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Fairness Perceptions and Compliance Behaviour: The Case of Salaried Taxpayers in Malaysia after Implementation of the Self-Assessment System

Natrah Saad*

Abstract
This study investigates the role of fairness in tax compliance decisions among taxpayers in Malaysia. The impacts of tax knowledge and tax complexity on fairness perceptions are also examined employing the Theory of Planned Behaviour. To test the model, a questionnaire was administered among a sample of salaried taxpayers across Malaysia. The findings revealed that taxpayers perceived the current income tax system as fair but there was no conclusive evidence that such a perception had an influence on compliance behaviour. Instead, attitudes and subjective norm were found to be most influential. Furthermore, tax knowledge and tax complexity were shown to affect fairness perceptions.

1. INTRODUCTION

The shift from the official assessment system (OAS) to self-assessment system (SAS) in 2004 has seen considerable changes take place in the tax system in Malaysia. Obviously, the major transformation with the new system is that the Inland Revenue Board (IRB) now functions more as a tax auditor than as a tax assessor. From the taxpayers' perspective, the change is more burdensome as the responsibility to compute and file tax returns rests solely with them (or with their tax preparers), which undoubtedly requires good knowledge of the tax system and reduced tax complexity. In short, SAS has imposed additional compliance costs to taxpayers. To facilitate taxpayers in their new role, seminars on SAS were conducted across the country and e-filing was introduced, providing options for taxpayers to file either manually or electronically.

Yet, after five years of SAS, taxpayers' perceptions on the new system are not fully understood. Thus, this study investigates taxpayers' perceptions with regard to

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fairness; how tax knowledge and complexity influence fairness perceptions; and how these elements subsequently affect taxpayers' compliance behaviour.

I believe this study contributes to the literature in several ways. First, from a theoretical perspective, this study adds to the limited literature available in the Asian region. To date, there have been two major studies on fairness perceptions undertaken in Malaysia (Azmi & Perumal, 2008; Mustafa, 1996). Even though these two studies are quite recent, Mustafa (1996) for example, only focused on the tax rate structure as the element of tax fairness. He does not comment on the determinants of such judgments. The other study, on the other hand, attempted to identify the fairness dimensions among Malaysian taxpayers by replicating the Gerbing's (1988) developed questionnaire.

Second, this study extends the well-established Theory of Planned Behaviour (TPB) in compliance behaviour studies. While TPB appears to be the dominant model in explaining an individual's behaviour, the inclusion of fairness perceptions in tax settings has strengthened the model to a certain extent.

Third, from a practical perspective, the information on taxpayers' fairness perceptions and compliance behaviour can assist policy makers, particularly tax authorities in reviewing and modifying current tax systems, where necessary. In addition to this, the findings on the impact of tax knowledge and tax complexity on fairness perceptions and compliance behaviour are also useful for policy makers to tailor tax education and simplification programs.

The remainder of this paper is organized as follows. Section 2 provides an overview of the income tax system and compliance environment in Malaysia while Section 3 reviews the relevant literature and develops the research hypotheses. In Section 4, the conceptual model is proposed, while Section 5 describes the methods used in this study. The results are presented in Section 6, followed by a discussion in Section 7.

2. OVERVIEW OF THE INCOME TAX SYSTEM AND COMPLIANCE LEVELS IN MALAYSIA

The income tax system in Malaysia commenced in 1948 under British colonization. It was introduced to legitimise the collection of taxes from individuals and corporations. Since its inception, Malaysia has adopted OAS which requires taxpayers to furnish relevant information pertaining to their incomes and expenses to the IRB. Under the system, the duty to compute the tax payable lies with the IRB as taxpayers are assumed to have limited knowledge on taxation.

However, with effect from 2001,[1] SAS was implemented. Under the new system, the responsibility to compute the tax payable shifted from the IRB officers to the taxpayers. Unlike OAS, SAS requires taxpayers to be well-versed with the existing tax laws and provisions since they are answerable to the tax authorities in the case of a tax audit. Another prominent attribute of SAS is voluntary compliance, as the tax return submitted by taxpayers is deemed to be their notice of assessment. In other words, penalty mechanisms will be applied if taxpayers do not submit a correct tax return within the stipulated period.

[1] SAS was implemented in stages, beginning with companies in 2001, followed by non-companies in 2004, and was fully put into practice in 2005.

Subsequent to the full implementation of SAS in 2005, the IRB succesfully recorded tax collection of RM56.85 billion in direct taxes in the year 2005.[2] This amount is 17.6 percent higher than the Government's revised estimate of RM48.35 billion for the year 2005. The IRB Chairman claims that the IRB has never collected such a large amount before (Inland Revenue Board of Malaysia, 2005). At a glance, this provides some evidence that the shift from OAS to SAS made by the IRB is 'financially rewarding'. However, he further notes that the rise in tax collection is also attributable to favourable national economic condition that grew by five percent in 2005, which in turn creates a conducive climate for all sectors in Malaysian economy.

Notwithstanding the favourable tax collection recorded during the year, the IRB's report also documented the following 'alarming' statistics relative to the previous year:[3]

(1) the IRB visited 1,113 individuals' premises and discovered tax in arrears of RM37.5 million;

(2) 9,066 individuals were banned from leaving the country in accordance with Section 104 of the Income Tax Act 1967[4] (Malaysia) with outstanding tax payments of RM245.09 million;[5]

(3) 466 cases filed in the courts for RM30.65 million tax; and

(4) 39 bankruptcies were filed for individuals involving RM9.85 million tax (Inland Revenue Board of Malaysia, 2005).

The increasing trend of non-compliance indicated in the IRB's report may give the impression, that either (1) taxpayers' negative response on tax compliance behaviour is rising gradually; or (2) the concerted effort of the IRB officers (such as an increase in audit work, etc.) has been fruitful in discovering non-compliance behaviour. From both perspectives, it appears that non-compliance behaviour is 'alarming' in Malaysia.

The discussion above provides a clear indication that the existing income tax system under SAS is not well understood, with unintentional or deliberate non-compliance by taxpayers.[6] The reason(s) for such non compliance has (have) yet to be explored, but it

[2] Direct taxes comprise company income tax, petroleum income tax, individual income tax, cooperative income tax, stamp duty, real property gains tax (RPGT), withholding tax, International Offshore Financial Centre (IOFC) tax and other taxes.

[3] The 2004 Annual Report suggests that: (1) the IRB visited 566 individuals' premises and discovered tax in arrears of RM6.05 million; (2) 6,736 individuals were banned from leaving the country in accordance with Section 104 of the Income Tax Act 1967 (Malaysia) with outstanding tax payments of RM226.77; (3) 121 cases filed in the courts for RM15.35 million tax (Inland Revenue Board of Malaysia, 2004).

[4] This section stipulates that the Director General of the IRB (DGIR) has the right to ban a person from leaving Malaysia if he/she did not pay all tax payable by him/her, including tax penalties, tax on emoluments or pensions, tax on interest or royalties, and special classes of income derived from Malaysia (Inland Revenue Board of Malaysia, 2008).

[5] There is a possibility that individuals whose premises were visited by the IRD partly forms the number of individuals who were being banned from leaving the country. However, no further information available in the IRB's Annual Report to confirm this.

[6] Taxpayers with unintentional non-compliance would feel that they have fully complied with the tax law in filing their tax returns but may end up filing incorrectly inadvertently. In other words, they have the

(they) may be associated with the tax fairness perceptions (as indicated by numerous overseas studies, eg. Gilligan & Richardson, 2005; Turman, 1995; Bordignon, 1993; Etzioni, 1986).

3. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This section provides an overview on the relevant literature on tax fairness perceptions, tax compliance and the variables under investigation, and is followed by hypotheses development.

3.1 Tax Fairness Perceptions

Previous studies indicate that fairness perceptions can take various forms. First, vertical fairness, which asserts that taxpayers with different economic situations should be taxed at different rates (Erich et al., 2006). This would result in higher income earners paying tax at higher rates than low-income earners. Another component is horizontal fairness, defined as 'the equal treatment of equally circumstanced individuals' (Michael, 1978). In other words, horizontal fairness recommends that taxpayers of similar economic positions should pay the same amount of tax. These two dimensions of fairness are derived from the Distributive Justice Theory (DJT) which asserts that for a system to be perceived as fair, it needs to treat people in similar circumstances in equivalent manner, without neglecting the individuals' needs. In other words, the theory is suggesting that a compromise has to be made between these dimensions of fairness to accomplish positive perceptions on the fairness of an income tax system.

In addition to vertical and horizontal fairness, Bobek's (1997) study on the US tax system is also concerned with procedural fairness and policy fairness. Procedural fairness relates to the process employed to reach distribution outcomes while policy fairness deals with the content of the tax law. Another significant fairness dimension is exchange fairness (Gilligan & Richardson, 2005; Gerbing, 1988), which represents the exchange of contribution and benefit between taxpayers and government. This dimension of fairness holds that taxpayers will have fair perceptions of the tax system if the benefits received from the government are equitable compared to their tax contributions.

Other dimensions of fairness include a preference for either progressive or proportional taxation (Turman, 1995), personal fairness, tax rate fairness, special provisions and general fairness (Gilligan & Richardson, 2005; Richardson, 2005a; Christensen & Weichrich, 1996; Christensen et al., 1994; Gerbing, 1988).

The above review on studies of tax fairness suggests approximately ten dimensions of fairness. However, in this study, seven dimensions are identified to be important in assessing the fairness of the income tax system. The dimensions are: general fairness, exchange fairness, horizontal fairness, vertical fairness, retributive fairness, personal fairness and administrative fairness.

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willingness to comply but possibly their lack of knowledge may lead to them being non-compliant. In contrast, taxpayers with deliberate non-compliance have the intention not to comply with the tax law. They purposely act against the tax law by either understating their incomes, overstating their expenses and even not submitting their tax returns. This intentional non-compliance is of interest in this study.

General fairness simply measures individuals' judgments whether the (income) tax system is generally fair or not. While exchange fairness is concerned with a reciprocal exchange between taxpayers and the government, horizontal fairness considers equal tax treatment among taxpayers in similar economic positions. Vertical fairness is assessed based on the ability to pay and preference for tax rate structure, either flat rate or progressive. Retributive fairness deals with the fairness of punishments imposed. Personal fairness concerns individual's self interest while administrative fairness, on the other hand, relates to the content of the tax law (policy fairness) and procedures employed by the tax authority (procedural fairness). Thus, based on the prior literature, it is therefore hypothesised that:

H_1: Malaysian taxpayers perceive the fairness of the income tax system as multi-dimensional.

3.2 Tax Compliance

In this study, tax compliance is assumed to take place when a taxpayer files all required tax returns at the proper time and that these returns accurately report tax liability in accordance with the tax law (which include the Internal Revenue Code, regulations, and court decisions) applicable at the time the return is filed. This definition is adopted from Roth et al. (1989), as it provides a better definition when compared to the definition used by Jackson and Milliron (1986) (refer to Richardson & Sawyer, 2001), which has been critised for not taking into account court decisions in their definition of tax compliance.

Numerous studies have been published on the relationship between tax fairness perceptions and tax compliance. Survey data from 1960-1980 by Etzioni (1986) documented that the fairness perception was more likely to affect tax compliance rather than tax rates. Turman (1995) and Roth et al. (1989) confirmed that fairness perceptions influence tax compliance behaviour. Similarly, Gilligan and Richardson (2005), Roberts (1994), Hite and Roberts (1992), Porcano and Price (1992), Harris (1989), and Song and Yarbrough (1978) found tax compliance to be significantly associated with perceptions of an improved tax system.

A recent cross-cultural study by Richardson (2005b) on tax fairness perceptions and tax compliance behaviour in Australia and Hong Kong documented that tax fairness perceptions about general fairness had a significant impact on tax compliance behaviour in both countries. Additionally, in Australia, it was found that tax fairness perceptions about special provisions, tax rate structure and self interest had some significant relationships with tax compliance behaviour. Given the foregoing discussion, it is further hypothesised that:

H_2: Malaysian taxpayers perceive fairness dimensions$_{1\ to\ k}$ positively and significantly influence tax compliance behaviour.[7]

[7] In this study, fairness perceptions, tax knowledge and tax complexity are treated as multi-dimensional. Thus, *1 to k* in the relevant hypotheses refers to the number of dimensions of that variables. For instance, in Hypothesis 2, *1 to k* denotes seven dimensions of fairness that are hypothesised to positively and significantly influence tax compliance behaviour.

3.3 Tax Knowledge

Tax knowledge is an essential element in a voluntary compliance tax system (Kasipillai, 2000), particularly in determining an accurate tax liability (Palil, 2005). Without tax knowledge, there is a tendency for taxpayers not to comply with the tax law either intentionally or unintentionally. This was postulated by McKerchar (1995) who studied small business taxpayers. She suggested that small business taxpayers were not even aware of their tax knowledge shortfall and this might lead to unintentional non-compliance behaviour.

The influence of tax knowledge on fairness perceptions was documented by Schisler (1995), who carried out a study comparing tax preparers and taxpayers. Schisler found that taxpayers had significantly lower fairness perceptions compared to tax preparers. The result might be due to the absence of tax knowledge among taxpayers compared to tax preparers. Fallan (1999) later confirmed Schisler's (1995) findings that tax knowledge significantly changed attitudes towards the fairness of the tax system. In that experimental study, the author measured tax knowledge through an additive index of 12 questions concerning tax allowances and tax liabilities.

Unlike Fallan (1999), who simply focused on technical knowledge of tax, an earlier study by Harris (1989) separated tax knowledge into fiscal awareness and technical knowledge, in order to observe the impact of each type of knowledge on fairness perceptions. The findings revealed that types of tax knowledge impacted fairness perceptions and consequently compliance behaviour. This study was supported by White et al. (1990), who suggested that a formal class in taxation would enhance the knowledge about the law and appreciation of fiscal policy goals, thus increasing perceived fairness.

Despite the evidence that fairness is a multi-dimensional construct, these prior studies tend to focus on the effect of tax knowledge on the overall fairness of the tax system rather than on each dimension of fairness. To critically assess the role of tax knowledge on fairness perceptions of the tax system, I believe it is essential not only to distinguish the types of knowledge, but also the dimensions of fairness that the type of knowledge has affected. Having said that, this study examines the impact of tax knowledge on seven dimensions of fairness as discussed earlier. Thus, it is hypothesised that:

H_3: Tax knowledge$_{1\ to\ k}$ positively influences the dimensions of fairness perception$_{1\ to\ k}$ of Malaysian taxpayers.

3.4 Tax Complexity

Tax complexity arises due to the increased sophisticatication in the tax law (Richardson & Sawyer, 2001). Some researchers agree that a certain degree of complexity in the income tax system is necessary to ensure the system is fair (for example, Forest & Sheffrin, 2002; Sawyer, 1996; White, 1990). This is particularly applicable to the perceptions of the tax authority and tax professionals, suggests White (1990). Applying four scenarios of tax complexity, she asserts that both the tax authority and tax professionals (tax lawyers and tax accountants) prefer complexity in the tax law but at different levels. The tax authority prefers tax complexity that will increase their probability to win the cases in disputes, while tax lawyers on the other

hand are in favour of tax complexity that gives rise to a higher probability that the taxpayers will win the case. Similarly, tax accountants' preferences are also towards a high level of tax complexity as it will increase the demand for their tax services. In his critique and extension of White's study, Sawyer (1996) suggests that the tax authority prefers a lower level of tax complexity than indicated in White (1990), and the tax authority may benefit most when the level of complexity is close to zero in some circumstances.

Notwithstanding preferences by the tax authority and tax professionals, tax complexity actually causes negative perceptions of fairness among taxpayers (Cialdini, 1989; Carroll, 1987). Milliron (1985) claimed in her study of jurors that the participants viewed complexity and fairness as distinct but incompatible features of the income tax system. Erich et al. (2006) share a similar view on the inverse relationship between complexity and fairness perceptions. In their study on Australian taxpayers and tax officers, Erich et al. (2006) claimed that complexity in tax law resulted in a negative perception of the tax system and consequently encouraged an unwillingness to comply. Based on the foregoing discussion, it is therefore hypothesised that:

H_4: Tax complexity$_{1 \text{ to } k}$ negatively influences the dimensions of fairness perception$_{1 \text{ to } k}$ of Malaysian taxpayers.

3.5 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) is the extended version of the Theory of Reasoned Action (TRA), and is a dominant theoretical framework used in explaining human behaviour (Ajzen, 1991). The TPB model depicts that behavioural intention is the immediate determinant of the actual behaviour. Behavioural intention is, in turn, determined by attitudes towards behaviour, subjective norm and perceived behavioural control. Some examples that have successfully applied TPB in predicting behaviours include speeding (Paris & Broucke, 2008), adolescent smoking (Guo et al., 2007) and cardiopulmonary resuscitation (CPR) involvement (Dwyer & Williams, 2002). In a taxation context, Bobek (1997) applied the TPB model with the inclusion of the moral obligation variable.

3.5.1 Attitudes towards compliance

Ajzen (1991) stipulates that attitudes towards compliance reflect feelings of favour and disfavour towards compliance behaviour. The contention has been shown by Davis et al. (1989) in information technology studies. In a taxation context, Bobek (1997) found that attitudes explained compliance behaviour when the belief-based attitudes measure was used. A recent study by Loo et al. (2007) also emphasized that attitudes towards the tax system positively influenced compliance behaviour. Thus, it was anticipated in this study, that a positive attitude towards the tax system would encourage taxpayers to comply and vice versa. In this study, I consider two dimensions of attitudes, namely affective attitude and instrumental attitude. Affective attitude deals with emotions such as feeling happy, sad or guilt if performing certain behaviour while instrumental attitude refers to a more cognitive consideration to which performing a behaviour would be advantageous (Breckler & Wiggins, 1989).

It is also believed that a positive attitude towards the tax system is in fact the result of positive fairness perceptions. In other words, positive fairness perceptions may act as

the antecedent of a positive attitude. Thus, it is anticipated in this study, that taxpayers with positive perceptions on the fairness of the tax system are more likely to have positive attitudes towards the tax system and consequently encourage them to comply.

3.5.2 Subjective norm

Subjective norm reflects motivation to conform with significant referents either to comply or not comply with tax obligations. A review of factors affecting compliance from 1986 to 1997 reveals compliance with peers as significantly related to compliance behaviour (Richardson & Sawyer, 2001). This view is consistent with Bobek (1997) who found that subjective norm significantly affected compliance behaviour in a business deduction scenario. A comparative study in Australia, Singapore and the US by Bobek et al. (2007) also found subjective norm as an influential factor in explaining tax compliance behaviour. Based on the literature, I expect subjective norm would positively influence taxpayers in their compliance decisions.

3.5.3 Perceived behavioural control

Perceived behavioural control reflects an individual's perception on the ease or difficulty in performing a particular behaviour. Ajzen (1991) stipulates that a behaviour that is easy to perform is high in perceived behavioural control, while one that is difficult to perform is low in perceived behavioural control. Furthermore, the author suggests that an individual with high perceived behavioural control will be more likely to perform the behaviour in context than an individual with lower perceived behavioural control. For instance, individuals who have high perceived behavioural control over performing a daily physical exercise are more likely to do the exercise than those with lower perceived behavioural control (Ajzen, 2006).

In tax compliance behaviour research, when a taxpayer believes that he or she can successfully complete and file the tax return forms with Inland Revenue without any mistakes, the person seems to have a high perceived behavioural control and is more likely to comply with their tax obligations. Likewise, if a taxpayer believes that he or she can avoid paying tax without being caught by a tax audit, the person also seems to have a high perceived behavioural control over non-complying, and thus, is more likely to avoid paying tax.

In this study, I am interested in respondents' perceived behavioural control over non-complying with tax obligations. In particular, I anticipate that the higher the perceived behavioural control, the more likely that the taxpayers would avoid compliance. Based on the foregoing discussion on TPB, it is therefore hypothesised that:

H_{5a}: Attitudes$_{1\ to\ k}$ towards compliance and subjective norm positively influence tax compliance behaviour of Malaysian taxpayers;

H_{5b}: Fainess perceptions positively influences attitudes$_{1\ to\ k}$ towards compliance of Malaysian taxpayers; and

H_{5c}: Perceived behavioural control negatively influences tax compliance behaviour of Malaysian taxpayers.

As indicated earlier, perceived behavioural control deals with how taxpayers perceive relative easiness and difficulty in non-complying with tax obligations. As taxation is inherently a complicated matter, it is more likely that taxpayer's control over non-complying with tax obligations is influenced by resources and obstacles. Based on this argument, it is appropriate to investigate the impact of tax knowledge (resources) and tax complexity (obstacles) on perceived behavioural control. Therefore, it is hypothesised that:

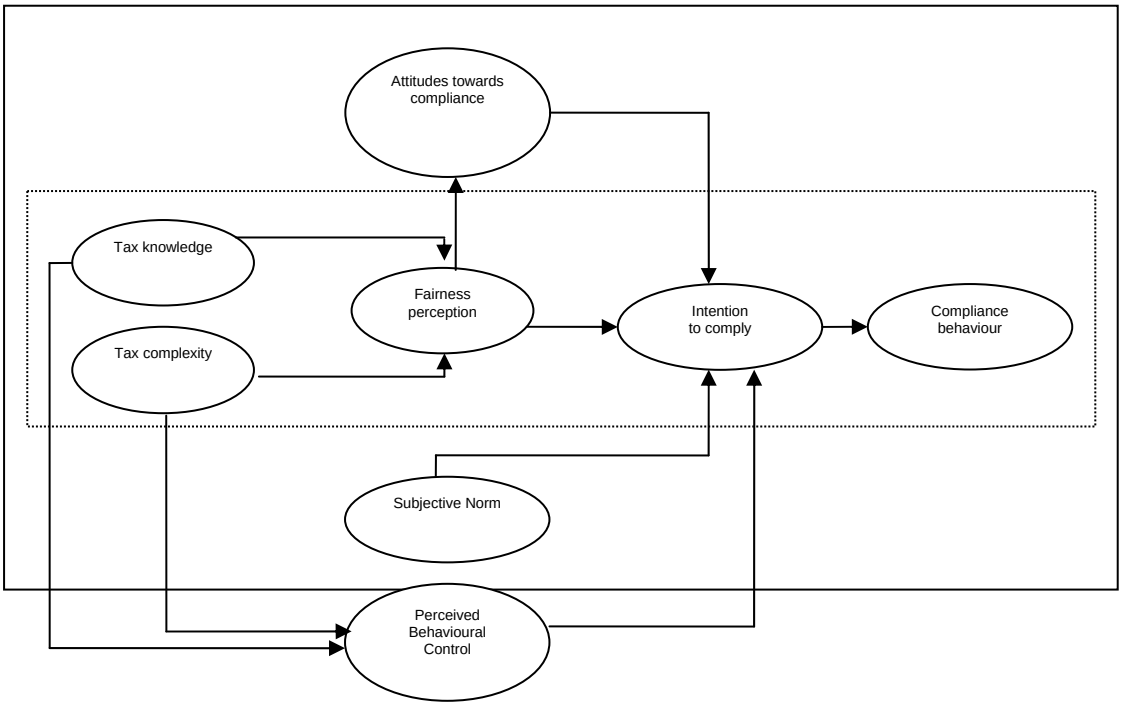
H_{6a}: Tax knowledge positively influences perceived behavioural control of Malaysian taxpayers.

H_{6b}: Tax complexity negatively influences perceived behavioural control of Malaysian taxpayers.

4. PROPOSED MODEL

I now propose a model, as set out in Figure 1, that incorporates the factors that may influence fairness perceptions and compliance behaviour as discussed earlier. A description of each construct employed in the model is also presented.

FIGURE 1: FACTORS AFFECTING FAIRNESS PERCEPTIONS AND COMPLIANCE BEHAVIOUR



5. METHODOLOGY

This section outlines the data collection and sampling characteristics, measurement techniques, demographic information, descriptive analysis and data analysis.

5.1 Data Collection and Sampling

Data was collected through survey questionnaires which were distributed to a sample of 2,267 persons with the help of Human Resource Personnel or Head of Department in the respective organizations.[8] A total of 85 items were asked in the questionnaire. However, some of those items were not included in the analysis within this study. As an effort to increase the response rate, phone call reminders were made to the representatives requesting them to remind the potential respondents to return the questionnaires. In addition, the potential respondents were given a University of Canterbury book-mark to encourage them to complete the questionnaires as suggested by Dillman (2007). Overall, 852 usable responses were received, giving a response rate of 37.58 percent.

5.2 Measurement Techniques

Twenty items were used to measure the seven dimensions of fairness, namely general fairness, exchange fairness, horizontal fairness, vertical fairness, retributive fairness, personal fairness and administrative fairness. General fairness relates to an overall fairness evaluation of the income tax system. Exchange fairness is concerned with reciprocal exchange between taxpayers and the government, horizontal fairness deals with equal tax treatment among taxpayers in similar economic positions. Vertical fairness is assessed based on the ability to pay principle and preference for tax rate structure, either a flat rate or progressive rate. Retributive fairness is concerned with the fairness of punishments imposed while personal fairness, leads to individuals' judgments about whether the income tax system is favourable to them. Finally, administrative fairness relates to the content of the tax law (policy fairness) and procedures employed by the tax authority (procedural fairness). Out of these twenty items, six were adapted from the previous study (Gilligan & Richardson, 2005) while the remaining items were self-developed with reference to the concept of fairness in Equity Theory and the Malaysian income tax system. The items were scaled such that a higher number reflects a fairer perception.

For compliance behaviour, a hypothetical tax scenario relating to understating other income was developed. Following the scenario, 17 statements relating to the TPB variables (intention, attitudes, subjective norm and perceived behavioural control) were generated and the respondents were requested to express their opinions on the statements. Intention, attitudes and subjective norm were scaled such that a higher number corresponds to more compliance with tax obligations. In this study, compliance behaviour was measured through its proxy, intention to comply. Perceived behavioural control, on the other hand, measures control over non-complying with tax obligations and was scaled such that a higher number reflects higher control over non-compliance.

[8] Sixteen organisations (inclusive of public and private) were selected in Malaysia.

Nine items to measure tax knowledge were developed based on various definitions available in previous studies. These items were classified into general knowledge, legal knowledge and technical knowledge. General knowledge relates to a broad idea of the income tax system such as its purpose and the tax structure. Legal knowledge emphasises taxpayers' knowledge on the regulation aspects of the income tax system, such as responsibility to submit their tax return forms timely and the penalty for non-compliance. Technical knowledge concerns with taxpayers' ability to fill and file their tax return forms themselves. To measure tax complexity, seven items were developed measuring both content and compliance complexity. Content complexity relates to difficulty in understanding tax-related materials while compliance complexity concerns with taxpayers' difficulty to comply with their tax obligations. Tax knowledge was coded such that a higher number reflects higher tax knowledge. Tax complexity, on the other hand, was scaled such that a higher number corresponds to a lower level of tax complexity.

All items were developed based on the 7-point Likert Scale, from strongly disagree (1) to strongly agree (7). In addition, respondents were also asked to provide demographic background information, including age, gender, ethnicity, education level, annual income, working sector and filing experience.

5.3 Demographic Information

The relevant demographic information of the sample is set out in Table 1. Table 1 shows that the majority (84.7 percent) of respondents were in the 30-59 age bracket. It was not a surprise that only one respondent was in the group of 60 or over as the mandatory retirement age for Malaysians is 58.[9] While male and female respondents were almost equally represented, 64 percent of them were at least, holders of a diploma or bachelor degree. With regard to filing experience, the majority (54.3 percent) had filed their tax returns for more than five times.

A t-test analysis of the early and late responses was performed and results showed no response bias. The late responses were used as proxies for non-respondents (Leong, 1980). Similarly, comparison between population and survey responses in terms of gender, median income and employment sector also indicated that the responses were representatives of the total population of salaried individuals.

[9] This mandatory retirement age is only applicable to public servants. However, they can continue to work with either public or private sector on a contract basis. There is no specific retirement age for those employed in the private sectors.

TABLE 1: SUMMARY OF DEMOGRAPHIC DATA (N = 852)

Variable	Frequency	Percent	Variable	Frequency	Percent
Age (years)			**Annual income (MYR)**		
Under 30	125	14.7	Less than 40,000	396	46.5
30-39	271	31.8	40,000-50,000	190	22.3
40-49	292	34.3	50,001-60,000	91	10.7
50-59	159	18.6	60,001-70,000	63	7.4
60 or over	1	0.1	70,001 or more	86	10.1
Missing	4	0.5	Missing	26	3.0
Gender			**Working sector**		
Male	422	49.5	Public	565	66.3
Female	426	50.0	Private	273	32.0
Missing	4	0.5	Missing	14	1.7
Ethnicity			**Filing experience**		
Malay	794	93.2	Never	133	15.6
Chinese	28	3.3	Once	63	7.4
Indian	22	2.6	2-5 times	147	17.3
Others	6	0.7	More than 5 times	463	54.3
Missing	2	0.2	Missing	46	5.4
Education level					
SPM/MCE	207	24.3			
STPM/MHCE	89	10.5			
Diploma or degree	422	49.5			
Masters or PhD	128	15.0			
Missing	6	0.7			

5.4 Descriptive analyses

Descriptive analyses are normally used to describe the basic features of the data, as set out in Table 2, Table 3 and Table 4, respectively. Table 2 describes respondents' perceptions on the fairness of the income tax system. The mean values of each item suggested that taxpayers generally had positive perceptions on vertical fairness, personal fairness and administrative fairness. In other words, taxpayers believed that the current tax system has treated individuals with different economic positions in a fair manner. In addition, taxpayers were of the opinion that they were paying a reasonable amount of tax under the current tax system. For the other dimensions of fairness, the views on each item were mixed, but leaning towards positive perceptions. In general, the mean values of these constructs clearly indicate positive perceptions on all dimensions of fairness.

TABLE 2: DESCRIPTIVE STATISTICS ON FAIRNESS PERCEPTIONS (N = 852)

Measures	Code	Min	Max	Mean	Std. Dev.
General fairness	**GF**	1	7	4.23	0.968
I believe the government utilizes a reasonable amount of tax revenue to achieve social goals, such as the provision of benefits for low-income families.	GF1	1	7	4.34	1.460
I believe everyone pays their fair share of income tax under the current income tax system	GF2	1	7	4.66	1.394
I think the government spends too much tax revenue on unnecessary welfare assistance.	GF3R	1	7	3.73	1.572
Exchange fairness	**EF**	1	7	4.42	0.849
I receive fair value from the government in return for my income tax paid (e.g. benefits).	EF1	1	7	4.34	1.361
It is fair that low-income earners receive more benefits from the government compared to high-income earners.	EF2	1	7	5.63	1.412
The income taxes that I have to pay are high considering the benefits I receive from the government.	EF3R	1	7	3.33	1.373
Horizontal fairness	**HF**	1	7	4.03	1.450
It is fair for individuals with similar amounts of income to pay a similar amount of income tax.	HF1	1	7	3.85	1.993
I believe it is fair for me to pay a similar share of income tax compared with other taxpayers earning an equivalent amount of income.	HF2	1	7	4.21	1.737
It is fair that 'equals before tax are equals after tax'. For example, if a person earning MYR100,000 before tax pays MYR20,000 tax, everyone earning MYR100,000 income before tax should be left with MYR80,000 after tax.	HF3	1	7	4.12	1.611
Vertical fairness	**VF**	1	7	5.16	0.965
It is fair that high-income earners are subject to tax at progressively higher tax rates than middle-income earners.	VF1	1	7	5.62	1.318
It is fair that middle-income earners are taxed at a lower rate than high-income earners.	VF2	1	7	5.80	1.291
The share of the total income taxes paid by high-income earners is much too high.	VF3R	1	7	4.11	1.492
Retributive fairness	**RF**	1	7	4.60	0.920
It is fair that individuals who deliberately evade paying their taxes should be penalised with the same amount of penalty regardless of the amount of tax evaded.	RF1R	1	7	3.86	1.876
To be fair, the degree of punishment for evading tax should depend on the degree of non-compliance.	RF2	1	7	5.41	1.330
I believe the initial late payment penalty on the unpaid tax, imposed on non-compliant taxpayers under the current tax system, is fair.	RF3	1	7	4.59	1.504
Personal fairness	**PF**	1	7	4.93	0.866
I believe that I pay my fair share of the tax burden under the current income tax system.	PF1	1	7	5.39	1.337
Compared to other taxpayers, I pay more than my fair share of income tax.	PF2R	1	7	4.08	1.464
Middle-income earners pay their fair share of income tax.	PF3	1	7	5.35	1.288
Administrative fairness	**AF**	1	7	4.62	1.053
There are a number of ways available to me to correct errors in the calculation of my tax liability, if necessary, at no additional cost.	AF1	1	7	4.71	1.279

The administration of the income tax system by the Inland Revenue Board is consistent across years and taxpayers.	AF2	1	7	4.58	1.392

With regard to perceptions of taxpayers' tax knowledge and complexity of the tax system, results in Table 3 suggest that taxpayers generally perceived themselves as having good knowledge of tax except in two knowledge indicators, which had low mean values. In relation to complexity of the tax system, the majority of the content complexity items had mean values of below 4.0, indicating that taxpayers perceived the content of the income tax system as complex. However, observing these items as one construct (content complexity), with a mean value of 4.06 showed slightly improved perception. Despite this perception, taxpayers felt that it was relatively less complex to comply with the income tax system.

TABLE 3: DESCRIPTIVE STATISTICS ON TAX KNOWLEDGE AND TAX COMPLEXITY (N = 852)

Measures	**Code**	**Min**	**Max**	**Mean**	**Std. Dev.**
General knowledge	**GK**	1	7	4.47	1.101
The income tax system is a legitimate way for the government to collect revenue to manage an economy.	GK1	1	7	5.58	1.224
To my knowledge, individuals are subject to a single flat rate of income tax under the current tax system.	GK2R	1	7	3.60	1.566
Legal knowledge	**LK**	1	7	4.99	1.077
As far as I am aware, non-compliant taxpayers can be imprisoned, if found guilty of evading tax.	LK1	1	7	4.67	1.594
Similar to other criminal offences, I believe that individuals can also be prosecuted for not complying with the Income Tax Act.	LK2	1	7	5.30	1.347
I believe that I do not have to abide by the deadline for the submission of tax return form (s) as the deadline is only a guideline and does not result in penalties.	LK3R	1	7	5.03	1.715
Technical knowledge	**TK**	1	7	4.54	0.886
As far as I am aware, everyone who earns income sourced in this country needs to register with the Inland Revenue Board, regardless of whether that person is resident or not.	TK1	1	7	5.48	1.281
I am sure that I am not required to file a tax return on interest income that I earn from money deposited in a bank account in Malaysia as it will be subject to income tax at source.	TK2	1	7	4.77	1.621
To my knowledge, I can deduct all personal expenses in calculating my tax liability.	TK3R	1	7	4.01	1.819
I have little idea about the deductions that I can claim as a taxpayer in the computation of my tax liability.	TK4R	1	7	3.98	1.629
Content complexity	**CT**	1	7	4.06	1.127
I think the term used in tax publications (eg. IRB guide books) and in tax return forms are difficult for people like me to understand.	CT1R	1	7	3.89	1.491
The sentences and wording in the Individual Income Tax Return Guide are lengthy and not user-friendly.	CT2R	1	7	3.76	1.468
The rules related to individual income tax are clear.	CT3	1	7	4.73	1.266
Most of the time I need to refer to others for assistance	CT4R	1	7	3.97	1.733

in dealing with tax matters.					
Compliance complexity	**CM**	1	7	4.25	1.124
I do not have a problem with completing and filing the tax return form(s).	CM1	1	7	4.84	1.487
I find it tedious to maintain all my relevant records for the whole year for tax purposes.	CM2R	1	7	3.42	1.614
I do not have to make a lot of effort to understand the explanations given in Inland Revenue Board guide books and other similar explanatory material.	CM3	1	7	4.53	1.448

Table 4 exhibits a higher mean for intention (except for one item, INS3R) and affective attitude, indicating respondents' likelihood to greater compliance behaviour. Meanwhile, a lower mean for instrumental attitude and subjective norm suggests a lower degree of compliance in Malaysia. Other than that, the perceived behavioural control of slightly above 4.0 also reflects that Malaysian taxpayers have less difficulty to avoid tax, thus resulting in low compliance.

TABLE 4: DESCRIPTIVE STATISTICS ON THEORY OF PLANNED BEHAVIOUR ITEMS (N = 852)

Measures	**Code**	**Min**	**Max**	**Mean**	**Std. Dev.**
Intention	**INS**	1	7	4.23	1.342
I would report my income fully, including the amount of MYR10,500 from the sales of handicrafts.	INS1	1	7	4.17	1.701
I would not attempt to cheat by omitting to report the extra amount of MYR10,500 in my tax return form.	INS2	1	7	4.63	1.481
I would not declare the MYR10,500 because that amount arises from trading goods with friends and neighbours.	INS3R	1	7	3.91	1.700
Affective Attitude	**AFS**	1	7	4.23	1.362
I would be upset if I did not declare the extra amount of MYR10,500.	AFS1	1	7	4.29	1.636
I would feel guilty if I did not declare that extra amount of MYR10,500.	AFS2	1	7	4.30	1.644
I would feel pleased if I did not declare the extra amount of MYR10,500.	AFS3R	1	7	4.12	1.585
Instrumental attitude	**ISS**	1	7	3.80	1.184
The likelihood of being audited by the Inland Revenue Department is high.	ISS1	1	7	4.13	1.539
It would be financially beneficial for me not to declare the extra amount of MYR10,500.	ISS2R	1	7	3.50	1.540
Subjective norm	**SNS**	1	7	3.91	1.231
My family and peers would think that I should not declare the extra MYR10,500.	SNS1R	1	7	3.85	1.645
My family and peers would think that I should declare the extra MYR10,500.	SNS2	1	7	4.28	1.536
My family and peers would approve of my decision to understate my income by MYR10,500.	SNS3R	1	7	3.73	1.471
My family and peers would not declare the extra MYR10,500 if faced with a similar situation.	SNS4R	1	7	3.82	1.483
Perceived behavioural control	**PBS**	1	7	4.17	1.070
Due to my limited knowledge, skills and resources, it					

is hard for me to omit the MYR10,500 in my tax return form successfully.	PBS1R	1	7	4.02	1.474
With my tax knowledge, skills and resources, it would be definitely easy for me to not declare the extra amount of MYR10,500 in my tax return form successfully.	PBS2	1	7	4.13	1.482
I would successfully omit the extra amount of MYR10,500 in my tax return form if I wanted to.	PBS3	1	7	4.36	1.560
With my tax knowledge, skills and resources, I would have no difficulty to omit the extra MYR10,500 in my tax return form successfully.	PBS4	1	7	4.23	1.518
There are no barriers that would prevent me from understating my income by MYR10,500 successfully.	PBS5	1	7	4.20	1.521

5.5 Data Analysis

The hypothesised model was analysed using the Partial Least Square (PLS) approach. This approach is suitable for models with latent variables which cannot be measured directly. The model was tested by performing a bootstrap procedure in PLS.[10]

This model consists of six exogenous variables (subjective norm, three dimensions of tax knowledge and two dimensions of tax complexity) and 11 endogenous variables (seven dimensions of fairness, intention to comply, perceived behavioural control and two dimensions of attitudes). Of these variables, six are formative constructs (with 18 items) and 11 are reflective constructs (with 35 items). While formative constructs do not measure the same underlying phenomenon and do not expect to correlate, reflective constructs are latent variables that measure "the same underlying phenomenon" (Chin, 1998, p. 305). It is vital to distinguish these two types of constructs because they require different methods in evaluating the measurement model.

5.5.1 Validity of formative constructs

To assess the validity of the formative constructs, indicator weights and the t-values were obtained from the bootstrapping procedure in Partial Least Square (PLS). A review on the results in Table 5 reveals that one item measuring retributive fairness (RF1R), two items of technical knowledge (TK3 and TK4R), and three items of content complexity were insignificant. While Diamontopolous and Winklhofer (2001) suggest that it is proper to eliminate any non-significant items to achieve all significant paths, other researchers (Bollen & Lennox, 1991; and Roberts & Thatcher, 2009) advise to retain them so as to preserve content validity. Thus, a compromise was made between these two views, where only three insignificant items (that is, RF1R, TK3 and CT1), measuring retributive fairness, technical knowledge and content complexity, respectively, were deleted. This cautious decision was made after a thorough review on those items to ensure that the construct is still measuring the entire domain and content validity is preserved (Petter et al., 2007).

[10] The software used for the analysis was PLSGraph Version 3.0 developed by Professor Wynne Chin of the University of Houston.

TABLE 5: FORMATIVE CONSTRUCTS, INDICATORS AND WEIGHTS

Construct and Items	PLS Weights	T-Statistics	Significance Level
General fairness			
GF1	0.7219	5.8746	0.005
GF2	0.4878	3.1588	0.005
GF3R	-0.2008	1.4343	0.100
Retributive fairness			
RF1R	*-0.1158*	*0.7226*	*not sig.*
RF2	0.8468	5.0245	0.005
RF3	0.3230	1.9857	0.025
Administrative fairness			
AF1	0.3191	2.9465	0.005
AF2	0.8842	14.8294	0.005
General knowledge			
GK1	0.9173	17.1679	0.005
GK2R	-0.2873	2.8055	0.005
Technical knowledge			
TK1	0.8847	11.1842	0.005
TK2	0.2653	2.5829	0.005
TK3	*-0.1538*	*0.8563*	*not sig.*
TK4R	-0.1163	0.8433	not sig.
Content complexity			
CT1	*-0.1079*	*0.8139*	*not sig.*
CT2	-0.1318	0.9706	not sig.
CT3	1.0548	44.1376	0.005
CT4	-0.1275	1.2761	not sig.

* Italicised items are candidates for deletion

5.5.2 Validity of reflective constructs

For reflective constructs, both convergent and discriminant validity were observed (refer Table 6). Convergent validity of the reflective constructs was examined by looking at two indices: (1) the individual item loadings on the constructs; and (2) the average variance extracted (AVE). From 18 items measuring fairness perceptions, tax knowledge and tax complexity, the individual item loadings on 12 items were all highly significant at 0.7 and above (Dibbern & Chin, 2005) with a significant t-value of 0.005 level (Gefen & Straub, 2005). One item (EF2) had a loading of 0.5419 while the remaining five items had very low loadings. In relation to tax compliance behaviour constructs, all items except for two items were highly significant with individual loadings of 0.7 and above. One item (ISS2R) measuring instrumental attitude had loading of 0.5835, while another item on perceived behavioural control (PBS1R) had very low loading of below 0.3. Chin (1998) suggests that items with loadings of 0.5 and 0.6, may still be acceptable if there are other additional indicators for that construct. Based on his recommendation, the two items (EF2 and ISS2R) were retained for further analysis, while other items with loadings below 0.5 were deleted.

In terms of AVE, four constructs (exchange fairness, vertical fairness, personal fairness and legal knowledge) had values below the threshold of 0.5, providing support to remove several items in the construct, as suggested by the item loadings.

TABLE 6: REFLECTIVE CONSTRUCTS, INDICATORS AND LOADINGS

Construct and Items	PLS Loadings	T-Statistics	Significance Level
Exchange fairness		**AVE = 0.373**	
EF1	0.8391	4.1319	0.005
EF2	**0.5419**	1.7733	0.050
EF3R	*0.3483*	*0.8488*	*Not sig.*
Horizontal fairness		AVE = 0.661	
HF1	0.8130	34.0252	0.005
HF2	0.8154	22.4026	0.005
HF3	0.8115	26.1232	0.005
Vertical fairness		**AVE = 0.463**	
VF1	0.8164	26.3240	0.005
VF2	0.8258	27.7621	0.005
VF3R	*0.2034*	*1.8185*	*0.050*
Personal fairness		**AVE = 0.410**	
PF1	0.8404	26.9001	0.005
PF2R	*-0.0506*	*0.3933*	*Not sig.*
PF3	0.7220	17.6894	0.005
Legal knowledge		**AVE = 0.494**	
LK1	0.7127	12.4842	0.005
LK2	0.9223	68.0397	0.005
LK3R	*0.3492*	*3.1737*	*0.005*
Compliance complexity		AVE = 0.535	
CM1	0.9200	68.6230	0.005
CM2R	*0.1211*	*0.9739*	*Not sig.*
CM3	0.8622	30.3890	0.005
Intention		AVE = 0.670	
INS1	0.8883	95.6698	0.005
INS2	0.7907	30.8406	0.005
INS3R	0.7721	30.2272	0.005
Affective attitude		AVE = 0.711	
AFS1	0.9043	78.9188	0.005
AFS2	0.9034	72.0915	0.005
AFS3R	0.7063	20.7253	0.005
Instrumental attitude		AVE = 0.570	
ISS1	0.8943	29.8622	0.005
ISS2R	**0.5835**	7.1217	0.005
Subjective norm		AVE = 0.642	
SNS1R	0.8386	47.8350	0.005
SNS2	0.7443	29.1542	0.005
SNS3R	0.7884	30.7893	0.005
SNS4 / SNS4R	*0.8313*	*44.9107*	*0.005*
Perceived control		AVE = 0.533	

PBS1R	*0.2293*	*2.9023*	*0.005*
PBS2	0.7672	26.9629	0.005
PBS3	0.7575	23.4037	0.005
PBS4	0.8786	63.8594	0.005
PBS5	0.8236	39.4065	0.005

* Figures in bold indicate loadings or AVE below 0.6 or 0.5 respectively; while italicised item represents items to be deleted.

The re-run test on the remaining indicators showed better loadings and AVEs (refer Table 7), which satisfied the convergent validity condition (Fornell & Larcker, 1981).

TABLE 7: REFLECTIVE CONSTRUCTS, INDICATORS AND LOADINGS (REVISED MODEL)

Construct and Items	PLS Loadings	T-Statistics	Significance Level
Exchange fairness		AVE = 0.528	
EF1	0.7924	7.9051	0.005
EF2	0.6540	4.8302	0.005
Horizontal fairness		AVE = 0.661	
HF1	0.8133	32.3795	0.005
HF2	0.8109	22.1034	0.005
HF3	0.8151	25.3093	0.005
Vertical fairness		AVE = 0.674	
VF1	0.8165	27.2260	0.005
VF2	0.8258	25.3514	0.005
Personal fairness		AVE = 0.617	
PF1	0.8437	32.5484	0.005
PF3	0.7227	15.9622	0.005
Legal knowledge		AVE = 0.710	
LK1	0.7471	18.2436	0.005
LK2	0.9282	65.8648	0.005
Compliance complexity		AVE = 0.798	
CM1	0.9201	76.5415	0.005
CM3	0.8658	43.9460	0.005
Intention		AVE = 0.670	
INS1	0.8884	99.4664	0.005
INS2	0.7921	27.8647	0.005
INS3R	0.7707	27.5944	0.005
Affective attitude		AVE = 0.711	
AFS1	0.9055	84.4308	0.005
AFS2	0.9044	81.4470	0.005
AFS3R	0.7038	25.2547	0.005
Instrumental attitude		AVE = 0.570	
ISS1	0.8953	35.6605	0.005
ISS2R	**0.5818**	8.4530	0.005
Subjective norm		AVE = 0.654	
SNS1R	0.8492	55.4851	0.005

SNS2	0.7896	40.3286	0.005
SNS3R	0.7866	31.5517	0.005
Perceived control		AVE = 0.676	
PBS2	0.7843	37.1882	0.005
PBS3	0.7756	33.2751	0.005
PBS4	0.8898	77.4915	0.005
PBS5	0.8336	42.2967	0.005

Discriminant validity demands a strong correlation between an indicator and its associated construct but weak correlation with all other constructs (Gefen & Straub, 2005). The two procedures used to assess discriminant validity were (1) item cross-loadings; and (2) the ratio of the square root of the AVE of each construct to the correlations of this construct to all other constructs (Gefen & Straub, 2005). The results revealed that all item cross-loadings load higher on their corresponding constructs than any other construct and every construct had a square root of AVE bigger than its correlations with other constructs. This suggested that each measure did not tap the different concepts, and therefore confirmed the discriminant validity. Detailed item cross-loading and inter-construct correlations are presented in Tables 8 and 9, respectively.

TABLE 8: LOADING AND CROSS-LOADING MATRIX

	INS	AFS	ISS	SNS	PBS	GF*	EF	HF	VF	RF*	PF	AF*	GK*	LK	TK*	CT*	CM
INS1	**.888**	.650	.508	.616	-.348	.210	.155	.058	.029	.070	.100	.165	.065	.008	.016	.158	.084
INS2	**.792**	.554	.409	.479	-.226	.153	.172	.021	.150	.139	.126	.117	.112	.077	.071	.199	.103
INS3R	**.771**	.558	.370	.665	-.478	.045	.064	-.069	.001	.012	.029	.034	-.008	-.011	-.046	-.041	-.004
AFS1	.629	**.905**	.445	.501	-.272	.167	.109	.114	.050	.060	.101	.114	.040	.009	.003	.112	.070
AFS2	.616	**.904**	.453	.501	-.295	.136	.123	.128	.045	.063	.082	.133	.062	.017	-.007	.119	.079
AFS3R	.571	**.704**	.345	.606	-.467	.031	.082	-.049	.007	.052	.088	.017	.059	.021	-.022	.001	-.016
ISS1	.477	.455	**.895**	.472	-.274	.173	.064	.220	.051	.043	.080	.084	-.020	-.053	.009	.113	-.016
ISS2R	.297	.265	**.582**	.323	-.434	-.007	.008	.053	-.067	-.062	-.064	-.044	-.063	-.115	-.049	-.055	-.075
SNS1R	.594	.509	.409	**.849**	-.493	.079	.065	.010	-.008	.034	-.024	.022	-.036	-.005	-.059	-.030	-.077
SNS2	.623	.551	.513	**.790**	-.259	.183	.117	.155	.061	.168	.048	.120	.040	.056	.071	.152	.006
SNS3R	.527	.468	.364	**.787**	-.464	-.026	-.012	-.035	-.055	-.005	-.083	-.072	-.087	-.033	-.086	-.075	-.067
PBS2	-.386	-.333	-.294	-.450	**.784**	-.085	-.020	.026	.047	.034	.034	-.004	.026	.120	.034	.004	.031
PBS3	-.276	-.234	-.341	-.320	**.776**	-.068	-.017	-.076	.056	.090	.061	-.027	.036	.104	.063	-.002	.061
PBS4	-.371	-.350	-.396	-.418	**.890**	-.080	-.030	-.019	.069	.089	.049	.009	.063	.083	.071	.082	.088
PBS5	-.377	-.385	-.358	-.421	**.834**	-.066	-.059	-.028	.091	.103	.058	.013	.060	.060	.137	.066	.105
GF1	.174	.177	.122	.119	-.108	**.865**	.410	.164	.058	.046	.269	.380	.232	.062	.030	.213	.122
GF2	.073	.024	.091	.032	-.026	**.722**	.287	.217	.139	.101	.368	.323	.189	.087	.200	.296	.139
GF3R	-.023	.027	-.033	-.011	-.002	**-.114**	-.040	-.117	-.115	-.077	.015	.026	-.003	-.023	-.048	-.067	-.011
EF1	.149	.125	.049	.050	-.058	.543	**.792**	.113	.057	.079	.315	.399	.182	.093	.031	.204	.114
EF2	.072	.050	.031	.060	.008	.055	**.654**	.144	.485	.171	.250	.141	.157	.192	.202	.136	.051
HF1	.010	.058	.163	.055	-.020	.165	.118	**.813**	.062	.024	.104	.168	.050	.026	.072	.097	-.006
HF2	-.019	.041	.132	.022	-.013	.195	.153	**.811**	.111	.040	.109	.157	.108	.010	.089	.101	-.055
HF3	.019	.096	.199	.066	-.028	.234	.150	**.815**	.140	.083	.113	.180	.100	.043	.059	.123	.054
VF1	.088	.055	.026	-.014	.049	.135	.226	.135	**.816**	.156	.257	.161	.255	.163	.241	.162	.134
VF2	.024	.014	-.005	.018	.083	.082	.330	.081	**.826**	.178	.289	.098	.271	.141	.275	.120	.048
RF2	.053	.043	-.015	.064	.108	.055	.138	.028	.213	**.952**	.272	.135	.324	.350	.299	.178	.130
RF3	.127	.099	.064	.099	.003	.153	.138	.122	.056	**.539**	.129	.247	.111	.175	.106	.227	.161
PF1	.098	.086	-.001	-.033	.052	.360	.277	.053	.199	.204	**.844**	.270	.332	.247	.256	.266	.226
PF3	.058	.083	.069	.006	.043	.205	.352	.174	.345	.240	**.723**	.295	.230	.163	.217	.239	.126
AF1	.066	.015	.072	.043	.062	.258	.241	.135	.145	.113	.246	**.497**	.106	.149	.108	.164	.171
AF2	.123	.116	.030	.025	-.022	.391	.352	.187	.126	.181	.313	**.951**	.287	.196	.125	.318	.249
GK1	.065	.060	-.076	-.039	.062	.216	.227	.059	.336	.321	.359	.270	**.966**	.406	.330	.344	.221
GK2R	-.023	-.028	-.100	-.025	.001	-.232	-.088	-.201	-.029	-.076	-.117	-.139	**-.394**	-.145	-.184	-.209	-.108
LK1	-.021	-.020	-.045	-.022	.048	.067	.152	.069	.084	.192	.150	.128	.279	**.747**	.141	.138	.108
LK2	.048	.036	-.104	.026	.122	.085	.168	.007	.201	.378	.274	.225	.402	**.928**	.327	.263	.249
TK1	.066	.023	-.003	.019	.052	.116	.159	.033	.292	.296	.305	.141	.350	.322	**.957**	.213	.212
TK2	-.149	-.093	-.083	-.145	.148	.045	.000	.138	.186	.118	.117	.067	.147	.066	**.484**	.102	.094
TK4R	.059	.048	-.091	.037	-.068	-.083	-.029	-.199	-.015	.038	.035	.002	.003	.057	**-.062**	-.019	.296
CT2R	.034	-.001	-.072	-.015	-.042	.023	.021	-.127	-.007	-.004	-.006	.050	.000	-.007	-.057	**.013**	.404
CT3	.124	.094	.031	.018	.039	.295	.229	.075	.165	.228	.314	.329	.360	.252	.201	**.958**	.564
CT4R	-.014	.028	-.140	-.028	.009	-.040	-.010	-.194	.020	.088	.066	.002	.021	.094	.006	**.012**	.389
CM1	.082	.082	-.035	-.030	.072	.147	.104	-.014	.148	.158	.237	.266	.246	.228	.205	.386	**.920**
CM3	.044	.007	-.051	-.074	.086	.134	.106	.020	.036	.134	.167	.220	.162	.179	.110	.428	**.866**

* = formative constructs, therefore loadings are not interpreted.

TABLE 9: CORRELATION OF LATENT CONSTRUCTS AND THE SQUARE ROOT OF AVE

	INS	AFS	ISS	SNS	PBS	GF	EF	HF	VF	RF	PF	AF	GK	LK	TK	CT	CM
INS	**0.819***																
AFS	0.680	**0.843**															
ISS	0.518	0.474	**0.755**														
SNS	0.657	0.541	0.508	**0.809**													
PBS	-0.339	-0.283	-0.348	-0.433	**0.822**												
GF	0.204	0.153	0.154	0.086	-0.074	**0.654**											
EF	0.168	0.120	0.061	0.034	-0.045	0.440	**0.727**										
HF	0.037	0.076	0.191	0.042	-0.011	0.238	0.177	**0.813**									
VF	0.041	0.029	-0.008	-0.033	0.099	0.107	0.329	0.121	**0.821**								
RF	0.105	0.089	0.008	0.066	0.138	0.122	0.213	0.068	0.292	**0.773**							
PF	0.127	0.109	0.046	-0.030	0.061	0.376	0.403	0.134	0.353	0.322	**0.785**						
AF	0.149	0.115	0.053	-0.007	0.020	0.424	0.395	0.212	0.161	0.235	0.360	**0.759**					
GK	0.080	0.092	-0.036	-0.037	0.095	0.273	0.291	0.131	0.363	0.362	0.409	0.333	**0.738**				
LK	0.035	0.048	-0.094	-0.019	0.141	0.110	0.219	0.036	0.245	0.428	0.327	0.247	0.499	**0.843**			
TK	0.041	0.019	-0.042	-0.021	0.148	0.123	0.179	0.093	0.377	0.374	0.348	0.202	0.428	0.411	**0.620**		
CT	0.163	0.130	0.061	0.008	0.081	0.309	0.246	0.116	0.181	0.261	0.349	0.341	0.396	0.314	0.274	**0.553**	
CM	0.073	0.068	-0.050	-0.099	0.126	0.169	0.142	-0.005	0.131	0.217	0.263	0.283	0.277	0.303	0.243	0.480	**0.893**

* Diagonal elements are square root of average variance extracted.

5.5.3 Reliability of the constructs

Reliability of the constructs involved multicollinearity test (formative constructs) and composite reliability and AVE (reflective constructs). With regard to formative constructs, no presence of multicollinearity was expected to confirm the reliability of the measures, as high multicollinearity suggests an unstable model (Petter et al., 2007). For this purpose, variance inflation factor (VIF) and condition index were used as the reference, with statistics of greater than 3.3 (Diamantopoulos & Siguaw, 2006) and 30 respectively, representing multicollinearity problem. The result in Table 10 revealed that the VIF and condition index figures were below the threshold levels, which suggested no multicollinearity problem existed and thus confirmed the reliability of the measures.

TABLE 10: VARIANCE INFLATION FACTOR (VIF) AND CONDITION INDEX

Item	Un-standardized Coefficients		Standardized Coefficients			Collinearity Statistics		Condition Index
	B	Std. Error	Beta	T	Sig.	Tolerance	VIF	
Constant	0.000	0.034		0.000	1.000			1.000
GF	0.127	0.038	0.127	3.309	0.001	0.775	1.290	1.455
RF	0.065	0.037	0.065	1.763	0.078	0.844	1.185	1.531
AF	0.049	0.039	0.049	1.271	0.204	0.751	1.332	1.798
GK	-0.013	0.040	-0.013	-0.335	0.738	0.727	1.376	1.845
TK	-0.039	0.037	-0.039	-1.054	0.292	0.832	1.202	2.006
CT	0.068	0.038	0.068	1.775	0.076	0.772	1.296	2.054

For reflective constructs, the figures in Table 11 suggest that all constructs met the minimum value of 0.7 (Chin, 1998; Igbaria et al, 1997; Suraweera et al., 2005), except for exchange fairness with a slightly lower value, at 0.69. Other than that, most constructs had an internal consistency of above 0.8.

TABLE 11: INTERNAL CONSISTENCY OF THE CONSTRUCTS

Construct	Composite Reliability
Exchange fairness (EF)	0.689
Horizontal fairness (HF)	0.854
Vertical fairness (VF)	0.805
Personal fairness (PF)	0.762
Legal knowledge (LK)	0.829
Compliance complexity (CM)	0.888
Intention (IND/INS)	0.859
Affective attitude (AFD/AFS)	0.879
Instrumental attitude (ISD/ISS)	0.717
Subjective norm (SND/SNS)	0.850
Perceived behavioural control (PBD/PBS)	0.893

In addition to composite reliability, the AVE scales used to determine reliability of the measures also indicated that all the scales performed acceptably on this standard (exceed 0.5) and thus confirmed the reliability of the measures (refer Table 12).

TABLE 12: AVERAGE VARIANCE EXTRACTED OF THE CONSTRUCTS

	AVE
Exchange fairness (EF)	0.528
Horizontal fairness (HF)	0.661
Vertical fairness (VF)	0.674
Personal fairness (PF)	0.617
Legal knowledge (LK)	0.710
Compliance complexity (CM)	0.798
Intention (INS)	0.670
Affective attitude (AFS)	0.711
Instrumental attitude (ISS)	0.570
Subjective norm (SNS)	0.654
Perceived behavioural control (PBS)	0.676

The evaluation on measurement model implies that the measures used in this study work appropriately. Thus, the next step is to test the explanatory power of the entire model in explaining tax compliance behaviour.

6. KEY RESULTS

Figure 2 presents the results. The R^2 value of 0.664 for the intention to comply indicated that fairness perceptions, affective attitude, instrumental attitude, subjective norm and perceived behavioural control accounted for 66.4 percent of the variance of the construct. The predictive power of this model is a considerable improvement over the reported R^2 in Bobek (1997), who studied the determinants of non-compliance behaviour.

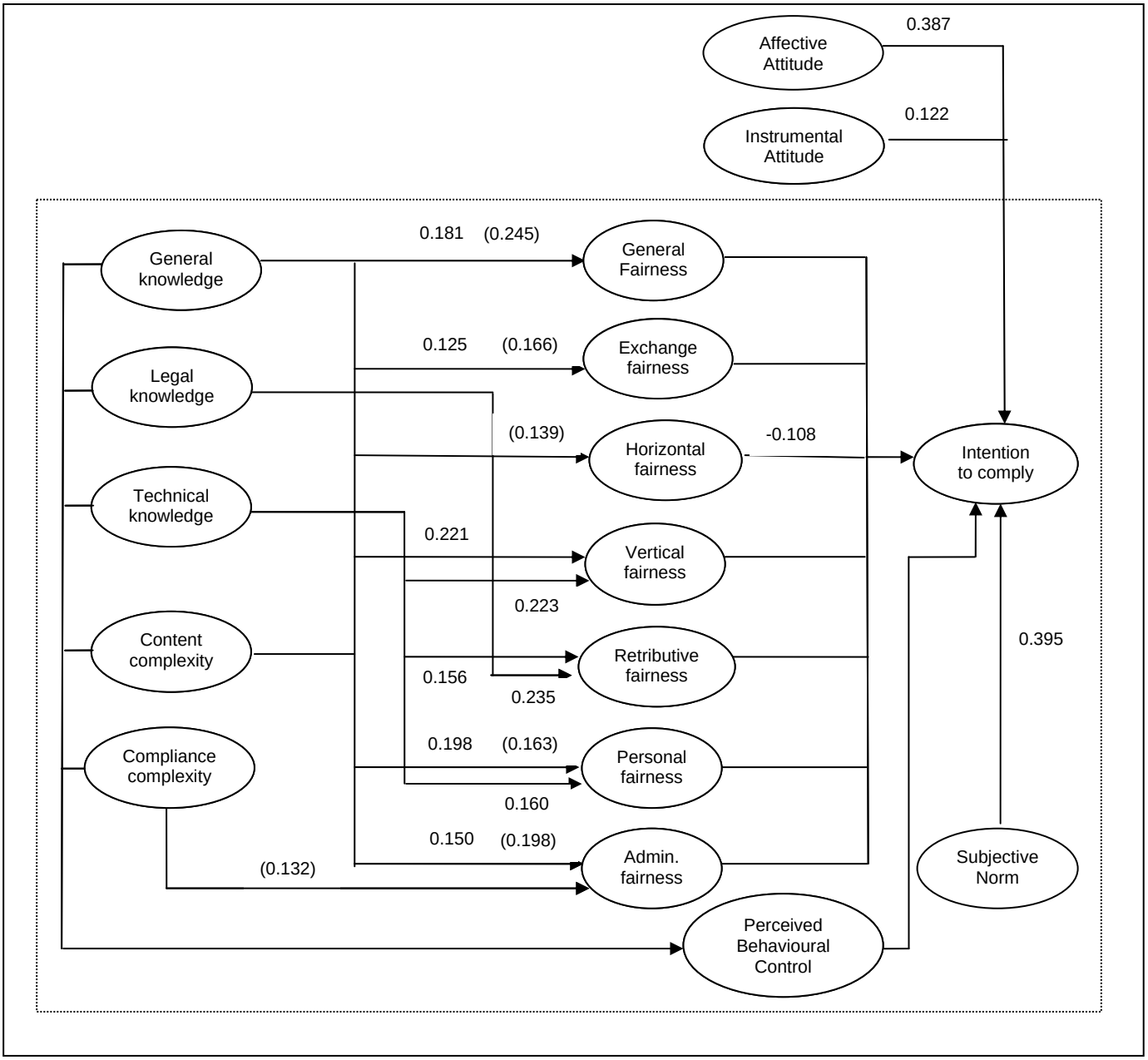
The path coefficients on variables under study are also provided. In relation to the direct effects of fairness perceptions on compliance behaviour, it was found that horizontal fairness was the only dimension that was significant, at the 0.005 level. Surprisingly, however, the path coefficient was in the opposite direction to that expected.

The TPB variables (attitudes and subjective norm) were highly significant at the 0.005 level. As expected, attitudes (both affective and instrumental) and subjective norm positively influenced compliance behaviour. Further, results suggested that instrumental attitude was significantly influenced by the perceptions on horizontal fairness.

The model also describes the path coefficients for tax knowledge and tax complexity on fairness perceptions. The results showed that generally, tax knowledge had effects on fairness perceptions to a certain degree, except for horizontal fairness. In particular, general knowledge had a significant positive influence (at the 0.005 level) on five dimensions of fairness (excluding horizontal fairness and retributive fairness). Technical knowledge was found to have significant influence on vertical fairness, retributive fairness and personal fairness, while legal knowledge was only significant in shaping taxpayers perceptions on retributive fairness. All paths were in positive directions.

With regard to the effect of tax complexity, results revealed that tax complexity had no significant influence on vertical fairness and retributive fairness. Other than that, content complexity was found to have effects on all dimensions of fairness perceptions, while compliance complexity only had an effect on administrative fairness. With regard to the effects of tax knowledge and tax complexity on perceived behavioural control, no significant influence was reported.

FIGURE 2: PATH COEFFICIENTS



Notes:
For simplistic purpose, only significant path coefficients are displayed in the model.
Figures in parentheses are path coefficients for the influence of tax complexity on fairness perceptions.
$R^2 = 0.664$

7. DISCUSSION

The purpose of this study was to examine the fairness perceptions of Malaysian taxpayers on the income tax system and how their perceptions influence their compliance behaviour. In so doing, I used a well-established model of TPB. The TPB model provides a theoretical framework of behavioural determinants consisting of attitudes, subjective norm and perceived behavioural control. For the purpose of this study, fairness perceptions were included to extend the existing TPB model, particularly in the tax compliance environment. Overall, the results suggest that the TPB model fits the data well.

This study reveals that taxpayers view fairness of the income tax system from various perspectives, namely general fairness, exchange fairness, horizontal fairness, vertical fairness, retributive fairness, personal fairness and administrative fairness. This is consistent with previous studies which contend that fairness perceptions are multidimensional (Gilligan & Richardson, 2005; and Gerbing, 1988). Also, the results extend the three fairness dimensions[11] documented by Azmi and Perumal (2008). Thus, the findings provide support for Hypothesis 1 that fairness perceptions are multidimensional.

Hypothesis 2 predicts that fairness perceptions will positively influence compliance behaviour. Specifically, the hypothesis suggests that the fairer taxpayers perceive the tax system, the more likely they will comply with their tax obligations. However, the findings provide no support to this contention. The possible explanation for such findings is the fact that taxation lies within a highly legalised environment. In such environment, whether a system is perceived fair or not, taxpayers have no choice but to comply. Otherwise, they will be subject to penalties. In other words, despite their resentment with the income tax system, they still need to pay tax which is compulsory on them.

Surprisingly, horizontal fairness is found to have a negative effect on compliance behaviour. This suggests that the fairer taxpayers perceive the income tax system, the less likely for them to comply. A possible explanation for this is the belief that taxpayers should not be taxed equally with sole reference to their annual incomes without considering their financial responsibilities and social welfare. For instance, a single person earning an annual income of MYR100,000 should not be taxed at similar rate with a married taxpayer with three children even though he is earning similar amount of incomes, due to their different circumstances. In other words, taxpayers were suggesting that if all others remain constant, horizontal fairness will motivate them to not comply.

Implicitly, the results suggest that horizontal fairness cannot be observed as a stand alone dimension of fairness. It should be complemented by other dimensions of fairness, particularly vertical fairness, as suggested by the Distributive Justice Theory. To recap, the Distributive Justice Theory asserts that in order to be fair, a system needs not necessarily treat people in similar circumstances in equivalent manner, but rather it depends on individuals' needs. Having said that, a further test was conducted by combining the horizontal fairness and vertical fairness dimensions (known as

[11] The dimensions are general fairness, fairness on tax structure and self-interest.

distributive fairness) and examining their effects on intention to comply. From that analysis, the results suggested no significant relationship was present. In other words, taxpayers did not perceive distributive fairness (horizontal and vertical fairness) as an important motivation to either comply or not comply.

Among three dimensions of tax knowledge, general knowledge of the income tax system was proven to have an influence on all dimensions of fairness, with the exception of horizontal fairness and retributive fairness. While legal knowledge only had a significant influence on retributive fairness, technical knowledge was found to have significant effects on vertical fairness, retributive fairness and personal fairness. Overall, the findings provide partial support to Hypothesis 3 which predicted that tax knowledge will positively influence fairness perceptions. Also, the findings, to a certain degree, are consistent with previous studies (Fallan, 1999; White et al., 1990; and Harris, 1989), which claimed that tax knowledge would increase fairness perceptions.

With regard to tax complexity, the findings indicated that general fairness, exchange fairness, horizontal fairness, personal fairness and administrative fairness were highly influenced by the complexity of the content of the income tax law (content complexity). In addition, complexity to comply (compliance complexity) with the income tax law was reported to have a significant influence on administrative fairness. These findings are consistent with Hypothesis 4, which suggests that tax complexity has an inverse relationship with fairness perceptions. Specifically this study confirms that a lower level of tax complexity positively influenced fairness perceptions as reported in previous studies (Erich et al., 2006; Cialdini, 1989; Carroll, 1987; and Milliron, 1985).

The use of the TPB model in tax compliance behaviour offers a good explanation of taxpayers' behaviour. Attitudes (both affective and instrumental) and subjective norm proved to be significant factors but not the perceived behavioural control. While attitudes and subjective norm had positive coefficients, the perceived behavioural control had a negative coefficient (but not significant). In other words, the results suggested that the higher the attitudes towards compliance, the more likely a taxpayer would comply with his or her tax obligations. Similarly, the higher a taxpayer's motivation to comply with his or her referent group, the higher would be their compliance. The findings provide support to Hypothesis 5a. This suggests that the TPB model is not limited to predicting unethical behaviours in information systems (Dwyer & Williams, 2002) and other human behaviours (Paris & Broucke, 2008; Guo et al., 2007; and Chang, 1998), but is also useful in explaining tax compliance behaviour.

Hypothesis 5b that concerns with the influences of fairness perceptions on attitudes is mainly rejected except in the case of horizontal fairness. The result suggested that better perceptions on horizontal fairness would improve taxpayers' instrumental attitude towards compliance. Other than that, the findings generally suggest that fairness perceptions do not necessarily form taxpayers' attitudes towards compliance.

The final hypothesis predicts that tax knowledge and (tax complexity) will positively and (negatively) influence perceived behavioural control. Specifically, I anticipate a higher level of tax knowledge will result in a higher perceived behavioural control while a higher level of tax complexity will result in a lower perceived behavioural

control. The findings on these variables, however, showed insignificant results, thus suggesting rejecting hypotheses 6a and 6b.

8. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

The study provides evidence that Malaysian taxpayers perceive fairness of the income tax system in several dimensions. However, such dimensions, with the exception of horizontal fairness, seem to have no significant influence on their compliance behaviour. On the contrary, attitudes and subjective norm as highlighted in TPB have been significantly influential. This empirical evidence should add to the literature on compliance behaviour. In Malaysia particularly, the findings would provide an important update on the existing evidence documented by Mustafa (1996) and Azmi and Perumal (2008). Furthermore, the findings should be beneficial to policy makers and the tax authority as they highlight the fairness dimensions and relevant factors that need attention.

This study should also help tax researchers generally to understand the role of tax knowledge and tax complexity in fairness perceptions. For policy makers, the empirical evidence offers guidance in developing tax education and simplification programmes. Last, but by no means least, this study provides clear evidence that the TPB model has significant potential to contribute to the tax compliance literature. The extension to the TPB model in a tax environment seems to be a fruitful area for future research.

This study, however, is not without limitations. The convergent validity analysis on the constructs indicates lower item loadings than the recommended threshold of 0.7 for some of the items. Notwithstanding the low loadings, the items are still acceptable for further analysis (Chin, 1998). Future research should continue to extend the theoretical model of TPB in the tax literature as it offers a good explanation of compliance behaviour. Possibly researchers could decompose the TPB variables to gain a better insight into the determining factors. In addition, a survey on fairness perceptions among tax professionals would also be an interesting area for research.

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