

ผลกระทบของคุณลักษณะของผู้จ่ายภาษีและทัศนคติที่มีต่อการหลบเลี่ยงภาษีและการหนีภาษี : หลักฐานจากการจัดเก็บภาษีเงินได้บุคคลธรรมดาในประเทศไทย

วันที่ได้รับต้นฉบับบทความ : 1 มิถุนายน 2565
วันที่แก้ไขปรับปรุงบทความ : 15 สิงหาคม 2565
วันที่ตอบรับตีพิมพ์บทความ : 19 สิงหาคม 2565

ดร.อัครศักดิ์ เศวตলেখ

ผู้ช่วยศาสตราจารย์ประจำภาควิชาบัญชี
คณะบริหารธุรกิจ มหาวิทยาลัยเกษตรศาสตร์

ดร.กาญจนา พรลัมฤทธิกุล

อาจารย์ประจำ ภาควิชาบัญชี
คณะบริหารธุรกิจ มหาวิทยาลัยเกษตรศาสตร์
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บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์ เพื่อตรวจสอบปัจจัยที่มีผลกระทบต่อทัศนคติของการหลีกเลี่ยงภาษีและการหนีภาษีของผู้จ่ายภาษีในประเทศไทย แบบสอบถามออนไลน์จำนวน 1,281 ฉบับ ได้ถูกส่งไปยังผู้จ่ายภาษีและถูกเก็บรวบรวมอย่างสมบูรณ์จำนวน 1,001 ฉบับ และวิเคราะห์โดยสถิติเชิงพรรณนา สหสัมพันธ์และการวิเคราะห์การถดถอยพหุคูณ จากการศึกษาพบว่า ลักษณะของผู้จ่ายภาษีและประสบการณ์การจ่ายภาษีในอดีตมีอิทธิพลต่อการหลีกเลี่ยงภาษีและการหนีภาษี ผลลัพธ์แสดงความสัมพันธ์เชิงลบระหว่างอายุและทัศนคติที่มีต่อการหลีกเลี่ยงภาษี ในทางตรงกันข้าม ความหลากหลายของเงินได้พึงประเมินและระดับรายได้มีความสัมพันธ์เชิงบวกกับการหลีกเลี่ยงภาษี หรืออาจกล่าวได้ว่าผู้จ่ายภาษีที่มีอายุน้อย มีเงินได้พึงประเมินหลายประเภทและมีรายได้สูงมีแนวโน้มที่จะหลีกเลี่ยงภาษี ในแง่มุมของการมีอิทธิพลต่อการหนีภาษี ผลลัพธ์แสดงว่า ระดับการศึกษามีความสัมพันธ์เชิงลบกับการหนีภาษี ในขณะที่ความหลากหลายของเงินได้พึงประเมินมีความสัมพันธ์เชิงบวกกับการหนีภาษี อาจกล่าวได้ว่า ผู้จ่ายภาษีที่มีการศึกษาสูงมีแนวโน้มที่จะหนีภาษีน้อยกว่าผู้จ่ายภาษีที่มีการศึกษาต่ำกว่า ในขณะที่ผู้จ่ายภาษีที่มีเงินได้พึงประเมินหลายประเภทมีแนวโน้มจะหนีภาษีมากกว่า ในท้ายที่สุดปัญหาจากการจ่ายภาษีในปีที่ผ่านมา ๆ มามีอิทธิพลทั้งต่อการหลีกเลี่ยงภาษีและการหนีภาษี ปัญหาที่เกี่ยวกับเงินได้ที่ได้รับยกเว้นมีความสัมพันธ์เชิงบวกกับการหลีกเลี่ยงภาษี ในขณะที่ปัญหาเรื่องการหักค่าใช้จ่ายและเงินบริจาคมีความสัมพันธ์เชิงบวกกับการหนีภาษี

คำสำคัญ: การหลีกเลี่ยงภาษี การหนีภาษี ผู้จ่ายภาษี ภาษีเงินได้บุคคลธรรมดา

1. INTRODUCTION

During Covid-19 pandemic in Thailand, the recent fiscal year of 2021, the revenue department collected personal income tax at 334,409 million baht (10,133 million dollars) decreasing from the previous year 0.53% whereas the fiscal year of 2020 were collected at 336,178 million baht (10,187 million dollars) decreasing from the prior year 0.03% (Fiscal Policy Office, 2022). In the viewpoint of tax officials, they may recognise that personal income tax collection has very efficient. However, collecting the amount of revenue does not illustrate good tax administration. OECD (2001) mentioned that efficient tax administration should include good tax refund system, efficient taxpayer database and also decrease tax avoidance and tax evasion. Tax avoidance is minimising tax payments by using the loopholes of tax laws. In other words, tax avoidance can be called legal tax planning. Kang (2016) stated that tax avoidance means that reduction of tax burden from legal ambiguity.

Thai personal income tax is direct tax which is collected from the individual assessable incomes after deducted all allowances. The numerous tax allowances are for a decrease of income tax burden, however, they are used for specified groups of taxpayers. For instance, taxpayers may seek legal opportunity to avoid tax such as tax deductible, tax allowance, exempted income, and donation to decrease their tax burdens. There are lots of problems of personal income tax both in the viewpoint of tax officials and taxpayers. Therefore, the study of individual characteristics and attitudes are important since they influence on tax avoidance behaviour.

Apart from tax avoidance, tax evasion or tax fraud is a significant problem that mostly occurs in developing countries. Many governments lost tax revenue collection from tax evasion. As a result, the government may face a fiscal deficit, particularly, in the Covid-19 situation. However, it is hard to forecast tax evasion in each type of tax revenue collection (Khlif & Achek, 2015). In the era of digitalisation, tax evaders develop complex systems of tax frauds that are difficult to examine. For example, taxpayers may intend to evade tax by under-reporting income. Some taxpayers, particularly online sellers, reach minimum assessable income to pay tax but they have never been listed in the taxpayer database. Hence, the tax officers are responsible for inspecting to come up with evaded taxpayers' behaviour.

There are several factors that influence taxpayers to evade tax. Taxpayers may evade tax because they distrust in the income tax system, income tax rates and utilisation of government expenditure (Alleyne & Harris, 2017). Demographic factors may stimulate tax evasion. Obviously, different gender, age, and marital status of taxpayers show resistance towards tax evasion behaviour (Ross & McGee, 2012). Sometimes, taxpayers seek the opportunity to unpaid taxes either for their self-benefits or feeling unfairness from paying taxes.

Many literatures focus on the relationship between demographic factors and tax evasion behaviour. This study focuses on a relationship among personal characteristics and attitudes of individual taxpayer towards tax avoidance and tax evasion. In addition, the relationship among personal income level, types

of assessable incomes and problems on tax complexity and attitudes of taxpayers towards tax avoidance and tax evasion will be examined. Therefore, the purpose of this study is to examine the relationship between key determinants and attitudes of taxpayers towards tax evasion and tax avoidance. Moreover, this study investigates whether the individual experiences on prior tax paying explicit tax avoidance and tax evasion behaviour.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Tax Complexity in Personal Income Tax

Tax simplification can be examined by predictability, proportionally, consistency, compliance, administration, coordination and expression (Cooper, 2002). The basic form of simplification is simple tax systems, number of taxes, tax bases, the number of tax exemption and the structure of tax rates (Tran-Nam, 2016). On the other hand, prior literature explains tax complexity consists of ambiguity, computation, frequent changes, numerous rules, detailed record keeping and confused format (Long & Swingen, 1987). In addition, Vogel (1974) identifies complicated tax return causes of tax complexities. The countries that have a complex tax system will face low voluntary tax compliance and tax complexity may cause of unintentionally behaviours of tax paying (Feldman, Katuščák, & Kawano, 2016).

Thai Taxable income is calculated from their assessable income minus tax deduction, tax allowance and donation. Afterwards, tax will be calculated by progressive tax rate during 5% to 35% from taxable income. In addition, there are 8 various types of assessable income. Some assessable income types can be deducted tax expenses by percentage of assessable income. However, some types can be deducted tax expenses by actual expenses or percentage of assessable income. Normally, tax allowances consist of personal, married and blind person's allowance. However, Thailand has 19 tax allowances that some of them may be not used.

According to James (2016), he mentioned that UK personal income tax faced problems of working expenses for employees. Expenses were allowed to deduct if they were wholly, exclusively and necessarily in the performance. For example, some costs of professional clothes of newsreader were allowed to deduct as employee expense. These expenses were ambiguity to interpret. However, problems of personal income tax in Thailand may be not focus on tax expenses. Problems may focus on more than 100 exempted incomes, 19 tax allowances and a variety of donations.

In the Southeast Asia Countries, EY (2021) referred Indonesia has personal allowance, married persons' additional allowance, wife's additional allowance, additional allowance for each dependent family member in direct bloodline and for adopted children, up to a maximum of three individuals. Singapore, Philippines have personal allowance, spouse, child and disabled family allowance whereas Vietnam has personal and dependent relief, mandatory social, health and unemployment insurance

contributions and contributions to charity. Thailand has a variety of tax allowances that some of them are unnecessary while other countries in the same region concentrate on family allowance and disabled person. Whenever taxpayers have experience on the complexity of tax payment, tax evasion and tax avoidance should be concerned.

2.2 Tax Avoidance and Tax Evasion

Tax avoidance is using the legal methods to modify lower amount of income tax (Adebisi & Gbegi, 2013; Bala, Enoch, & Yakubu, 2021). The study of tax avoidance has long been documented in prior literature (see Hanlon & Heitzman, 2010 for a review). Hanlon and Heitzman (2010) suggested that if money can be saved, taxpayers expect to utilise a legal tax avoidance opportunity. Alstadsæter and Jacob (2017) also supported that taxpayers must have a monetary incentive to participate in tax avoidance. Thus, taxpayers need to access tax avoidance strategies and they understand in the tax code and find the opportunity to minimise taxes.

The main causes of tax avoidance are higher tax rates, imprecise laws, low penalties, and inequity (James & Nobes, 2018). However, the main cause of Thai tax avoidance is loopholes in tax laws (Svetalekth, 2016). One of the loopholes of personal income tax in Thailand is resident rule. If you have assessable income from overseas, job in overseas or entity worked in overseas or asset in overseas. You have duty to pay personal income tax when you reached both conditions. First, taxpayers stay in Thailand for a period or periods aggregating more than 180 days in tax (calendar) year. Second, taxpayers bring assessable income to Thailand in tax (calendar year). However, taxpayers can open the bank account in overseas and bring their money in the next year. As a result, their assessable incomes will be excluded to calculate tax for both tax years.

Apart from tax avoidance, tax evasion is one of the problems that most governments in developing countries face and tax collection cannot reach the target (Altaf, Herani, & Awan, 2019; Folayan & Adeniyi, 2018). Tax evasion causes government faces a loss of revenue collection (Folayan & Adeniyi, 2018). Similarly, Altaf et al. (2019) investigated tax evasion in South Asian countries and found that tax evasion was an important reason for the budget deficit. Simser (2008) mentioned that tax evasion occurred when taxpayers failed deliberately to tolerate for their tax responsibility.

Different from tax avoidance, tax evasion is illegal manipulation to decrease tax paid. Mart (2020) stated that corruption is an important factor of tax evasion. The corruption can stimulate both individual taxpayer and corporates to evade tax. Moreover, Malkawi and Haloush (2008) suggested that taxpayers are unhappy to pay tax if they recognise that government obtains the benefits from taxpayers' income.

Tax evasion in Thailand can be often found when taxpayers deliberate to not reveal the whole assessable incomes. For example, employees fill wages, salaries, bonus as incomes but they may not fill rental revenue for tax return. Some doctors who have revenues for several ways may misunderstand

in classifications of assessable Income. For example, doctors can work as full-time job, part-time job or open the business as a group of persons. All mentioned working are different classifications of assessable Income and also are different tax deductible. However, all are called tax evasion. Online sales are another problem of personal income tax evasion. It is too difficult to examine online selling. The Revenue Department mentions that there are 9.55 million individual taxpayers in the Revenue Department database. However, there are only 3 million taxpayers to pay tax and there are more than 6.55 million taxpayers to propose tax form without paying tax return (Thansettakij, 2020). In 2019, the Revenue Department launched E-Payment Law that financial institutions must report every year for any bank accounts that have more than 3,000 annual transactions or any bank accounts that have more than 400 annual transactions and have total values more than 2 million baht per year. This law directly effects towards online sellers because the Revenue Department can recognise revenue of online sellers from bank report. Thus, it will be more difficult for them to evade tax.

Both tax avoidance and tax evasion caused of loss of tax revenues and if those problems become wider. As a result, taxpayers may lose faith in tax administration system and finally, they join the ranks of tax evaders. Prior literature identifies that demographic, cultural and behaviour, legal and institutional, and economic factors are determinant factors to stimulate individual and companies to evade tax (Khlif & Achek, 2015). In addition, source of income, tax complexity, fairness, tax audit, tax administration, tax rates and penalties have influences towards tax evasion (Jackson & Milliron, 1986). Similarly, Bird (2004) said that tax administration and tax official's work efficiency affect the level of tax evasion.

As mentioned above, tax avoidance explains tax minimisation actions through legal loopholes whereas tax evasion is an illegal activity and there is a crucial problem for many countries including Thailand. Thus, the main purpose of this study is to investigate personal characteristics and prior experience factors influence taxpayers to avoid or evade tax burden.

2.3 Hypothesis Development

There are a variety of variables contributing to tax avoidance and tax evasion. Although several studies investigate influenced factors for minimising tax burden, results have been mixed and are still unclear. Somehow, it depends on prior experiences or individual attitude toward tax system. Specifically, this study focuses on determinants and attitudes on tax avoidance and tax evasion toward individual characteristics and experiences.

Many studies indicate that the relationship between gender and tax evasion has been mixed results (e.g., Fadi Alasfour, Martin Samy, & Roberta Bampton, 2016; Robert W. McGee & Guo, 2007; Richardson & Sawyer, 2001). There is unclear which gender impact on tax minimisation behaviour either legality or illegality. According to Richardson and Sawyer (2001), the results showed that women tend to be more compliant with tax laws than men. Likewise, Che , Ming , and Roslani (2018) reported that

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in term of tax fraud, males are more likely to be unlawful than females. In term of tax avoidance, prior literature suggests that the existing of female on the board of directors reduces corporate tax avoidance (Hoseini, Safari Gerayli, & Valiyan, 2019). In contrast, some studies suggest that males less likely to tax lawlessness than females (Fadi Alasfour et al., 2016; Robert W. McGee & Guo, 2007). Therefore, the following hypothesis is as follows:

H1a: there is a relationship between gender and tax avoidance attitude

H1b: there is a relationship between gender and tax evasion attitude

The relationship between tax minimizing and taxpayers' income has been document in prior literature (Che et al., 2018; Robert W McGee & Liu, 2016; G. Preobragenskaya & McGee, 2016; G. G. Preobragenskaya, McGee, & Komarev, 2018). Age has influence on tax evasion. Younger people who have less concerned about risk are more likely to non-compliance on tax than older people (Tittle, 1980).

There is unclear that either younger or older taxpayers engages on tax minimisation behaviour. Younger people have an opportunity to have a tax fraud rather than elder people, but the threat of punishment will affect elder people because they are more tax paying (Fadi Alasfour, Martin Samy, & Roberta Bampton, 2016). Similarly, G. Preobragenskaya and McGee (2016) studied taxpayers in Russia and revealed that women taxpayers, married and younger taxpayers have more opposition towards evasion behaviour. Conversely, Che et al. (2018) mentioned that the elder people tend to have a tax evasion rather than younger people since they are more level of incomes. However, To the best of our knowledge, there is no evidence on a study on how age factors affect tax avoidance attitudes. In this study, hypotheses about the relationship between age range and tax avoidance were developed. Therefore, the following hypothesis is as follows:

H2a: there is a relationship between age and tax avoidance attitude

H2b: there is a relationship between age and tax evasion attitude

Tax complexity, education, fairness, income source and tax morality are significant determinants of tax evasion (G. Richardson, 2006). Meanwhile, the studying about the relationship between education level and tax evasion, there are conflicting findings. For example, Lewis (1982) indicated that ignorance of fiscal fundamentals leads to tax evasion. Moreover, from a study of factors affecting tax evasion in Ghana, it found that education levels had a negative impact on tax evasion, meaning the higher level of education taxpayers had, the lower tax evasion was (Ameyae & Dzaka, 2016). On the other hand, the study by Chang (1984) reported that taxpayers who were more likely to evade taxes are knowledgeable about tax law. Furthermore, Ibadin and Eiya (2013) and Mansor and Gurama (2016) also found that level of education affect tax evasion. However, To the best of our knowledge, it seems that there is no researchs about the education levels affect tax avoidance attitudes. Hence, in this study hypotheses were developed regarding the relationship between taxpayer education levels and tax avoidance. Therefore, the following hypothesis is as follows:

H3a: there is a relationship between education level and tax avoidance attitude

H3b: there is a relationship between education level and tax evasion attitude

Some studies suggests that people with low incomes are significantly more likely to avoid taxes (Allingham & Sandmo, 1972; Tabandeh, 2012). Nevertheless, people with higher incomes seem to be better at complying with tax laws. For example, studies have shown that income levels have a negative correlation to tax evasion (Tabandeh, 2012). In Malaysia, Tabandeh (2012) found that taxpayers who had lower incomes tended to have a tax evasion.

On the other hand, high earners are found to be positively correlated to tax evasion (Alleyne & Harris, 2017). The study of Mansor and Gurama (2016) found that income levels were positively correlated with tax evasion in Nigeria. Consistent with the results of G. Richardson (2006), the income component is an important driving force in controlling tax evasion. Moreover, Richardson (2006) also commented that the sole source of income from wages and salaries reduced tax avoidance to a noticeable level. However, research has argued that income levels have no statistically significant correlation to tax avoidance (Feinstein, 1991). Therefore, the discussion leads to following hypothesis:

H4a: there is a relationship between personal income level and tax avoidance attitude

H4b: there is a relationship between personal income level and tax evasion attitude

In Thailand, assessable incomes are categorised into 8 various types. For instance, assessable incomes are derived from employment, a perform of work, goodwill or other rights, interest on deposit or dividend from investment, rent of property, income from liberal professions, income from a contract of work, and income from business or commercial. Some taxpayers may have several assessable incomes more than one. Because some assessable income types can be deducted tax expenses by percentage of assessable income, others can be deducted tax expenses by actual expenses or percentage of assessable income.

This study predicts that the difference of personal income tax calculation methods for each assessable income may motivate individuals to deviate their real income reporting. Taxpayers may seek how manipulate their various types of incomes. This prediction consists with prior study that age, gender, level of income, and occupation are related to experience of working and tax filing (Devos, 2008). Tax avoidance and tax evasion activities might be influenced from the variety of assessable income types of taxpayers because some types of assessable income can be chosen to deduct either percentage of assessable income or actual expenses. Taxpayers may intent to report their assessable income that it is inconsistent with the real income type for more deduction on expenses. Therefore, the discussion leads to following hypothesis:

H5a: there is a relationship between assessable income types and tax avoidance attitude

H5b: there is a relationship between assessable income types and tax evasion attitude

According to several studies about taxpayers' attitude in some countries towards tax evasion, it found the different results. Uzunali et al. (2021) mentioned that the tax complexity is one of the factors that affects taxpayers' tax perceptions and attitudes in Turkey. Tan (1998) studied the impact of working and tax return on perceptions of the tax system fairness. The result indicated that both determinants influenced perceptions of the tax rate structure fairness including filing status, affecting the perception of fairness of the tax burden according to different income levels. Altaf, Herani, and Awan (2019) investigated relationship between determinants and tax evasion in South Asian countries and they found that age, corruption, marginal tax rate simplicity of launching the business, and accountability have positive relationship with tax evasion whereas service income, gender, trust in politicians have negative impact on tax evasion. Savić, Dragojlović, Vujošević, Arsić, and Martić (2015) mentioned that from studying performance of tax administration in 13 European countries, countries that have more efficient tax administration will have lower grey economy. Grey economy (shadow economy) refers to activity in which other lawful obligations are neglected to receive financial benefits (e.g., avoid tax, fraud related to tax refunds, conceal revenues). However, To the best of our knowledge, there does not appear to be a study on how the degree of tax complexity affects tax avoidance attitudes. Therefore, in this study, assumptions were developed regarding the relationship between the taxpayer's level of tax complexity and tax avoidance. Therefore, the discussion leads to following hypothesis:

H6a: there is a relationship between problems on tax complexity and tax avoidance attitude

H6b: there is a relationship between problems on tax complexity and tax evasion attitude

3. RESEARCH METHODOLOGY

3.1 Sample and Data Analysis

In this study, data were collected through online questionnaire survey to test the hypotheses discussed in the previous section. The data were collected by using internet-based communication technology (e.g., online platforms and email). Under the restrictions of COVID-19 pandemic, online survey-based is usefulness because of its ability to collect data with greater ease and faster compared to traditional questionnaires. However, there are the important to concern about the validity and generalisability of findings using online survey methodology. Since the objective of this study focuses on the attitude of taxpayers on tax avoidance and tax evasion in the personal income tax point of view, the population of the study is defined as personal income taxpayers. The purposive sampling technique as a non-probability method is used (Tangco, 2007). The survey link was individually shared to the target population who had assessable income for the prior taxable year. However, the respondents were excluded from the further analysis if participants indicated that they had no assessable income. This study was conducted under strict review by the Ethics Review Committee for Research Involving Human

Research Subjects, Kasetsart University. The participants were protected from harm, and the information was kept confidential. There was minimal risk involved for participants in this study¹.

To ensure voluntary participation, the participants were informed of the purposes of this study and answered a consent question at the beginning of the questionnaire. The online questionnaire survey comprised demographic questions, tax return and filing experience, and problems of personal income tax payment. As outlines in Table Panel A, 1,281 initial respondents were collected. However, the final sample were 1,001 respondents, excluding 208 respondents who were incomplete questions and 72 respondents reported that they are no tax paid. Questionnaires consisted of 14 questions and were separated into two sections. The first part contained demographic information of taxpayers. Demographic questions showing opinions about personal income tax structure asked to mirror tax problems from the taxpayers' viewpoint. With difficulty of recognising of taxpayers' attitude towards tax avoidance and tax evasion, the second section uses 11-Point Likert scale rating from 0–10 where 0 denotes strongly disagree to do tax avoidance or tax evasion and 10 shows strongly agree to examine taxpayers' attitude towards tax avoidance and tax evasion. The 11-point Likert scale are used to ask the participants' attitude as dependent variables because of minimizing categorisation effect (Garner, 1960), improvement data analysis (Saris & De Rooij, 1988), and reliability of the data (Andrews & Withey, 1976). The participants were informed the definition of tax avoidance and tax evasion before deciding to answer the questions. The demographic characteristics of respondents and their descriptive statistics are shown in Table 1 Panel B.

Table 1: Sample Size and Demographic Characteristics

Panel A: Sample Size Number of Respondent
Initial respondent 1,281
Incomplete 208
No tax paid 72
Final sample 1,001

¹ The Kasetsart University Research Ethics Committee has exempted this study which is to be carried out in comply with international guidelines for human research protection according to the certificate number COE64/203.

Table 1: Sample Size and Demographic Characteristics (Cont.)

Panel B: Demographic Characteristics		
Demographics	Frequency (N)	Percentage (%)
Gender		
Male	366	36.56
Female	635	63.44
Total	1,001	100.00
Age		
20–30 years	238	23.78
31–40 years	174	17.38
41–50 years	260	25.97
51–60 years	258	25.77
Above 60 years	71	7.09
Total	1,001	100.00
Education Level		
Advanced diploma/Diploma	90	8.99
Bachelor’s degree	636	63.54
Master’s degree	248	24.78
Doctor’s degree	27	2.70
Total	1,001	100.00
Level of Income (per month)		
Less than 15,000 Baht	49	4.90
15,000–30,000 Baht	288	28.77
30,001–50,000 Baht	334	33.37
50,001–100,000 Baht	233	23.28
More than 100,000 Baht	97	9.69
Total	1,001	100.00

The demographic of respondents and descriptive statistics shown in Table 1 Panel B indicated that 63.44% of the respondents were female whereas 36.56 % were male. With regarding to the count of age, the proportions of each age range were similarly close between 17–25%, except for over 60 years old that was only 7.09 percent. The education level indicated that 63.54% of the respondents had complete a bachelor’s degree, 24.78% had a master’s degree, 8.99% had a diploma or below undergraduate, and 2.70% had a doctoral degree. 33.37% of participants had income between 30,000 and 50,000 baht, and 28.77% had income level at 15,000 to 30,000 baht, respectively.

3.2 Variable Measurement and Model Specification

In this part, dependent variables are tax avoidance and tax evasion scores which the models are separated for each of these two dependent indicators. To examine the effects of individual characteristic indicators on tax avoidance and tax evasion of personal income tax in Thailand, the models are estimated using ordinary least square (OLS). Factors affecting tax evasion were studied using independent variables with different data formats, whether demographic data such as gender, range of age, education levels, including with levels of income, income components, rate of the importance of taxation and administration by analysing with multiple regression model (Ameyaw & Dzaka, 2016; Onu, Oats, Kirchler, & Hartmann, 2019). The amount of Durbin-Watson of both models are 1.903 and 1.958, respectively (between 1.5 and 2.50). VIF values are below the threshold (less than 10) and Cook’s distance is less than 1. The assumption test results free of multicollinearity, autocorrelation, and influential observations. Since the objective of this study is to examine the effect of personal characteristics on tax avoidance and tax evasion attitude, all responses are interested variables. The multiple regression modelling can be designed as:

$$TA = \beta_0 + \beta_1 \text{Gender} + \beta_2 \text{Age} + \beta_3 \text{Edu} + \beta_4 \text{Income} + \beta_5 \text{Types} + \beta_6 \text{Problem} + \varepsilon \quad (1)$$

$$TE = \beta_0 + \beta_1 \text{Gender} + \beta_2 \text{Age} + \beta_3 \text{Edu} + \beta_4 \text{Income} + \beta_5 \text{Types} + \beta_6 \text{Problem} + \varepsilon \quad (2)$$

Where, the variable definition and measurement are illustrated in Table 2

Table 2: Definition of Variables and Measurement

Variables	Definition and Measurement
TA	Tax avoidance attitude where 0 denotes strongly disagree and 10 strongly agree to do tax avoidance
TE	Tax evasion attitude where 0 denotes strongly disagree and 10 strongly agree to do tax evasion
Gender	Gender of respondents where female = 1, male = otherwise
Age	Age range of respondents where 1 = 20–30 years, 2 = 31–40 years, 3 = 41–50 years, 4 = 51–60 years, and 5 = above 60 years
Edu	Education level of respondents where 1 = Advanced diploma/Diploma, 2 = Bachelor’s degree, 3 = Master’s Degree, and 4 = Doctor’s degree
Income	Income level of respondents Where 1 = Less than 15,000 Baht, 2 = 15,000–30,000 Baht, 3 = 30,001–50,000 Baht, 4 = 50,001–100,000 Baht, and 5 = above 100,000 Baht

Table 2: Definition of Variables and Measurement (Cont.)

Variables	Definition and Measurement
Types	Total income types, where minimum = 1, maximum = 8
Problem	Problem of tax complexity, using a 5-point (1–5) Likert scale, where 1 denotes respectively strongly disagree and 5 denotes extremely agree

4. RESULTS

4.1 Correlation Analysis

Table 3 tabulates the correlation matrix between interested variables. The correlation results show that age exhibits a negative correlation with tax avoidance while gender, age, education level, and level of income have negatively correlated with tax evasion at 1% significance level. In addition, total income types and problems of tax complexity suggest positively correlated with both tax avoidance and tax evasion at 1% significance level. Specifically, younger taxpayers are more likely to engage in both tax avoidance and tax evasion while more variety of income types and lot of problems relating paying tax influence taxpayers' attitude to do tax avoidance and tax evasion activities. However, the level of education negatively correlates with tax evasion at 1% significant level but there is not statistically significant on tax avoidance. It could be interpreted that low knowledge taxpayers relate to engage illegal behaviour rather than seek tax loophole activity.

Overall, the results indicate a moderate correlation between independent variables and dependent variables (0.079–0.367) at 1% of significant level, below the threshold of 0.80 (Hair, Ringle, Sarstedt, & Practice, 2011). Thus, multicollinearity is not an issue in these variables.

Table 3: Descriptive Statistics

Variables	TA	TE	Gender	Age	Edu	Income	Types	Problem
TA	1.000							
TE	0.206**	1.000						
Gender	-0.045	-0.056*	1.000					
Age	-0.154**	-0.056*	-0.009	1.000				
Edu	-0.042	-0.086**	0.012	0.098**	1.000			
Income	0.029	-0.054*	-0.117**	0.367**	0.336**	1.000		
Types	0.165**	0.074**	-0.068*	0.016	0.079**	0.166**	1.000	
Problem	0.166**	0.193**	-0.055*	-0.082**	-0.112**	-0.099**	0.045	1.000

Note: ** p -value < 0.01, * p -value < 0.05

4.2 Hypothesis Testing

In this study, we have going to know the significant relationship between taxpayers' characteristic and prior experiences on tax avoidance and tax evasion. To test our hypotheses, OLS regression should be employed to test our hypotheses. Table 4 illustrates the OLS regression results for tax avoidance which is used for tax avoidance (model 1) and tax evasion (model 2). Overall, the results indicate that both models are statistically significant (p -value < 0.001). This implies that the relative models would fit better data.

Table 4 presents the results of hypothesis testing the relationship between taxpayers' characteristics and prior experiences of paying tax on tax evasion and tax avoidance. The results indicate that there is statistically insignificant relationship between gender and tax avoidance or tax evasion attitude. The results are inconsistent with H1a and H1b. Although the results show that woman taxpayers tend to be more compliant with tax, they are less likely to engage in tax avoidance or tax evasion. However, there is not statically significant. Gender difference is not influence neither legal nor illegal tax attitude. The findings in Table 3 also confirm the negative relationship between ranges of age and tax avoidance attitude (p -value < 0.001). Specifically, younger taxpayers tend to avoid personal income tax. Nevertheless, the relationship between age and tax evasion attitude are insignificant at the 5 percent level. There results support H2a but it is not consistent with H2b.

H3a and H3b hypothesise the impact of level of education on tax avoidance and tax evasion. The results suggest that the different level of education insignificantly effect on tax avoidance attitude. In contrast the level of education has negatively marginal significance on tax evasion attitude (p -value < 0.10). These results indicate that more knowledgeable taxpayers are less likely to engage in tax evasion behaviour. Table 4 also shows the association between tax avoidance/tax evasion and income level. The level of income has positive relationship with tax avoidance ($p < 0.01$) but there is no relating on tax evasion. Taxpayers with higher incomes might use the loophole of tax law to avoid tax paying but they unintentionally evade tax, hence, these results support H4a but not consist with H4b.

In addition, the results reveal the impact of various income types on both tax avoidance and tax evasion attitude. Not only the total income types have positively associated with avoidance, but they also show the association on the evasion attitude at a significantly level (p -value < 0.001 and p -value < 0.01 , respectively). The results are consistent with H5a and H5b and suggest several types of income stimulate taxpayers to engage in tax avoidance and tax evasion.

Finally, participants were asked the questions to indicate problem relation tax complexity using a 5-point (1–5) Likert scale, where 1 and 5 respectively strongly disagree and extremely agree. The questions were related to the problem experience of taxpayers including: (1) assessable income calculation, (2) tax expenses, (3) tax allowance, (4) exempted income, (5) withholding tax, (6) donation, (7) dividend tax credit, (8) tax rate, (9) half-year tax. Cronbach's alpha of nine questions was 0.924,

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indicating the reliability of the questions, given the minimum threshold of 0.60 (Cortina, 1993). The mean score of the problems is used representing taxpayers’ problem experience. The results find that the problem experiences of taxpayers were significantly impact both tax evasion and tax avoidance attitude (p -value < 0.001). When taxpayers have problems on prior experiences for paying tax, it might stimulate them neither to minimise personal income tax under legality nor illegally manipulate further tax.

Table 4: Determinants of Tax avoidance and Tax Evasion

	Dependent Variables (DV)					
	Model 1 (DV = TA)			Model 2 (DV = TE)		
	Coefficient	t-statistic	p-value	Coefficient	t-statistic	p-value
Constant	2.707	3.562	0.000***	0.296	0.871	0.384
Gender	-0.016	-0.525	0.599	-0.043	-1.378	0.168
Age	-0.176	-5.373	0.000***	-0.029	-0.870	0.385
Edu	-0.053	-1.641	0.101	-0.061	-1.858	0.063 ⁺
Income	0.100	2.836	0.005**	-0.022	-0.614	0.539
Types	0.148	4.776	0.000***	0.072	2.276	0.023**
Problem	0.148	4.802	0.000***	0.176	5.597	0.000***
No. of observations	1,001			1,000		
F-Statistics	14.811 (p -value < 0.001)			8.632 (p -value < 0.001)		
R ²	0.082			0.050		
Adj.R ²	0.077			0.044		
Durbin-Watson	1.903			1.958		

Note: *** p -value < 0.001, ** p -value < 0.01, * p -value < 0.05, + p -value < 0.10

TA (TE) = score of tax avoidance (evasion) attitude which using 11-Point Likert scale rating from 0–10, where 0 denote strongly disagree to do tax avoidance (evasion) and 10 strongly agree to do tax avoidance (evasion)

4.3 Additional Analysis

Because previous section suggests that the problem experiences of taxpayers significantly impact both tax evasion and tax avoidance attitude. However, the problem experiences were calculated by weighted score of 9 problems as mentioned earlier. Individual may face with different problem experiences. For instance, some taxpayers may face a problem related to assessable income calculation, but others

may face with tax allowance problem. Therefore, this section extends the results by testing the relationship between each problem and tax avoidance/tax evasion.

We use the regression analysis to address this issue. To examine the effects of individual problems on tax avoidance and tax evasion attitude, the multiple regression modelling can be designed as:

$$TA = \beta_0 + \beta_1P1 + \beta_2P2 + \beta_3P3 + \beta_4P4 + \beta_5P5 + \beta_6P6 + \beta_7P7 + \beta_8P8 + \beta_9P9 + \epsilon \quad (3)$$

$$TE = \beta_0 + \beta_1P1 + \beta_2P2 + \beta_3P3 + \beta_4P4 + \beta_5P5 + \beta_6P6 + \beta_7P7 + \beta_8P8 + \beta_9P9 + \epsilon \quad (4)$$

Where,

TA = Tax avoidance attitude

TE = Tax evasion attitude

P1 = Assessable income calculation problem

P2 = Tax expenses problem

P3 = Tax allowance problem

P4 = Exempted income problem

P5 = Withholding tax problem

P6 = Donation problem

P7 = Dividend tax credit

P8 = Tax rate problem

P9 = Half-year tax problem

Problems of tax complexity relating individual experience on paying tax may influence on tax avoidance and tax evasion attitude. Each tax problem (P1–P9) is measured by using 5-point Likert scale, where 1 denotes strongly disagree and 5 denotes strongly agree. The correlation analysis (untabulated) indicates a highly correlation between nine problems (0.049–0.744), but below the threshold of 0.80 (Hair et al., 2011). The OLS regression between independent variables and dependent variables are exhibited in Table 5.

Table 5 exhibits the positive relationship between exempted income problem and tax avoidance attitude (p -value < 0.10). When taxpayers facing exempted income problem, they tend to avoid tax themselves. Interestingly, the findings reveal that there was significantly association between tax expense and donation problems with tax evasion (p -value < 0.05 and 0.10, respectively). Taxpayers may evade their tax payment when have the problems on the complication of tax expenses and donation calculation.

Table 5: The Impact of Problem Experience on Tax avoidance and Tax Evasion

	Dependent Variables (DV)					
	Model 3 (DV = TA)			Model 4 (DV = TE)		
	Coefficient	t-statistic	p-value	Coefficient	t-statistic	p-value
Constant	2.794	6.084	0.000***	-0.362	-1.934	0.053 ⁺
P1	0.002	0.030	0.976	0.046	0.812	0.417
P2	-0.029	-0.462	0.644	0.176	2.820	0.005**
P3	0.045	0.731	0.652	-0.042	-0.682	0.496
P4	0.110	1.964	0.050 ⁺	-0.077	-1.391	0.165
P5	0.025	0.452	0.652	-0.034	-0.637	0.525
P6	-0.013	-0.259	0.795	0.082	1.683	0.093 ⁺
P7	0.073	1.470	0.142	-0.001	-0.029	0.977
P8	-0.077	-1.524	0.128	0.081	1.611	0.108
P9	0.048	0.947	0.344	0.027	0.533	0.594
No. of observations	796			795		
F-Statistics	3.002 (p-value < 0.01)			5.362 (p-value < 0.001)		
R ²	0.033			0.058		
Adj.R ²	0.022			0.047		
Durbin-Watson	1.789			1.842		

Note: ***p-value < 0.001, **p-value < 0.01, *p-value < 0.05, ⁺p-value < 0.10

TA (TE) = score of tax avoidance (evasion) attitude which using 11-Point Likert scale rating from 0–10, where 0 denote strongly disagree to do tax avoidance (evasion) and 10 strongly agree to do tax avoidance (evasion).

P1 = Assessable income calculation problem, P2 = Tax expenses problem, P3 = Tax allowance problem, P4 = Exempted income problem, P5 = Withholding tax problem, P6 = Donation problem, P7 = Dividend tax credit problem, P8 = Tax rate problem, and P9 = Half-year tax problem

5. DISCUSSION AND IMPLICATION

From the empirical results, it can be indicated that most of factors can be determinants on tax avoidance and tax evasion. The previous studies have non-mutually exclusive results between age and tax avoidance or evasion behaviours. The results of this study show that the age range had a statistically significant negative effect on tax avoidance. These results support the prior studies (Fadi Alasfour et al., 2016; G. Preobragenskaya & McGee, 2016) that younger taxpayers are more likely to avoid taxes. On the other hand, the results find that income level, total types of income, and prior

exempted income problem experience had a positive effect on tax avoidance behavior consistent with the prior literature.

Prior study suggests that high level of income are found to be positively correlated to tax evasion (Alleyne & Harris, 2017). However, there is no evidence on the issues of various income types in the prior literature. The results of this study fulfil that the various types of assessable incomes and problems on tax complexity can stimulate people to minimise their tax burden.

In terms of tax evasion attitude, the education level had negatively influenced on tax evasion. The results show that higher education levels result in fewer evading taxes. These results confirm the prior literature that the higher the level of education taxpayers had lower tax evasion (Ameyae & Dzaka, 2016). However, this study also finds that income types and prior problem experience of taxpayers, particularly tax expenses and donation problem are positively associated with tax evasion. Since the complexity in the number types of income and prior problem experiences, people may choose to reduce their tax burden and engage in tax evasion behaviour.

The empirical results can be summarised as Table 6 below:

Table 6: xXx

Relationship	Tax Avoidance	Tax Evasion
Positive relationship	Various types of assessable incomes, Income Level and Exempted income problems	Various types of assessable incomes, Tax expense problems and Donation problems
Negative relationship	Range of Age	Education Level

The results of this study contribute both academic and practitioners, especially, related regulators. The background of tax evasion may be that there are substantial deductibles and that the Revenue Department may not be able to verify all taxpayers for actual deductibles as reported to the Revenue Department. This is the difficulty of the Thai Revenue Department in dealing with tax avoidance or evasion problems for taxpayers. In order to address this issue, the first thing the Revenue Department should be aware of is direct communication to taxpayers, such as relevant laws, proper filing methods, and relevant documentation. In addition, it is important to improve the personal income tax system to make it easier and more convenient for taxpayers to file their return. Moreover, it is advisable to encourage education about Thailand's tax system in all fields of study. It is necessary to raise awareness of the importance of taxation among students to help reduce the problem of tax evasion.

6. CONCLUSIONS AND LIMITATIONS

The purpose of this study is to investigate the crucial factors of tax avoidance and tax evasion attitude. 1,001 online questionnaires were distributed to Thai taxpayers as the final sample. The multiple regression models were used to analyse the data and testing the hypotheses. The results show that younger taxpayers tend to avoid tax. Taxpayers who have a variety of incomes, higher level of income and face exempted income problem tend to avoid tax. In addition, taxpayers who have a variety of income and face tax expense and donation problem tend to evade tax. However, higher education level taxpayers will be less tax evasion. Thus, government should educate younger taxpayers and also taxpayers who have lower income to realise penalty of tax evasion. Furthermore, government should decrease the complexity of donation and tax deduction to decrease level of tax evasion. However, limitations of this study should be noted. Firstly, this empirical research ignores taxpayer's recognising towards penalty of tax evasion. Secondly, perceptions and attitudes of tax avoidance and tax evasion are subjective. Level of strongly disagree of individual taxpayers are unequal. Finally, further research may be a comparison of effects of taxpayer characteristics and attitudes on tax avoidance and tax evasion in Asean countries.

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