 1970-1995, they found that the Swiss cantonal tax authorities treated taxpayers more respectfully than the federal tax authority and this eventually showed that the tax authorities of cantons with well-developed direct participation rights were less suspicious if the taxpayers reported remarkably low incomes. On the other hand, taxpayers in direct democratic cantons who did not submit their declaration and did not comply with the basic rules of the game were being fined

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181 The data used in the study was actually based on five different years i.e. 1970, 1978, 1985, 1990 and 1995.
182 It should be noted that the Swiss cantons have the basic power to tax personal and corporate income, while the local jurisdictions levy a surcharge on cantonal income taxes. Cantons can set tax rates and define tax base autonomously. The federal level mainly raises not only indirect taxes, but also a highly progressive Federal Income Tax (Feld & Frey 2003:4).
heavily. Hence, in direct democracy, minor violations of the tax code were punished less than major violations. In summary, taxpayers were treated respectfully and with trust in the case of minor human weaknesses, but with strong deterrence if the psychological tax contract was at stake.

The insufficient link to individuals’ attitudes, personality-related variables or intentions in compliance behaviour led to the most recent work of Trivedi, Shehata and Mestelman (2005). Trivedi, Shehata and Mestelman (2005) extended Ajzen and Fishbein’s TPB and further developed a TPB with moral reasoning. Trivedi, Shehata and Mestelman used a laboratory experiment to examine whether the combined experimental economic and economic psychology techniques affected an individual’s compliance decisions. They found that an individual’s attitudes, personality and intentions were variables that influenced an individual’s compliance decisions and that there were significant differences between hypothetical and actual compliance decisions and that the former were more influenced by moral reasoning. Their model is presented at Figure 2.4.

**Figure 2.4: Theory of planned behaviour with moral reasoning**
(Adapted from Trivedi, Shehata & Mestelman 2005:49)

![Diagram of TPB with moral reasoning](image)

The development of the psychological model of taxpayers’ compliance was indeed a very important precursor in identifying and explaining the factors that are associated with compliance behaviour. However, it would never be adequate to understand the
behaviour of human beings. As life gets more complex, the behaviour of human beings has become even more complex to understand. Hence, there remained a need to seek, consider and to incorporate further factors in the economic and psychological-sociological models to develop more refined tax compliance models.

2.3.3 Expanded model

The growing interest in tax compliance has led to further refinement of the economic and psychological-sociological models. While earlier studies suggested that an expanded model should incorporate economic, psychological and sociological variables as shown in Figure 2.5 (Fischer 1991, quoted in Fischer, Wartick & Mark 1992), a later study suggested that cultural factors should also be incorporated (Chan, Troutman & O’Bryan 2000).

**Figure 2.5: Fischer (1991) expanded model of tax compliance**
(adapted from Fischer, Wartick & Mark 1992:4)

This was so because the merger of the economic and psychological-sociological models in the previous studies might be insufficient to describe taxpayers’ behaviour. Furthermore, it was likely that compliance behaviour was influenced by the opportunities to evade, uncertainty of tax policy changes, demographic characteristics of average taxpayers, complexity of tax filing and numerous other factors (Ali, Cecil & Knoblett 2001:195).
Hence, an expanded model was developed, which incorporated not only demographic variables, non-compliance opportunity, attitudes and perceptions, tax system or tax structure and financial self-interest, but also moral belief and cultural differences.

In a very comprehensive review of the compliance literature, Fischer, Wartick and Mark (1992) developed a comprehensive model (see Figure 2.5), which predicted that demographic variables would play significant roles in influencing taxpayers’ compliance behaviour. The two demographic variables, age and gender were expected to have an indirect, positive effect on taxpayers’ compliance (Jackson & Milliron 1986; Roth, Scholz & Witte 1989). In their studies, they (Jackson & Milliron; Roth, Scholz & Witte) tried to investigate the effects of these two variables on non-compliance opportunities\(^{183}\) (educational and income level) as well as attitudes and perceptions (moral development attitude).\(^{184}\) Their final major construct (tax system or structure) suggested that the probability of detection and progressive versus proportional tax rates were significantly associated with tax compliance. They viewed taxpayers as rational individuals who would choose to maximise expected saving from tax evaded in the light of the probability of being detected.

Using the Fischer, Wartick and Mark (1992) expanded model as the underlying theoretical framework, Chan, Troutman and O’Bryan (2000) empirically tested the model using a structural equations approach with a convenience sample of taxpayers in Hong Kong and the US. The results of their test indicated that there was a direct, negative effect on compliance for both groups. The effect was somehow moderated by an indirect, positive link between education, moral development, and compliance. Figure 2.6 reflects Chan, Troutman and O’Bryan (2000) illustration of significant structural relationship.

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\(^{183}\) Jackson & Milliron 1986; and Roth, Scholz & Witte (1989) suggested a direct, negative relationship between educational level and taxpayer compliance; however, there was no clear relationship between income and compliance.

\(^{184}\) Moral development includes the process of reasoning and attitude towards the fairness of the tax system. An individual’s moral development involved six stages: Obedience; Instrumental Egoism and Simple Exchange; Interpersonal Concordance; Law and Duty to the Social Order; Societal Consensus; and Non-arbitrary Social Cooperation (Rest 1979, quoted in Singh V 2003b:142). In the Kohlberg & Candee (1984) study, they predicted a direct, positive relationship between moral development and taxpayer’s compliance. The TRA suggested that compliance is determined by attitude and a set of personal salient beliefs (Caroll 1992a, 1992b; Hanno & Violette 1996).
The findings of the study by Chan, Troutman and O’Bryan also indicated that there were significant differences between taxpayers in the US and in Hong Kong. The former group used a higher stage of moral reasoning, had a more favourable attitude towards the tax system and were more compliant, while the behaviour of the latter group in respect of similar attributes was somewhat contrasting. The differences perhaps were due to cultural differences between the two groups. Chan, Troutman and O’Bryan claimed that their findings underscored a key concept of the Fischer model i.e. tax compliance decision making was a complex process. They argued that taxpayers’ compliance decisions were also being affected by many other variables such as economic, demographic, behavioural and even cultural factors. However, the sample used in their study, which was based on convenience sampling, might not be adequately representative of the overall population as compared to samples based on random sampling. Hence, the results of the study by Chan, Troutman and O’Bryan might be restrictive and thus perhaps further investigations would be required in order to obtain more conclusive results.

Figure 2.6: Chan, Troutman and O’Bryan (2000) international model

The earlier economic models appeared to be rather narrow as well as theoretical and the outcomes arising from their applications might not reflect what was actually happening in reality. The later models, utilising creative and innovative economic theories appear to provide better insight into the understanding of taxpayers’ compliance behaviour. However, both the economic models and psychological-sociological models support deterrence theory, and the two factors, namely the
probability of audit and the extent of penalty appear to be pre-requisites for future study.

In order to provide a better explanation of tax compliance behaviour, a more sophisticated model is needed. Such a model perhaps needs to incorporate economic theory, sociological, psychological and other relevant variables. The other relevant variables may range from age, level of education, socio-economic grouping such as the employed and self-employed, level of income, class of occupation, and peer group (such as workmate or colleague).

There is no doubt that numerous studies on tax non-compliance had been conducted during the last few decades. However, the hypotheses and policy questions still require further investigations as most of the recent empirical work remains loosely connected with theory (Andreoni, Erard & Feinstein 1998). In addition, research in tax compliance appears to reveal contradictory findings although a few of these empirical findings had led to productive new theorising. These contradictory findings may to some extent be due to some methodological flaws in gathering the data or might be caused by inappropriate measurement of data and the difficulty in obtaining data. As stated, the "...data from official investigations are hardly ever available and data from other sources..." may be unreliable (Torgler 2002:658).

Compliance is a behavioural phenomenon and tax compliance behaviour has been loosely regarded as a function of attitudes, willingness and opportunity (Wallschutzky 1990). The questions about tax compliance are "...as old as taxes themselves and will remain an area of discovery as long as taxes exist" (Torgler 2002:657). Hence, there could be other factors that have not been well integrated into the models discussed above, but nevertheless were causes that might have affected taxpayers' compliance behaviour. These factors that were derived from a number of integrated studies, along with the factors mentioned in the compliance models above are further re-classified and are discussed in the next section.

2.4 Integration of factors affecting compliance behaviour

Previous studies (Smith & Kinsey 1985; Jackson & Milliron 1986185) had identified a number of factors that are associated with compliance behaviour. Among these

185 See 2.3.2.1 for more discussion.
factors are lack of opportunity\textsuperscript{186} for non-compliance, minimal cost of compliance,\textsuperscript{187} knowledge and ability to comply,\textsuperscript{188} normative commitment to obey the laws and desire to avoid formal sanction\textsuperscript{189} for non-compliance. Alm (1991) on the other hand reviewed the findings of various experimental designs and suggested twelve\textsuperscript{190} variables that were related to compliance. Wallschutzky (1992) concluded that a number of factors were associated with compliance, such as audit, deterrence, taxpayers’ education and service, change in tax law and positive incentives such as material rewards as well as factors that reinforced or increased satisfaction of taxpayers such as pride, attitude, identification with recognition by valuing others and feeling of fairness.

In his later analysis, Wallschutzky\textsuperscript{191} (1993) expounded a few other factors that could contribute to the causes of non-compliance, namely the ignorance of the law, poor advice given by tax agents/revenue authorities, uncertainty or ambiguity of the tax law and forgetfulness of taxpayers to include items of income. Wallschutzky also identified three major factors that could motivate evasion or avoidance. These factors are, firstly, the exchange relationship factors including increase in tax rates, unfairness of tax system and unwise government spending. Secondly, the social orientation factors including the basic predisposition to the state and the law, and group influence; and finally, the administrative control factors such as where the tax administration is too coercive (e.g., tax enforcement is too oppressive or tax administration is not effective).

\textsuperscript{186} Those whose income is subjected to withholding taxes have less opportunity to underreport income.

\textsuperscript{187} The costs here referred to money, time, effort and emotions. The authors argued that lower psychological costs would help taxpayers to reinforce normative commitment to comply and reduced justifications for non-compliance.

\textsuperscript{188} This includes understanding of the tax law and arithmetic skill to compute taxes.

\textsuperscript{189} This includes the likelihood of detection, the severity of punishment if detected and the swiftness of detection and punishment.

\textsuperscript{190} Briefly, the twelve variables were tax rates, penalty rate, audit frequency, probability of audit, individuals felt that they were being treated unfairly, labour supply decision, willingness to pay taxes in exchange for something, rewards, public programmes available, uncertain tax policies, tax amnesty and moral reasoning.

\textsuperscript{191} Wallschutzky further suggested other factors that provided opportunities for tax evasion. The factors included the adequacy of tax collection procedures that include the effectiveness of withholding tax; adequacy of record keeping requirements; adequacy of resources used to detect evasion and adequacy of penalties for evasion. Other factors that provided opportunities for tax avoidance were defects in wording of provisions of tax law, fundamental weakness in the tax system, different tax structure (for example different tax structure for sole trader and companies), significant difference of opinion on attitude and the attitude being inferred.
More recently, researchers also proposed other factors that could be associated with tax compliance, such as tax morale, taxpayer communication, dissemination of information among taxpayers and cultural factors (Chan, Troutman & O’Bryan 2000; Torgler 2002, 2003; Alm, Jackson & McKee 2004).

Having reviewed the numerous factors as presented above, as well as some other factors derived from other relevant literature, the following section classifies the factors related to tax compliance into six categories. These categories are economic and deterrence factors; social factors; institutional variables; equity factors; ethic and moral; and other variables.

2.4.1 Economic and deterrence factors

Economic of crime and expected utility literatures assumed that taxpayers are amoral rational economic evaders who would assess the likely benefits and costs with evasion behaviour (Hasseldine 1993). They would make calculated decisions by weighing the benefits and costs of compliance (Klepper & Nagin 1989c). The benefits and costs referred to are associated with the tax rate, tax audit, probability of detection, tax audit rate, enforcement, penalties or fine as well as positive inducement and rewards.

2.4.1.1 Tax rate

While it has been argued that an increase in tax rates encouraged individuals to declare more income (Yitzhaki 1974, quoted in Torgler 2002:658); it had also been found that an increase in tax rate from 25 per cent to 50 per cent led to an increase of the probability of underreporting income and to the extent of underreporting income (Friedland, Maital & Rutenberg 1978).

Some years later, the results of a study by Clotfelter (1983) also suggested that the level of after tax income and marginal tax rates had a significant negative effect on compliance. Other earlier studies also consistently noted similar findings (Witte & Woodbury 1985; Dubin & Wilde 1988; Das-Gupta, Lahiri & Mookherjee 1995). In contrast to Clotfelter’s findings, Feinstein (1991, quoted in Sawkins & Dickie 2003:5) noted a significant negative relationship between the marginal tax rate and
non-compliance, but that no significant relationship existed between non-compliance and income.

With the conflicting findings, tax rate remained a focus of later research that consistently reported an association between tax rate and tax compliance. Besley, Preston and Ridge (1997) used socioeconomic and other geographical data on the UK poll tax to investigate the determinants of compliance as a function of the characteristics of tax authority. They confirmed\textsuperscript{192} that higher taxes lead to larger non-payment problems. Ali, Cecil and Knoblett (2001) found that an individual tended to comply less when the marginal tax rate rose. This appeared to be more applicable to those high-income rather than lower-income taxpayers.

2.4.1.2 Tax audit, probability of detection, audit rate and prior audit

The general deterrence effects provided by audit have been widely acknowledged. (Dubin 2004:3). Tax audit, as part and parcel of a SA system also drives the compliance behaviour of taxpayers (Jackson & Jaouen 1989; Lopez 1999; Shanmugam 2003). In the context of the Federal Income Taxes for individuals in the US, tax audit is the central feature of voluntary compliance (Alm, Jackson & McKee 2004). Similarly, in other tax regimes, particularly those practising SA, the presence of tax audit appeared to have induced taxpayers to be more careful in the preparation of their returns (Baldry 1999a, 1999b). In fact, audit programmes are meant to encourage appropriate compliance (Butler 1993) and perhaps to change the taxpayers’ compliance behaviour.

Witte and Woodbury (1985) and Beron, Tauchen and Witte (1988) found that tax audit could be an important stimulant to compliance. However, it must be carefully designed for a specific taxpaying group. Witte and Woodbury noted that tax audit effects were more significant among small proprietors than others. Beron, Tauchen and Witte\textsuperscript{193} found that taxpayers significantly underreported adjusted gross income

\textsuperscript{192} The study also looked at the possibility of neighbourhood influences across authority boundaries. "...This is consonant with models of learning and social influences such as guilt, shame and stigma" (Besley, Preston & Ridge 1997:149). The authors found that this variable and the political variables were associated with non-payment of taxes.

\textsuperscript{193} This study analysed a 1969 data set that combined information from the IRS statistics of income programme, the Census, internal IRS documents and a special data set compiled by the IRS in the mid 1970s. The authors used an equation model to estimate compliance. The difference between this study and the earlier studies was that the dependent variables used were taxpayers’ reports rather than
and that the increase in the probability of audit increased reported income and tax liability. They concluded that tax audits were more effective at inducing accurate reporting of deductions rather than of income. This suggested that the tax authority's activities other than tax audits did have significant effects on tax compliance. Although there was sufficient empirical evidence to confirm that a significant relationship existed between audit rate and compliance, the results were inconsistent where there was no clear pattern for different audit classes or different taxpayers (Dubin & Wilde 1988; Wallschutzky 1992, 1993; Snow & Warren 2005).

Dubin, Graetz and Wilde (1987) and Dubin and Wilde (1988) investigated the impact of audit rates and tax rates on tax compliance. Unfortunately, they used proxies rather than random audit returns. The use of tax collections and returns per capita as inverse measures of non-compliance might have a number of possible endogeneity problems as those in cross-sectional analysis. Nevertheless, their results concluded that tax audit might become more 'efficient' over time, and thus might have an increasing deterrence effect.

In their later study, Dubin, Graetz and Wilde (1990), using data over a period from 1977 to 1986, explored the relationships between audit rates and three aspects relating to compliance, namely, reported tax per return, assessed liabilities per return and number of returns filed per capita.\(^{194}\) They concluded that audit rates had a significant positive effect on reported tax per return and the effect was even stronger in the case of assessed liabilities per return, implying that the positive effect was due to increased compliance because of the deterrent effect of audits on taxpayers' non-compliance. However, they also concluded that "...audits bear a negative relationship to returns per capital..." and that "...routine IRS audits are not an effective mechanism for locating non-filers..." (p404). They also noted that for every dollar of revenue gained from tax audits, an additional six dollars of revenue were generated from the indirect or 'ripple' effects. In contrast to the contentions of Dubin, Graetz and Wilde (1990), Long and Burnham (1990) argued that it was hard to determine the effects of varying probabilities of detection even with the presence

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\(^{194}\) Dubin, Graetz & Wilde defined 'returns per capita' as "...total individual income tax returns filed divided by total population" (p397).
of tax audit. These differences in contentions could probably be due to changes in other enforcement strategies.

Tauchen, Witte and Beron (1989) concluded that raising the audit rate had more impact on high-income wage and salary workers than on overall taxpayers. They estimated that the indirect effect of audits was almost three times the direct revenue effect on the high-income groups. Others argued that a reduction in audit rates did not seem to have much impact on compliance (Alm Jackson & McKee 1992c). The results of some other studies tend to suggest that higher audit rates had led to more compliance and that tax compliance was an increasing function of income and a decreasing function of the tax rate (Torgler 2002). Likewise, Dubin (2004) concluded in his simulation experiment that the doubling of audit rate had a direct effect on tax collections of reported amount, additional taxes and penalties.

Ali, Cecil and Knoblett (2001) utilising the 1980-1995 data from the Annual Reports of the IRS developed two equations\textsuperscript{195} and concluded that audit rates\textsuperscript{196} and penalty rates were both effective deterrent of non-compliance. The effectiveness of these two instruments was subjected to taxpayers' income level and that these two instruments were more effective for those high-income level taxpayers. The instrument used for audit rates was criticised as being insignificant and that it led to imprecise estimates of audit rates (Dubin 2004), given that the actual audit rate in the US then was less than 1 per cent.

Regardless of whether audit rates affect compliance or not, it appeared that the decline in audit rates\textsuperscript{197} since 1960s had affected voluntary compliance in the US (Johnson 2003). It was “...estimated that the US Government's coffers have been shortchanged by US7.2 billion dollars of 'real money' as a direct result of lower audit frequency...” (Alm, Jackson & McKee 2004:4). However, there was no evidence on the magnitude of the effects of audit risks on tax compliance and the effects of the manner (or way) taxpayers learn about or communicate audit risk among themselves. In response, Alm, Jackson and McKee incorporated a communication variable in their study utilising a laboratory experimental design with

\textsuperscript{195} The two equations are discussed at 2.3.1.1.
\textsuperscript{196} The audit rate is the percentage of returns audited.
\textsuperscript{197} In the US, the audit rate in 1960s was 4.5 per cent to 5 per cent and gradually dropped to less than 1 per cent (Johnson 2003).
controlled audit settings and communication opportunities. They examined how the three types of communication about audit frequency and audit results affected compliance. Their results indicated that ‘unofficial’ communication have a strong indirect effect that increased compliance, but the ‘official’ communication might not encourage voluntary compliance.

The perceived probability of criminal prosecution also appeared to act as a deterrent to non-compliance (Klepper & Nagin 1989a). The findings of an experiment based on the expected utility theory (Alm, McClelland & Schulze 1992) suggested that the subjects appeared to overweight the probability of an audit, so that there was higher compliance than predicted by expected utility theory.

In Minnesota, US, a controlled field experiment was conducted by Slemrod, Blumenthal and Christian (1998, 2001) to analyse taxpayers’ response to an increased probability of audit. They used taxpayers’ income returns over two years to compare the differences in reported income, deductions claimed and tax liabilities of those randomly selected taxpayers. The results of their experiment indicated that treatment effects varied depending on the level of income. The low and middle-income taxpayers appeared to have increased their reported income and their tax liabilities as compared to the control group. As for the control group, it was found that an indicator of non-compliance was present with the effect being stronger when there was an opportunity to evade. In contrast, the reported income for higher-income treatment group fell sharply as compared to the control group. Due to the comparably small sample size of high-income taxpayers, reliable inferences could not be drawn. Nevertheless, they suggested “...a model based on tax audit as a negotiation that can explain this apparently perverse result” (Slemrod, Blumenthal & Christian 2001:1). In addition, there was a difference in the outcomes depending on whether the taxpayers used tax advisers.

While the probability of being audited appeared to be one of the factors that drove compliance behaviour, Andreoni, Erard and Feinstein (1998) noted that prior audit also influenced subsequent tax compliance behaviour. However, in an earlier study,

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198 Treatment being a letter sent to taxpayers to inform them that their returns would be ‘closely examined’.
199 It is important to note that field experiments carried out with the cooperation of the tax authorities are less artificial and would be of a great enrichment in compliance literature.
Young (1994) detected that prior contact with the tax authority was negatively correlated with the level of compliance. A later study by Blumenthal, Christian and Slemrod (2001) resulted in findings similar to those of Young.

2.4.1.3 Enforcement, penalties and fines

Non-compliance decisions were found to be indirectly related to the threat of penalties (Schwartz & Orleans 1967) and Friedland, Maital and Rutenberg (1978) found that large fines were more effective deterrents than frequent audits. Utilising TCMP data, Klepper and Nagin (1989a) investigated the variations in compliance levels based on line items as appeared in tax returns. They found that the influence of the endogeneity of detection risk and penalties were pervasive and that taxpayers appeared to avoid extreme non-compliance on specific line items and instead allocated their non-compliance across line items to minimise expected penalties.

Graetz and Wilde (1985) argued that compliance could not be explained entirely by the level of enforcement. Scotchmer and Slemrod (1989) showed that optimal enforcement policy required some randomness in the assessment of taxable income, particularly in the case of tax evasion where increased randomness in assessment by tax auditors generally led to higher reported income and more revenue.

In the US, Mete (2002) combined the TCMP survey data for several tax years to study the interactions among taxpayers, the IRS and political ideologies. The study discussed how political ideologies were expected to correlate with audit rate. Mete argued that the Republicans preferred a lower level of enforcement for all forms of regulations than did the Democrats. Further, the Republicans provided less support for increasing government spending and enforcement activities than the Democrats. The influence of political factors on tax compliance behaviour are discussed in the later part of this section.

Tax compliance is not restricted to income taxation, but it is also similarly applicable to other forms of taxation such as Council Tax. Sawkins and Dickie (2003) used a preliminary econometric model to investigate the factors responsible for the relatively high Scottish Council Tax non-payment rates. The authors concluded that there was mixed evidence of a negative effect of enforcement on non-payment rates.
Chapter 2  Literature Review

The evidence appeared to be unclear due to differences in legal and administrative situations on both sides of the Scottish border.

Criminal Investigation\textsuperscript{200} (CI) appeared to be one of the key roles in the US tax system. The CI activities appeared to have measurable effects on voluntary compliance. With the extension to the DGW\textsuperscript{201} method, Dubin (2004) empirically tested the effects of criminal investigation’s measurable (enforcement) activities on taxpayers’ compliance. The study covered a period from 1988 to 2001. Statistical results showed that CI sentenced cases, namely tax and money laundering on general tax deterrence were not significant determinants of tax compliance. Instead, “…incarceration and probation (rather than fines) have the most influence on taxpayers” (Dubin 2004:23). The author claimed that this later study was far more complex than the previous study conducted with the other co-authors. The assumption made in the study that “…individuals consider the likelihood that they will be detected and punished” (Dubin 2004:23) appeared to be lacking information as to what extent was the predicted likelihood of detections i.e. the probability of detection and how severe was the punishment if one was caught.

Nevertheless, it is interesting to note that even with the tax administration’s threat of future enforcement actions, taxpayers in countries with high non-compliance simply did not change their behaviour (Silvani & Baer 1997). Perhaps tax compliance is not purely a matter of administration, but rather a matter of important connections between substance and procedure (Johnson 2003).\textsuperscript{202}

2.4.1.4 Positive inducements

Based on the economic theory that taxpayers seek to maximise their utility, positive inducement and rewards could play some roles in determining compliance behaviour. Alm, Jackson and McKee (1992c) used experiments to analyse the effects of four alternatives forms of positive inducement on tax compliance. The four were namely,

\textsuperscript{200} One of CI’s functions is to investigate alleged tax violations and money laundering.

\textsuperscript{201} DGW denotes Dubin, Graetz & Wilde (1990), which was based on two models. One model specified reported taxes per return filed as a function of audit rates and a variety of socioeconomic factors and the other specified returns filed per capita as a function of the same variables.

\textsuperscript{202} The author described ‘substance’ as those rules that prescribed how much tax each taxpayer owes. ‘Procedure’ includes (i) the rule by which controversies as to the amount of substantive liability are resolved, (ii) the rules which govern collection of the liability once the amount has been determined, and (iii) civil and criminal penalty regimes to encourage prompt and accurate payment of tax (Johnson 2003:1013).
a lottery treatment, a fixed reward session, an audit rate reduction and the provision of public goods. The results showed that there was a significant and positive relationship between positive inducement and tax compliance with the lottery treatment having the largest effect on compliance, followed by fixed reward session, public goods and vastly audit rate reduction.

Similarly, in another study utilising a combination of experimental economics and economic psychology techniques. Trivedi, Shehata and Mestelman (2005) found that considering individuals' attitude, personality and intentional measures provided a richer understanding of individuals' actual compliance decisions in the face of monetary incentives. When it comes to actual compliance decisions in the laboratory, individuals' intention indirectly influenced their attitudes on their compliance decisions (Trivedi, Shehata & Mestelman 2005). Hence, salient and dominant monetary rewards might have had a positive impact on compliance.

The economic or deterrence factor might be a major factor in determining compliance behaviour. However, it is still insufficient to explain compliance behaviour. Human behaviour somehow is also influenced by other factors, such as social factors.

2.4.2 Social factors

Discussion on social factors on compliance is not new. Social factors have been the subject of investigations and studies in various fields that involve compliance research. Regardless of the fields of investigation, generally if any research merely treats individuals as being homogenous, the findings might provide misleading results. Among other attributes, individuals vary in terms of attitudes, level of education, knowledge, awareness as well as income earning capacity.

2.4.2.1 Attitudes

Attitudes in some way do influence behaviour, but tax changes perhaps might not bring about symmetrical change in taxpayers' behaviour. According to Lewis (1982a; 1982b), attitudes are products of myth and misperception that are substituted

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203 In this lottery treatment, participants who were found to be fully compliant for five rounds were able to enter a lottery in which the chances of winning were 1 in 25.
204 For those fully compliant participants, two tokens were given as rewards.
by knowledge. Attitudes would change even if there was no change in terms of ideology and tax laws (Eriksen & Fallon 1996). Any behaviour may represent a multiplicity of attitudes and that tax mentality appears to be an important construct with more than one dimension (Lewis 1982a, 1982b).

In 1974, Song and Yarbrough (1978) conducted a study that comprised an analysis of attitude data that allowed for the investigation of dispositions towards tax evasion. In their experiment, they tried to resolve problems between specific tax knowledge and attitudes towards taxation. They questioned a sample of respondents on their knowledge regarding the objectives of tax reform in the US. Their findings indicated that those with higher fiscal knowledge tended to score positively in tax ethics than those with lower fiscal knowledge. Similarly, others found that low fiscal knowledge correlated with negative attitudes towards taxation and that attitudes towards tax improved through better tax knowledge (Lewis 1982b; Eriksen & Fallon 1996; Kasipillai et al 1999).

In a study conducted by Roberts, Hite and Bradley (1994), a majority of the subjects indicated a preference for progressive tax rates over choices of fair tax rate and regressive tax structure with regards to abstract questions. In contrast, there was a significant lower preference for progressive tax in response to concrete questions. This indicated that when subjects had the full knowledge of the meaning of progressive tax rates, their attitudes towards tax rate changed eventually.

In a quasi-experiment, Eriksen and Fallon (1996) examined the influence of specific tax knowledge on attitudes towards taxation. They reported significant changes in attitude to one’s own tax evasion and perceptions towards fairness of the tax system when tax knowledge increased and these changes in attitudes eventually improved tax ethics. The authors suggested that “...when attitudes towards taxation are improved, this will in turn increase tax compliance...” (Eriksen & Fallon 1996:398). This appeared to be a generalised statement without further reference to other moderating factors such as the effect of tax audit, peer reporting behaviour and moral judgement. However, the results were consistent with that of previous

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205 Concrete questions gave respondents a clear picture of the meaning of progressive taxes.
206 This experiment was conducted in Norway on two groups of students. The control groups comprised of students who were taking marketing as an elective subject in the second year of their BA education, while the experimental group were students who had opted for tax law as an elective. Both groups had never taken any study on tax law before.
research i.e. tax attitudes have influence on reinforced inclinations towards tax evasion and tax compliance.

Confirmation on the improvement in attitudes in relation to compliance are also available from other studies which have revealed that when taxpayers were at higher stages of reasoning, their attitudes would change accordingly. For instance, it was found that taxpayers in the US who used higher stages of moral reasoning, had more favourable attitudes towards the tax system and were more compliant compared with taxpayers in Hong Kong who used lower stages of moral reasoning (Chan, Troutman & O'Bryan 2000).

Likewise, a study utilising the 1997 Arkansas Tax Penalty Amnesty Programme found that filing status, income and the opportunity to evade were positively correlated with the tax owed (Ritsema, Thomas & Ferrier 2003). In their study, Ritsema, Thomas and Ferrier identified three groups of taxpayers: the intentional non-compliant, the unintentional non-compliant and a neutral group and found that taxpayers were not alike in their motivation for failure to report or pay taxes. For those intentionally non-compliant, lack of funds appeared to be a strong motivator related to the amount of taxes owed. Few other factors were significantly related to those unintentionally non-compliant. These results appeared to confirm the findings of several previous studies.

2.4.2.2 Education

One of key social factors influencing behaviour appears to be education. In an extensive literature analysis by Jackson and Milliron (1986), education was found to have effects (either negative or positive) on compliance and that results had been mixed. These mixed results perhaps came about because the earlier studies did not specifically define the level of education or that there was no segregation between evasion and avoidance (Hite 1996).

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207 Filing status includes taxpayer’s marital status, filing jointly, filing separately or filing separately on the same return. As stated by the authors, “...Arkansas tax law allows married taxpayers to file separately on the same return. This often results in tax savings over filing jointly, reducing the impact of a marriage penalty” (Ritsema, Thomas & Ferrier 2003:7).

208 Intentionally non-compliant taxpayers were those who admitted they were not ignorant of tax liability whereas unintentionally non-compliant were those who stated that ignorance was a reason for non-payment of taxes. Neutral group were those who were not affected by the motivating factors.

209 The motivating factors were the lack of available fund, ignorance and sense of morality.

210 The factors were filing status, income and lack of funds.
Beron, Tauchen and Witte (1988) found compliance to be higher for those taxpayers who were less educated and older, native-born, or where the household was headed by a female. Later studies (Beron, Tauchen & Witte 1992) showed a positive relationship between education and non-compliance, which was consistent with the findings of Witte and Woodbury (1985) and Kinsey, Grasmick and Smith (1991) but contradicting that of Dubin and Wilde (1988), as the latter found negative relationship between these two variables. Meanwhile, Dubin, Graetz and Wilde (1990) noted that an increase in the percentage of the adult population with at least a high school education had increased significantly the number of returns filed per capita and that this was more significant in the case of non-filers.

Research also showed that the positive relationship between education and compliance was not restricted to taxpayers in the US, as Chan, Troutman and O’Bryan (2000) also found such a relationship to be significant among taxpayers in Hong Kong. In Malaysia, Madi (1999)\textsuperscript{211} found that the level of taxpayers’ academic qualification was linearly and significantly associated with the level of tax knowledge, which is consistent with the contention that a low level of tax knowledge among taxpayers would not contribute to a higher level of compliance (Saad, Mansor & Ibrahim 2003). Further, Kasipillai, Arripin and Amran (2003)\textsuperscript{212} confirmed the existence of a relationship between education and tax compliance in the context of Malaysia.

2.4.2.3 Income level

Although income level appeared to have influenced compliance, research findings revealed mixed and inconsistent evidence (Clotfelter 1983; Witte & Woodbury 1985; Jackson & Milliron 1986; Dubin & Wilde 1988; Alm, Jackson & McKee 1992c; Young 1994). Both Clotfelter (1983), using the IRS data derived from the 1969 TCMP, and Young (1994) using the data derived from the 1987 Michigan Tax Amnesty Programme, found a positive relationship between income and non-compliance. In contrast, Alm, Jackson and McKee (1992a) found that income was negatively correlated with non-compliance. This is not surprising as the range of

\textsuperscript{211} This study was carried out on sole proprietors and partners in Sarawak, a State in Malaysia.

\textsuperscript{212} This study was conducted on among undergraduate students in Malaysia. The relationship mentioned was “...generally consistent, particularly...relating to general avoidance and personal avoidance” (p134).
income might limit the sample used in these studies. For instance in a study, Christian and Gupta (1993, quoted in Hite 1996:4) examined taxpayers with taxable incomes of less than US50,000 dollars and found that income was negatively correlated with tax evasion. Similarly, Witte and Woodbury (1985) found that taxpayers with middle range income of US30,000 dollars were more compliant than those earning higher income, and this is consistent with the findings of their earlier study in 1983 (Witte & Woodbury 1983). In short, higher level of education perhaps would lead to better income level and would improve one’s tax knowledge that might eventually change one’s attitude towards compliance.

2.4.3 Institutional variables

While individuals are affected by economic and social factors, institutional variables do play important indirect roles in influencing taxpayers’ compliance. Two prominent institutional variables, namely institutional uncertainty and complexity of tax law are discussed below.

2.4.3.1 Institutional uncertainty

Numerous experiments have analysed the role of fiscal uncertainty in taxpayer decision-making by comparing behaviour in two situations; one where the key fiscal parameters were known with certainty and another where the fiscal parameters were uncertain (Torgler 2002). Apparently, these two situations to some extent affect compliance, particularly when information in relation to tax compliance was provided to an individual.

Spicer and Thomas (1982) investigated whether information about the probability of audit influenced compliance. Their experiment consisted of 54 participants where 18 were given precise information regarding the probabilities of being audited in each round;213 the next 18 were given imprecise information and the remaining 18 were given no information about audit probabilities. The results of the experiment indicated that where the respondents received precise information regarding the audit probabilities, the percentage of taxes evaded was negatively and significantly

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213 There were three rounds of audit probabilities, first round 5 per cent, second round 25 per cent and the third round was 15 per cent.
correlated with audit probabilities. However, the respondents paid less attention to the amount of taxes evaded if there was no information given.

The roles of fiscal uncertainty was analysed by Alm, Jackson and McKeq (1992b). They compared the compliance behaviour of individuals when the fiscal parameters were known with certainty against unknown fiscal parameters. The results of their analysis indicated that by introducing uncertainties into the fiscal parameter (e.g. tax rate, penalty rate and the probability of detection), tax compliance increased.

In a later study by Dubin (2004), it was concluded that while media attention played important roles in disseminating information to the public and as a significant magnitude to general deterrence for those CI cases,214 the evidence of increasing compliance (particularly in the case of money laundering) was weak.

These findings indicated that the availability of information on institutional variables only affected certain categories of taxpayers such as those mentioned by Dubin (2004). Other categories of taxpayers might not take note of such information, perhaps because their intention is already to comply.

2.4.3.2 Tax knowledge and complexity of tax law

For some decades, taxpayers and policy makers have often expressed concern over the issues of tax law complexity and compliance (Ferguson 1978). These issues continued to be highlighted in tax compliance research (McKerchar 2002; Johnson 2003; Slemrod 2005). Increasing tax law complexity was often blamed for increasing tax non-compliance (Cuccia & Carnes 2001) as “…complexity is an evil with no redeeming features so far as taxpayers are concerned…complexity represent an opportunity for taxpayers…that can be exploited like any other, especially by those who enjoy a game with both risks and rewards” (Cooper 1993:458).

Despite numerous methods being used, research focusing on perceptions of complexity indicated that there was an association between these two variables (i.e. complexity and compliance) but the degree or strength of the association remained unclear. Some found positive association between complexity and non-compliance, whether intentional or unintentional (Clotfelter 1983; McKerchar 2002; Ritsema,

214 See 2.4.1.3 for more discussion.
Thomas & Ferrier 2003); while others found that the impact of complexity on compliance varied with the characteristics of individual taxpayers, which included education level, perceptions of fairness and the opportunity to evade (Witte & Woodbury 1985; Slemrod 1989). As for non-business taxpayers, Clotfelter (1983) showed that when the level of complexity\(^{215}\) increased, it significantly increased non-compliance among such taxpayers. This was possibly so because business taxpayers might seek advice from tax practitioners, hence the issue of complexity might not be of importance to them.

In an experimental investigation, complexity of the tax law showed significant influence on tax-reporting decisions (Milliron 1985) but the direction of this relationship differed across cases. Milliron concluded that when complexity was coupled with a perceived decrease in equity, the level of compliance increased. In contrast, the level of compliance decreased when complexity was coupled with the increased opportunity to evade. These conclusions were criticised as ambiguous and invalid due to flaws in the experimental design (Daly & Omer 1990). Upon reviewing the findings, complexity might not be the core issue here, but rather an excuse to link with other factors such as the perceptions of equity and the opportunity to evade. Most of the research on complexity (other than McKerchar 2002 and Ritsema, Thomas and Ferrier 2003) utilising survey and archival data has been unable to detect or to identify whether the taxpayers were unintentionally non-compliant because of complexity, which would result in both under and over statement of income. It is possible that other factors such as knowledge and perception of taxpayers also affect the relationship between complexity and compliance.

Knowledge about tax law was assumed to be important to preferences and attitudes towards taxation (Eriksen & Fallan 1996). Studies showed that tax knowledge and compliance were positively correlated but complexity and ambiguity in the tax law and uncertainty about the application of a particular provision also appeared to hinder compliance (Fischer, Wartick & Mark 1992; Kasipillai et al 1999). However, these findings contradicted that of Eriksen and Fallan (1996) and Mottiakavandar et al (2003) as their findings revealed no direct relationship between these variables.

\(^{215}\) Complexity in this study referred to the number of additional tax schedules filed with a return.
Likewise, in a health science study on ‘knowledge – action gap’ (Chan & Molassiotis 1999), it was found that patients might have higher factual knowledge but in reality, they did not fully apply it, hence there was no relationship between knowledge and compliance.

On one hand, reducing the complexity of tax laws might encourage compliance among taxpayers as they might easily understand the law, the tax structure, perhaps be able to compute their own tax liabilities, and eventually able to comply (Baldry 1999a; Somasundram 2003). On the other hand, simplifying the tax system might not be an effective deterrent to tax evasion because taxpayers may not necessarily consider a complex tax system to be unfair (Forest & Shefrin 2002).

Forest and Shefrin used survey data to estimate an empirical model by exploring the relationship between taxpayers’ perceptions of the complexity of tax law, perception of the unfairness of the tax system and taxpayers’ compliance. They failed to detect any relationship between complexity of the tax law and perception of unfairness and concluded that while simplifying the tax code was an otherwise laudable goal, it would not automatically improve compliance.

Taking social psychology and justice literature as the underlying framework, Cuccia and Carnes (2001) developed hypotheses to test the conditions under which tax complexity might be expected to affect equity perceptions. Their results confirmed that the potential complexity of a tax provision\(^{216}\) negatively affected equity assessments. The effects were found only when the subjects were prompted with an alternative provision with relatively favourable economic consequences and that, only when no explicit justification for its complexity and relative economic consequences was offered. While their study provided additional insights into the determinants of tax equity perceptions, the results suggested that “...taxpayers may be happy to tolerate complexity associated with perceived decreases in their tax burden...” (Cuccia & Carnes 2001:133) but the association remained salient.

\(^{216}\) This refers to “...provision called for doubling the maximum personal and dependency exemption amount but with an accompanying phase-out of its availability as income rise” (Cuccia & Carnes 2001:121). The phase-out was affecting those single taxpayers with income level of approximately $125,000 while for married couple it is approximately $190,000.
2.4.4 Equity variables

Equity theory predicts that, given a level of tax payments, any increase in public services or goods would improve taxpayers’ perception of exchange equity. Hence, a taxpayer is less likely to participate in tax evasion. Several empirical experimental results also showed consistency in relation to the equity effects (Alm, Jackson & McKee 1992a, 1992b; Alm, McClelland & Schulze 1992). In particular, these studies showed that an increase in public goods increased the subjects’ compliance but it was not clear whether the increase was due to the economic effects or the equity effects of the public goods or a combination of both.

2.4.4.1 Fiscal policy

An early survey by Song and Yarbrough (1978) suggested that there was a relationship between fiscal inequity and tax evasion. Based on a theoretical framework of the equity theory. Spicer and Becker’s (1980) experiment showed that there was an exchange relationship between the taxpayers and the government.

The result of a later survey by Falkinger (1995) indicated that if a person’s absolute risk aversion increased with perceived equity, the amount of tax that a person evaded decreased. The author used the economic and psychology argument to explain the relationship between risk aversion and equity as well as evasion and inequity. Falkinger concluded that “…if it is a social norm that evading taxes is particularly mean in a fair society, the taxpayers inclination to bear the risk of tax evasion will decrease with equity” (Falkinger 1995:64).

Hence, government policies and statutes determine which tax enforcement procedures are legal or desirable. As a consequence, different tax structures might require different strategies and enforcement measures that are appropriate to different structures.

2.4.4.2 Perceptions of fairness

Several studies have taken alternative approaches in exploring the relationship between complexity, unfairness and non-compliance. The issue of equity and fairness has been a frequent theme associated with taxpayer compliance (Cowell 1992).
Satisfaction with the government appeared to play an important role in taxpayers’ compliance behaviour. Positive actions by the relevant authorities were intended to increase taxpayers’ positive attitudes and commitment towards the tax system and the tax payment (Smith & Stalans 1991; Smith K 1992; Feld & Tyran 2002). The construct of mentality (Schmölders 1970) described what was experienced as fair; and the purpose of taxation and tax ethics associated with the propensity to evade taxes. In addition, experience of unfairness encountered by taxpayers influenced the taxpayers’ compliance towards a tax system (Alm 1991). A recent study confirmed that there were positive relationships between taxpayers’ perception of fairness in the tax system and the amount (as well as the percentage) of their tax liabilities (Ritsema, Thomas & Ferrier 2003).

Taxpayers are likely to comply if they find that there is equitable exchange between the tax paid and the service performed by the government. The presence of public goods enables behaviour interdependency and implies that an individual tends to follow the behaviour of other group members (Alm, Jackson & McKee 1992b). The average compliance rate would be higher in the presence of public goods but when incorporating fiscal uncertainty about the public goods, it would lower the average compliance rate (Alm, McClelland & Schulze 1992, 1999).

Experimental results showed that taxpayers who were given no transfer of public goods or services generally perceived their exchange equity with the government to be less equitable than taxpayers who were given such a transfer (Chung 2002). The extent to which taxpayers’ perception of equity was affected by the effect of the transfer of goods or services would in turn affects taxpayers’ reported income.

As suggested by equity theory, two dimensions of taxpayers’ perceptions of the status quo actually framed the taxpayers’ assessments of the fairness of their tax burden (Kinsey, Grasmick & Smith 1991). The two dimensions were exchange equity and vertical equity.\footnote{Exchange equity means the benefits received for taxes paid and vertical equity means the distribution of tax burdens across taxpayers.} However, Copeland and Cuccia (2002) argued that referents used by taxpayers on equity perceptions existed beyond the status quo of which other factors might have prompted the perceptions. Consistent with the findings of Christensen, Weirich and Newman (1994), it was found that increased
education of taxpayers would enhance the understanding and the acceptance of tax law complexity and the tax burden distributions. The equity perception of an individual was linked not only to the individual's economic satisfaction but also closely related to his/her political affiliation, if any.

2.4.4.3 Political factors

Mete (2002) incorporated the political system\textsuperscript{218} as an alternative approach to study the IRS enforcement activities and taxpayers’ compliance level across the US. Based on a model of bureaucratic behaviour, the analysis demonstrated a strong reciprocal relationship between the IRS enforcement behaviour and tax compliance. Non-compliance was significantly lower during the Democrats presidential administration and the impact of the presidential administration on non-compliance was consistent across all income groups. This implied that the presidents or political leaders had the ability to influence how taxpayers responded to the laws. However, the effect diminished with income.

Similarly, Hasseldine and Hite (2003b) tested taxpayers’ political preference and attitudes towards the tax system using political affiliation.\textsuperscript{219} They noted similar findings, i.e. taxpayers’ perceptions differed significantly by political party affiliation. They concluded that “...the more closely identified the tax provision is to a specific party, the more favourably it will be received by members of that party relative to taxpayers with other political party affiliations” (Hasseldine & Hite 2003b:6).

2.4.5 Ethics and morals

The Moral Development Theory (Kohlberg 1969, 1981) acknowledged that, given a certain situation, individuals could move forward or backward through different stages in the moral reasoning. Morals drove an individual’s intention to perform actions as prescribed in the modified TPB (Trivedi, Shehata & Mestelman 2005), while the role of ethics was directly related to tax compliance behaviour (Henderson & Kaplan 2005).

\textsuperscript{218} The political system studied covered four presidential administrations in the US that is Johnson (1965 -1968), Nixon/Ford (1969-1976), Carter (1977-1980) that was further divided into the Democrats and the Republicans administration.

\textsuperscript{219} They are the Democrats, Republicans and the Independents.
2.4.5.1 Tax morale and moral appeals

In the 1960s, Schwartz and Orleans (1967) examined the issue of morals affecting compliance. Similarly, McGraw and Scholz (1991) examined the effect of moral suasion on taxpayers. These studies were criticised for taking the averages of groups of taxpayers as their dependent variables. The analysis based on group means was unable to identify the specific types of individuals who were or were not affected by the moral strategies (Hite 1996). Nevertheless, Mason (1990) concluded that a moral appeal was feasible and Jackson and Jaouen (1989) found that to some extent, moral appeal was more effective for females than males on attitude towards tax compliance. However, taxpayers might have differing past experiences that affected their predispositions, and a single type of message was not representative of all taxpayers. Hence, the effect might not be universal.

Generally, research supported the contention that there was some kind of association between a sense of morality and compliance, but evidence varied depending on the tax rate and the taxpayers’ perception of fairness. A higher tax morale could be generated when trust between government and the citizens improved (Torgler 2003). Paying tax would become an accepted mode of behaviour when there was a positive influence of communication and voting rights (Alm, McClelland & Schulze 1999). A study also revealed that in an endogenous fine treatment where subjects were allowed to approve or reject a fine proposal, tax compliance was higher as compared to those in a fixed exogenous fine (Feld & Tyran 2002).

According to the Theory of Moral Reasoning (Kohlberg 1981), an individual at the higher stage of reasoning would no longer focus on him/herself but rather on the relationship with others and on personally held principles. The later two stages were closely linked to the society that one belongs to and to its social norms.

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220 Schwartz & Orleans used a series of questions to stimulate motivation such as guilt and patriotism. They found marginally significant ($p<.10$) results for a moral approach over legal sanctions.

221 McGraw & Scholz used a three months delay between the exposure of a moral appeal and the filing of tax returns. The respondents consisted mainly of the higher educated, mid to upper income taxpayers. They found no significant effect for moral appeal.
2.4.5.2 Social norms

A social norm is defined as an equilibrium-signalling behaviour and that once the signals commence, they tend to repeat themselves particularly when the signals are relevant to compliance of the law (Posner 2000). Social norms also "...consist of a pattern of behaviour which must be shared by other people and sustained by their approval and disapproval..." (Elster 1989, quoted in Torgler 2002:663). Social norms vary from group to group in terms of prescribed and proscribed as well as strength of the normative obligation (Smith & Kinsey 1985; Alm, Sanchez & DeJuan 1995). Slemrod (1998) argued that the social capital derived from the willingness to pay taxes voluntarily lowered the cost of operating by the government and of equitably assigning its cost to citizens.

Alm, McClelland and Schulze (1999) suggested that social norms affecting individual reporting decisions were further influenced by group communication and voting on different aspects of the fiscal system. In their experiment, they found that under an identical fiscal regime, an individual’s behaviour differed prior to and after the vote announcement. By communicating with others, a participant selected a greater level of enforcement. However, the combination of both communication and votes changed the social norms of tax compliance, so that paying taxes became the accepted mode of behaviour. It appeared that communication or discussion among participants gave them the opportunity to clarify costs and benefits of enforcement. This increased cooperation among groups and had led to a certain pattern of behaviour.

2.4.5.3 Opportunity to evade

Research has shown that when there were opportunities to evade, non-compliance increases (Wallschutzky 1992). Significant positive relationships between opportunity to evade taxes and occurrence of evasion and amount of evasion were found in a study by Robben et al (1990) but the frequency of evasion was not significant. Others argued that with a greater amount of tax withheld, taxpayers would have less opportunity to underreport tax liability (White, Harrison & Harrell 1993; Young 1994, Hasseldine, Kaplan & Fuller 1994; Turnier & Little 2004). However, psychological researchers (Kahneman & Tversky 1979, quoted in Witte
1989:5) suggested that overwithholding might stimulate compliance that subsequently changed the risk attitudes of taxpayers in accordance with the prediction of economic theory.

2.4.6 Other variables

The works of Ajzen and Fishbein (1980) and Jackson and Jaouen (1989) suggested that there were possible explanations for the relationships between external variables and behaviour. These external variables could be demographic variables (such as age, gender and marital status), cultural background, experience encountered by taxpayers, financial distress and other possible variables.

2.4.6.1 Demographic variables

Literature has consistently revealed supportive evidence that there were positive correlations between compliance issue and age and gender (Roth, Scholz & Witte 1989; Glen 1998; Andreoni, Erard & Feinstein 1998; Kasipillai, Aripin & Amran 2003). From an extensive review, Jackson and Milliron (1986) found that males tended to be more non-compliant than females, but the review noted contradictory results in previous research. By controlling the direct influence of income and education in a large pooled sample size, gender tended to correlate with non-compliance (Kinsey, Grasmick & Smith 1991).\(^{222}\) Glen (1998) and Kasipillai, Aripin and Amran (2003) concluded that among females, there was improvement in compliance attitudes after they were given lessons on tax. This might not be a clear indicator that gender played a role in compliance, or that females were less compliant. This could possibly be due to insufficient tax knowledge that might have lead to the non-compliance behaviour as Fallon (1999) confirmed that improved in tax knowledge did significantly change the attitudes of both male and female students towards tax. However, these studies did not take into consideration how interactions among participants of different gender affected compliance behaviour.

As for age, a study by Clotfelter (1983) noted a curvilinear relation with middle-aged taxpayers as the least compliant. In contrast, other research noted a negative

\(^{222}\) This study utilised a survey data derived from the year of 1979, 1985, 1987 and 1988 to analyse attitudes towards tax compliance.
relationship between age and compliance (Witte & Woodbury 1985; Baldry 1987; Dubin & Wilde 1988).

In terms of marital status, taxpayers are classified either as single or married. Apparently, single taxpayers evade more often than married taxpayers (Clotfelter 1993; Young 1994) but this relationship was not applicable to those who were unintentionally non-compliant (Ritsema, Thomas & Ferrier 2003). Perhaps the findings might also differ in different societies with different cultural backgrounds.

2.4.6.2 Culture

Culture represents an environment where one was brought up and where one lives. Cultural values denote the fundamental beliefs of a society. Beliefs in behaviour lead to certain outcomes (Ajzen & Fishbein 1980). The psychology paradigm suggested that cultural background was perhaps an important determinant of compliance behaviour (Lewis 1982b). As noted, cultural differences between taxpayers in Israel and in the US was a concern in a construct validity of experimental design in compliance (Fischer, Wartick & Mark 1992).

Evidence also showed that culture influenced the compliance behaviour and the mode of enforcement (Andreoni, Erard & Feinstein 1998). Likewise, others suggested that cultural background played an important role in forming taxpayers’ attitudes (Coleman & Freeman 1997). In particular, an individual’s behaviour was influenced by a broader cultural and sub cultural input. “...The attitudes and values which individuals acquire from this input produce an independent thinker engaging in complex behaviour” (Homan 1991, quoted in Coleman & Freeman 1997:6). Chan, Troutman and O’Bryan (2000) noted that there was a relationship between cultural differences and tax compliance among taxpayers in Hong Kong and in the US. Similarly, Richardson (2005) found several significant differences of opinions between the Australian and the Hong Kong survey respondents in relation to tax fairness perceptions.

Cummings, Martinez-Vazquez and McKee (2001) argued that it was possible to isolate cultural effects as a factor in compliance. The writers used laboratory experiments in three different countries, namely the US, South Africa and Botswana to investigate compliance behaviour across different cultural settings while holding
the tax reporting institutions constant. They found that the compliance rate varied between these countries and this could possibly be due to differences in institutional features and in social norms across these countries. Hence, there was a need to tailor the structure of the tax system to the predominant culture of the taxpayers (Chan, Troutman & O’Bryan 2000).

2.4.6.3 Other factors

Factors affecting compliance are not limited to the discussion above as there could be others that, though not very significant, might determine an individual’s behaviour. For example, encounters with tax authorities might change the perceptions of a taxpayer towards the tax system. Prior research has convincingly shown how a single experience with a rude official would lower one’s support of the legal authority and this indirectly increased non-compliance with the law (Stalans 1992, quoted in Wickerson 1993:6). Likewise, taxpayers’ experience with tax authorities might also influence taxpayers’ compliance (Kasipillai & Baldry 1998) particularly when taxpayers are unhappy about issues related to the tax authorities.

It has been suggested that persons experiencing financial distress would be more likely to be engaged in tax evasion than those with less financial difficulties (Wärneryd & Walerud 1982; Roy-Chowdhury 2003). In a study, Vogel (1974) found that respondents who experienced improved economic status were likely to admit that they evaded taxes during the last five years as compared to those who suffered economic deterioration. Other evidence showed that the lack of funds and the complexity of the tax system were negatively correlated with the amount of and the level of tax (Ritsema, Thomas & Ferrier 2003). Perhaps, compliance costs might be the principal issue closely linked to the financial position of an individual.

Proponents of the economic models may agree that human beings possess a multiplicity of motives and social roles (Lewis 1982b). The cognitive domain emphasises that the cognitive components need to be examined indirectly through some other cultural background variables or by quizzing people on their knowledge on tax. Different groups in society have varying attitudes towards and different perceptions on tax enforcement.
Economic and social factors appeared to be the prominent determinants in taxpayer compliance. Other factors to some extent do also influence compliance behaviour of taxpayers, and different factors are applicable to different societies in different countries. Nevertheless, social norms appear to have the most significant influence on individual taxpayer’s behaviour. Hence, tax administrators should take cognisance of different enforcement strategies when dealing with different groups of taxpayers.

The above review provides valuable insights into tax compliance behaviour in Malaysia and eight other SA tax regimes. It has clearly been demonstrated to be multifaceted and complex, with many factors that impact on such behaviour. There have been valuable contributions, but there are clearly gaps of knowledge in understanding taxpayers’ compliance behaviour. Yet understanding taxpayers’ compliance behaviour is critical for the tax authority in determining its assessment system and appropriate strategies to enhance compliance.

However in the context of SA in Malaysia, to enhance compliance rate, the IRB has focused mainly on enforcement and penalties. There appears to be a lack of appreciation that compliance behaviour is multifaceted, complex and influenced by factors other than enforcement and penalties. Thus, in the process of formulating policies and strategies to achieve a more efficient and effective tax administration and to enhance compliance, there is a need to take cognisance of and incorporate other factors that impact compliance behaviour. Since SA in Malaysia is still in its infancy stage, research on compliance behaviour under SA is very minimal and the understanding and knowledge in this area is limited. In this context, any expansion of knowledge on, and contribution towards a better understanding of compliance behaviour would be useful to the tax authority. The findings of this research could beneficially narrow the gap pertaining to the knowledge and understanding of compliance behaviour and the implications thereof, particularly in relation to SA in Malaysia.

2.5 Research questions

Given the objectives of the research set out in Chapter 1 and with references to various tax and non-tax compliance literature reviewed in this chapter and in the
context of the implementation of SA in Malaysia, the first research question is (1) ‘Has changing from OAS to SA system affected compliance behaviour of Malaysian individual taxpayers?’ Arising from this research question, five other research questions also need to be addressed. These five research questions are:-

(2) Do tax structure features (tax rates, tax audit and penalty) affect compliance behaviour?

(3) Does taxpayer’s attitude towards tax affect compliance behaviour?

(4) Does taxpayer’s tax knowledge affect compliance behaviour?

(5) Do financial constraints of taxpayers affect compliance behaviour?

(6) Are there relationships between the five causes (assessment system, tax knowledge, tax structure features, attitude towards tax and financial constraints)?

Having identified these research questions, a more refined theoretical model for personal income tax compliance in the context of Malaysian individual taxpayers’ compliance behaviour is developed from that presented in Chapter 1. The theoretical model would provide a framework for research and investigation to address the research questions and the objectives of this research.

2.6 Theoretical model for personal income tax compliance

The works of Ajzen and others in developing the TRA and TPB do have bearings on and thus have contributed to the development of the theoretical model for this research. Both TRA and TPB models considered attitudes and subjective norms as factors that could trigger intentions leading to the behaviour of an individual. The Trivedi, Shehata and Mestelman’s (2005) model is adopted to provide support to the TRA and TPB models of Ajzen and that of his co-authors.

The model for the purposes of this research also incorporates the features found in the model of Fischer, Wartick and Mark (1992) and the expanded model of Chan, Troutman and O’Bryan (2000). These features are being incorporated based on a number of justifications. Firstly, these models provide interactions of different categories of variables such as those variables within the economic and the sociological-psychological models. Secondly, Fischer, Wartick and Mark’s model
also considered the influence of tax structure features on attitudes and behaviour which could be significant given that tax audits and penalty form part and parcel of SA and that the tax audit and penalty strategy is the current emphasis of the IRB. Lastly, while Fischer, Wartick and Mark's model considered a number of demographic variables as the intervening variables, Chan, Troutman and O'Bryan's model incorporated cultural differences as the determinants of compliance behaviour. Since taxpayers' compliance behaviour might presumably be mediated by demographic variables such as gender, age, education, language proficiency and ethnic background, hence, in the context of compliance behaviour in the Malaysian settings, such demographic variables are relevant as mediating variables.

The issue of SA is current in the present income tax system in Malaysia, with SW and the SE taxpayers having commenced exercising SA in early 2005 when filing their returns in relation to their income derived in 2004. As SA places more responsibilities on individual taxpayers, presumably these taxpayers would seek to acquire relevant and adequate tax knowledge to manage their tax affairs. Thus, there is a possibility that the implementation of SA might affect the tax knowledge of individual taxpayers and that this might in turn affect their compliance behaviour. Hence, taxpayers' perceptions on the change of assessment system and their tax knowledge are incorporated as variables in the model.

In addition, the economic models generally posit that an individual would weigh the expected utilities in terms of costs and benefits while making decisions pertaining to payment of taxes (Allingham & Sandmo 1972). It has been suggested that those experiencing financial distress are more likely to be engaged in tax evasion than those with less financial difficulties (Wärneryd & Walerud 1982; Roy-Chowdhury 2003). Issues of financial constraints, such as income level and family financial commitments are also closely linked to one's financial position. As for financial commitments, presumably, the financial commitment of married taxpayers would probably be more than those who are single. Further, lack of funds also appeared to be a strong motivator related to intentional non-compliance (Ritsema, Thomas & Ferrier 2003). Hence, to a certain extent, the assessment system and the tax structure features in Malaysia might have effects on the financial situation of individual taxpayers and influence their compliance behaviour.
Based on the scenario presented above, a general theoretical model showing the interrelationships between the dependent variable (compliance behaviour), the five independent variables namely assessment system, tax knowledge, tax structure features, financial constraints and attitudes towards tax and the moderating variable (i.e. demographic variables) for personal income tax compliance behaviour in Malaysia is proposed and presented in Figure 2.7.

Logically, it is assumed that the assessment system is closely linked to the tax structure features. The implementation of these two independent variables (causes) would affect taxpayers’ financial commitments, or perhaps would result in taxpayers experiencing financial constraints. Presumably, regardless of whether taxpayers experienced unfavourable or favourable financial situations, such experience would affect their compliance behaviour.

It is predicted that the interactions of the three independent variables (assessment system, tax structure features and financial constraints) would eventually affect taxpayers’ attitudes towards tax, and as a consequence, would in turn affect their compliance behaviour.

While assessment system and tax structure features presumably have effects on financial constraints as well as attitudes towards tax, some demographic variables (such as age, level of education, marital status and types of employment) do have significant bearing on the financial constraints experienced by taxpayers. Similarly, some demographic variables (such as age, gender, level of education and ethnic background) could have roles in shaping taxpayers’ attitudes towards tax.

Based on the IRB’s current practice, for administrative purposes, individuals are classified into two categories, namely the SW and the SE taxpayers. In line with the objective of this research, the model in Figure 2.7 also aims to examine the different variables in relation to these two different categories of individual taxpayers. In general terms, the proposed model sets out a framework to address the six research questions as well as the overall objective of this research.
Figure 2.7: A theoretical model of personal income tax compliance behaviour

Chapter 2 | Literature Review
In the literature reviewed in this chapter, various modes of investigation have been adopted by researchers to search for evidence on the causes or factors that were associated with taxpayers' compliance behaviour. In the context of Malaysia, evidence on whether the five categories of causes and the moderating variables that had been theorised as determinants of taxpayers' compliance behaviour requires further investigation. Thus, in searching for the evidence on the effects or the impacts of these causes on compliance behaviour, an appropriate choice of research strategies involving different research paradigms and different research methods is of paramount importance. Discussions on the two distinctive research paradigms, namely qualitative and quantitative, and associated research methods such as survey, experiment and case study are presented in the next chapter together with the rationale for the research design.