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Personal Income Tax in Thailand: Problems that are hidden
ภาษีเงินได้บุคคลธรรมดาในประเทศไทย: ปัญหาที่ถูกซ่อนอยู่

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Abstract

This study explores problems of calculating and paying personal income tax in Thailand affecting tax avoidance and tax evasion of taxpayers and finds guidelines for increasing the efficiency of personal income tax in Thailand. 4,804 online questionnaires are launched towards taxpayers and responded 3,384 online questionnaires are used and analysed. The logistic regression model is used for studying the relationship between problems of calculating and paying personal income tax on the likelihood of tax avoidance and tax evasion. The results found that the problems of tax unfairness had the most significant positive effect with the likelihood of tax avoidance, followed by tax allowance which do not cover tax expenses and tax complexity calculation. Moreover, the problems of personal income tax rate had the most significant positive effect with the likelihood of tax evasion, followed by the problem of lack of assistance from the Revenue Department staff and tax unfairness. To solve these problems, The Revenue Department should decrease tax complexity and increase tax allowances to solve tax avoidance. Furthermore, lower personal income tax rate and improving quality of services can decrease tax evasion. Finally, unfairness of tax payment should be solved to decrease tax avoidance and tax evasion problems.

Keywords: Personal Income Tax, Tax Avoidance, Tax Evasion, Taxpayers

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อตรวจสอบปัญหาของการคำนวณและการจ่ายภาษีเงินได้บุคคลธรรมดาในประเทศไทย ซึ่งมีผลกระทบกับการหลีกเลี่ยงภาษีและการหนีภาษี นอกจากนี้งานวิจัยได้หาแนวทางสำหรับการเพิ่มประสิทธิภาพของภาษีเงินได้บุคคลธรรมดาในประเทศไทย แบบสอบถามออนไลน์จำนวน 4,804 ฉบับได้ถูกส่งไปยังผู้จ่ายภาษีและได้รับการตอบกลับแบบสอบถามที่สมบูรณ์จำนวน 3,384 ฉบับได้ถูกใช้ในการวิเคราะห์การวิเคราะห์ความถดถอยโลจิสติกได้ถูกใช้ในการศึกษาความสัมพันธ์ระหว่างปัญหาของการคำนวณและการจ่ายภาษีเงินได้บุคคลธรรมดาในประเทศไทยกับแนวโน้มในการหลีกเลี่ยงภาษีและการหนีภาษี ผลการศึกษาพบว่าความไม่ยุติธรรมในการจ่ายภาษีมีความสัมพันธ์เชิงบวกกับแนวโน้มในการหลีกเลี่ยงภาษีมากที่สุด รองลงมาคือปัญหาค่าลดหย่อนที่ ไม่ครอบคลุมกับรายจ่ายที่เกิดขึ้นจริงและความซับซ้อนในการคำนวณภาษี

ในขณะที่ปัญหาที่เกี่ยวกับอัตราภาษีเงินได้บุคคลธรรมดามีความสัมพันธ์เชิงบวกกับแนวโน้มในการหนีภาษีมากที่สุด รองลงมาคือปัญหาการขาดความช่วยเหลือจากเจ้าหน้าที่สรรพากรและความไม่ยุติธรรมในการจ่ายภาษี เพื่อที่จะแก้ไขปัญหาเหล่านี้ กรมสรรพากรควรจะลดความซับซ้อนในการคำนวณภาษี เพิ่มค่าลดหย่อนให้เพียงพอกับรายจ่าย นอกจากนี้การลดอัตราภาษีเงินได้บุคคลธรรมดาและการปรับปรุงคุณภาพการบริการสามารถที่จะลดการหนีภาษีได้ ในท้ายที่สุดเพื่อที่จะลดปัญหาการหลีกเลี่ยงภาษีและการหนีภาษี ควรปรับแก้ไขความไม่ยุติธรรมในการจ่ายภาษี

คำสำคัญ : ภาษีเงินได้บุคคลธรรมดา การหลีกเลี่ยงภาษี การหนีภาษี ผู้จ่ายภาษี

Introduction

Most of the main incomes of developed or developing countries come from various forms of taxation (Beza & Debre, 2014), for example personal income tax, corporate income tax, value-added taxes (VAT), etc. For this reason, policies in government fiscal management differ from country to country depending on the government focusing on any specific budget allocation, whether it is government spending, procurement providing basic facilitation to the people, including the basic welfare necessary for the people (Bala, Enoch, & Yakubu, 2018; Adebisi & Orsaa, 2013; Worlu & Nkoro, 2012). In addition, taxation is an important mechanism for regulating economic activities for the purpose of promoting or suppressing economic activities that affect national incomes (Bala, Enoch, & Yakubu, 2018).

In Thailand, taxation remains the main source of income for the government like many other countries in the same economy. All citizens with income are required to pay tax at the tax rate stipulated by law. Taxpayers can calculate income tax by self-assessment In addition, actual expenses, tax deductions, income exemptions, tax allowances, and donations can also be used to reduce the taxpayer's personal income tax burden. Despite the government's assistance to reduce the tax burden through policies, some citizens seek to avoid or evade such tax burdens through legal gaps or other illegal methods. These problems have resulted in a large gap between the estimated tax collection and the actual tax collection (Adebisi & Orsaa, 2013). Of course, this affects the appropriate and adequate budget allocation of the government administration.

Therefore, objectives of this research are to study problems of calculating and paying personal income tax that affect tax avoidance and evasion attitudes of Thai taxpayers and find guidelines for increasing the efficiency of personal income tax in Thailand.

Literature Review and Hypotheses Development

1. Personal Income Tax in Thailand

Personal Income Tax, the third source of Thai tax revenue, is direct tax that individuals bring their own incomes from self-employed or working to pay tax. The personal income tax calculation is the taxpayer's self-assessment. Normally, personal taxable income is calculated from assessable income minus with exempted income, tax deduction, tax allowance and donation in order to relief tax burdens for taxpayers. Government tries to collect personal income tax as efficient as possible to

compensate with government expenditure. With COVID-19 pandemic, however, personal income tax collection was anticipated that it may not reach the target. Svetalekth and Phonsumlissakul (2022) mention that Personal income tax collection in the fiscal year 2021 was collected at 334,409 million baht (10,133 million dollars) whereas fiscal year 2020 was collected at 336,178 million baht (10,187 million dollars) or decrease 0.53% .Perhaps, COVID-19 may not cause of a decrease of revenue collection. It may occur from tax avoidance or tax evasion. Taxpayers may seek loopholes of tax laws such as tax deductible, tax allowance, exempted income, and donation to decrease their tax burdens. Thai personal income tax has lots of tax allowances to decrease taxpayer burden however they are used for specified groups of taxpayers. In addition, some taxpayers intend to evade tax by under-reporting income. Nowadays, online business is very popular. Individual entrepreneur grows up rapidly. Perhaps, they have never been paid income tax. The Revenue Department could not recognise actual assessable income of youtubers and online sellers. As a result, they pay tax less than it actually should be. Afterwards, tax collection from e-Payment were strictly examined by tax officials. There are still lots of problems of personal income tax both in the viewpoint of tax officials and taxpayers.

2. Tax Avoidance and Tax Evasion

Kasipillai, Aripin, & Amran (2003) say there are two basic forms of taxation resistance: tax evasion and tax avoidance. Tax evasion is defined as the deliberate act of non-compliance with the payment of taxes by reporting the amount of income that should be reported to the collection agency is lower than the actual reported income, resulting in less tax payment than that actually have to pay (Brown, 1983; Chiumya, 2006; GIZ Sector Programme Public Finance, Administrative Reform, 2010). Prior research found that the success of tax evasion has serious consequences for the government as it poses a threat to government revenues and people's attitudes towards tax compliance (Clotfelter, 1983). Popescu (2020) says tax evasion can distort in the financial marketing and create social inequities taxpayers and tax evaders. In addition, tax evasion has direct impact towards less revenue collection in each local state. Alm (2021) adds technological innovation makes taxpayers easier to hide their transactions from tax authorities and makes companies to utilise global supply chain for tax evasion via money laundering.

Tax avoidance, on the other hand, is defined as a method of manipulating taxpayers' accrued income by exploiting legal loopholes to reduce the tax burden payable to the collection agency (Kasipillai, Aripin, & Amran, 2003). Meanwhile, GIZ Sector Programme Public Finance, Administrative Reform (2010) defines tax avoidance as taking advantage of the weakness, loopholes, or ambiguities of tax law in an effort to reduce the amount of tax payable. As long as the financial arrangements are not illegal, it is acceptable for taxpayers to be wise to reduce their tax burden (Kasipillai, Aripin, & Amran, 2003). Moreover, Hanlon and Heitzman (2010) define tax avoidance is any action taken to reduce explicit taxes. It is more closely aligned with tax minimisation than with effective tax planning. Lang et.al (1997) mention tax avoidance in Germany

causes less one-third of all income tax revenues or 7% of GDP. Roine (2006) supports that tax avoidance amounts affect with GDP around 2% in USA and 2-4% in Denmark and Sweden.

One of the interesting things is why people need to avoid the tax or evade the tax. Bethencourt and Kunze (2015) say that higher taxes increase the level of tax avoidance. Davis, Cebula and Boylan (2021) reveal that taxpayers found loopholes of tax laws such as tax exemption for municipal bonds and use this loophole to decrease tax liabilities. In addition, Davis, Cebula and Boylan (2021) say that income tax rate, unemployment rate, Internal Revenue Service audit, penalty rates and the growth rate of real per capita income has influenced towards income tax evasion. Svetalekth and Phonsumlissakul (2022) study effects of taxpayer characteristics and attitudes on tax avoidance and tax evasion and found that there is a negative relationship between ranges of ages and tax avoidance attitude and there are a positive relationship between income levels, several types of assessable incomes and tax avoidance. However, the education level has a negative relationship with tax evasion.

From literatures, it can be summarised tax avoidance is legal tax planning where tax evasion is fraud. Tax evasion and tax avoidance are significant issues that should be concerned. They impact to tax collection revenue and affect towards GDP. Apart from taxpayers' characteristics, interestingly, whether or not there are any income tax problems that taxpayers face and affect to tax avoidance and tax evasion.

3. Problems and Tax Complexity of Personal Income Tax

The problem with personal income tax is a diverse and complex problem in terms and affects people's attitudes towards taxation. The results of the study on the relationship between tax rates and tax avoidance or evasion are mixed. A study in Nigeria found that exorbitant income tax rates have a positive impact on tax avoidance and evasion (Adebisi & Orsaa, 2013). Other studies have found that increases in marginal tax rates result in greater tax evasion (Witte & Woodbury , 1983). However, there are also works that discuss the negative effects tax rates have on tax avoidance or evasion. A study by Tanzi (1980) shows that tax rates have a negative impact on tax compliance. In addition Clotfelte (1983), Torgler (2003), and Kirchler et.al (2007) state that lowering tax rates does not reduce tax evasion.

In term of tax complexity of personal income tax, there are various studies. Hoppe (2020) says tax complexity is a characteristic of tax system that is difficult to read, understand, comply with the tax code. It is also complex for administrative and legislative processes and tax framework. Hoppe et al. (2019) mention that countries that have complex tax codes tend to have a higher GDP and higher tax rates whereas countries that have a complex tax framework tend to have a lower GDP, a lower development level, lower quality of government and less infrastructure. In contrast, Budak and James (2018) mention that using consistent concepts and definitions will generate more tax simplification. Inconsistencies in legal and definitions should be avoided.

Tax complexity causes taxpayers use services from tax professional firms because they face difficulties in some tax issues (Sapiei & Kasipillai, 2013). The following problem of tax complexity is lower voluntary of tax compliance. Isa, Yussof, & Mohdali (2014) defined higher voluntary tax compliance means

people declare correct their income, are willing to pay correct tax in time. Similar to Gambo et al. (2014), there is a significant negative correlation between tax compliance and tax complexity in Africa.

Awasthi and Bayraktar (2015) support that e-filing and e-payment systems reduce compliance burdens. Electronic systems have benefits to tax administration for decrease tax compliance costs, save times and reduce contacting between taxpayers and tax officials. However, e-Tax invoice and e-Receipt does not work in Thailand. Electronic Processing Administrator Division in the Revenue Department (2022) mentions that only 1,436 taxpayers from 833,124 taxpayers (0.17%) applied them. The main reason is they are not forced to apply electronic system.

There are various studies on tax fairness. Mannan, Farhana, and Chowdhury (2020) say the concept of tax fairness resulted in a fair tax system. Amina and Saniya (2015) also state that the fairness of the tax system is one of the key factors that tax authorities and taxpayers believe influence decisions to comply with tax law. However, some studies have found that injustice in the tax system is just an excuse for tax non-compliance but does not contribute to tax evasion (IMF, 2011). Moreover, Wärneryd and Walerud (1982) found that some taxpayers felt that they had to pay more in taxes than others in the same income group they would not like to pay.

Tax penalties are another factor affecting tax avoidance or evasion. The structure of penalties and tax rates determines the monetary value of tax compliance, this leads to taxpayer behavior in tax compliance (Mannan, Farhana, & Chowdhury, 2020). If a taxpayer is required to file an income tax return but is unable to do so by the deadline, late filing fines may be assessed (Oladipupo & Obazee, 2016). Moreover, Allingham & Sandmo (1972) demonstrate increasing the rate of tax penalties as well as increasing the likelihood of detecting a tax break will always result in an increase in the taxpayer's real income. However, it has been noted that increasing penalties for tax evasion could result in lower government tax revenues as tax officials and taxpayers benefit from bargaining risks to avoid taxes when tax penalties increase (Virmani, 1987).

However, to the best of our knowledge, there is no evidence on a study of the problem factors involved in calculating assessable income, tax deductions, tax allowances, exempt income, calculating withholding tax, contributions, dividend tax credit calculation, and half-year personal income tax calculations affecting tax avoidance or evasion attitudes. Moreover, the study also examined the relationship between problem factors that should be addressed, such as delays information from the employers, lack of assistance from tax authorities, or inability to cover actual expenses of taxpayers and the attitudes towards tax avoidance or evasion of individual income taxpayers in Thailand are still unclear. Therefore, this study hypothesises that problems of taxpayers related tax complexity factors impact on the attitudes of tax avoidance or evasion of personal income taxpayers in Thailand.

Research Methodology

1. Sample and Data Analysis

The data used in the analysis were collected from questionnaires. The questionnaire survey was distributed via online platforms and e-mails. Because this research focuses on the personal income tax problem of taxpayers, survey link was shared to target population by using purposive sampling method (Tongco, 2007). In the case that the respondent did not have assessable income in the past year, the respondent was not used in the data analysis. This research is performed under strictly review by the Ethics Review Committee for Research Involving Human Research Subjects, Kasetsart University. The Participants in this study were at the lowest risk[1] because they were protected from harm and information is kept confidential.

In this study, the survey participants were informed of the research objectives and answered the consent questionnaire to ensure that respondents answered voluntarily. The online survey consists of four main sections: demographic factors, personal income tax return filing experience, nine questions about the problems of calculating or paying personal income tax, and eight questions of calculating or paying personal income tax problems that should be solved. The questionnaire material was developed from Svetalekth and Phonsumlissakul (2022). The questions were presented in Table 3.

From Table 1, total of 4,804 responses from survey respondents were compiled, and 3,384 were used in the data analysis[2]. Of these people, 80% of the non-specific randomisation was used for analysis in the experimental model, and another 20% of the data was used to test the model. For the data of the number of respondents 1,420 subjects were not used in the analysis because the responses to the questionnaire were incomplete and did not meet the criteria used in the sample selection. More than half of the respondents are female. Generally, the respondents were in the age range of 20 – 30 years, followed by respondents in the age range of 41 – 50 years, respectively. In addition, most of the respondents had a bachelor's degree, 65%. as for the income level of the respondents and more than 30% of the respondents had income in the range of 15,000 – 30,000 Baht, followed by from 30,001 – 50,000 Baht, 27% and 50,001 – 100,000 Baht, 19%, respectively.

Table 1: Overview of Statistic of Respondents

Sample Size	**Number of Respondents**
Initial respondents	4,804
Incomplete	1,420
Final sample	3,384
Demographic Characteristics	

[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.

[2] This research derives the sample size by using Yamane's 1967. When the target population is over 100,000 personal income taxpayers in Thailand, the sample size requires minimum 400 respondents at 5% of significant level.

Table 1 (continued).

	Frequency (N)	Percentage (%)		Frequency (N)	Percentage (%)
Gender			**Education Level**		
Male	1,292	38.18	Advanced diploma/Diploma	456	13.48
Female	2,092	61.82	Bachelor's degree	2,214	65.42
Total	3,384	100.00	Master's degree	665	19.65
			Doctor's degree	49	1.45
			Total	3,384	100.00
Age			**Income Level (per month)**		
20 – 30 years	1,044	30.85	Less than 15,000 Baht	413	12.20
31 – 40 years	656	19.39	15,000 – 30,000 Baht	1,067	31.53
41 – 50 years	792	23.40	30,001 – 50,000 Baht	931	27.52
51 – 60 years	713	21.07	50,001 – 100,000 Baht	643	19.00
Above 60 years	179	5.29	More than 100,000 Baht	330	9.75
Total	3,384	100.00	**Total**	3,384	100.00

Descriptive Statistics	**Min**	**Max**	**Average**
CC	1.00	5.00	3.40
UNFAIR	1.00	5.00	3.33
CF	1.00	5.00	3.33
PANEL	1.00	5.00	2.94
INF	1.00	5.00	3.27
LASSIST	1.00	5.00	3.24
HTRATE	1.00	5.00	3.51
NCOVER	1.00	5.00	3.65

2. Variable Measurement and Model Specification

As for questions related to tax avoidance and tax evasion attitudes, taxpayers knew the definitions of the two terms before answering this section. Attitudes towards tax avoidance and evasion are based on a Likert scale score of 11 on a scale of 0-10, where 0 means strongly opposed to tax avoidance or evasion. and 10 means strongly agree to avoid or evade taxes. In the data analysis, tax avoidance and tax evasion attitude scores which are the dependent variables were converted to two scores as shown in Table 2. The mean of tax avoidance attitudes was used to divide the scores into two groups: low- and high-tax avoidance, as well as tax evasion attitudes. As for the tax evasion attitude score, those who answered 0 were not used in the analysis because there was a possibility that they would definitely not do tax evasion, so only a score of 1-10 would be used on purpose

whether to evade tax if possible. Thus, in the modelling of the binary logistic regression for the dependent variable, tax avoidance attitude, a total of 3,384 individuals were sampled and 645 respondents for tax evasion attitude.

Table 2: Dependent variables

Variable	Description
TA	Tax avoidance dummy is a binary variable. 0 means low tax avoidance and 1 means high tax avoidance.
EV	Tax Evasion dummy is a binary variable. 0 means low tax evasion and 1 means high tax evasion.

Table 3: Independent variables and Control variables

Variable	Description	Statement
CC	Calculating complexity (5-point (1-5) Likert scale, where 1 indicates respectively strongly disagree and 5 indicates extremely agree)	Calculating complexity should be solved.
UNFAIR	Unfairness (5-point (1-5) Likert scale, where 1 indicates respectively strongly disagree and 5 indicates extremely agree)	Injustice in paying personal income tax should be solved.
CF	Complexity of filling (5-point (1-5) Likert scale, where 1 indicates respectively strongly disagree and 5 indicates extremely agree)	Complexity of filling should be solved.
PENAL	Penalties (5-point (1-5) Likert scale, where 1 indicates respectively strongly disagree and 5 indicates extremely agree)	Penalties of paying personal income tax should be solved.
INF	Delayed information (5-point (1-5) Likert scale, where 1 indicates respectively strongly disagree and 5 indicates extremely agree)	Delayed information from the employers should be solved.
LASSIST	Lack of assistance (5-point (1-5) Likert scale, where 1 indicates respectively strongly disagree and 5 indicates extremely agree)	Lack of assistance from the Revenue officer should be solved.

Table 3 (continued).

Variable	Description	Statement
HTRATE	Hight Tax rate (5-point (1-5) Likert scale, where 1 indicates respectively strongly disagree and 5 indicates extremely agree)	High personal income tax rate should be solved.
NCOVER	Tax allowance non-covered actual expenses (5-point (1-5) Likert scale, where 1 indicates respectively strongly disagree and 5 indicates extremely agree)	Tax allowances do not cover actual expenses should be solved.

Control Variables

Gender	Respondent's gender where 1 means male and 2 means female	Edu	Respondents' level of education where 1 = Advanced diploma/Diploma, 2 = Bachelor's degree, 3 = Master's Degree, and 4 = Doctor's degree
Age	The age range of the respondents where 1 = 20-30 years, 2 = 31-40 years, 3= 41-50 years, 4 = 51-60 years, and 5 = above 60 years	Income	Respondents' level of income 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

The analysis of the data in this study used a binary logistic regression model to study the relationship between dependent and independent variables shown in table 3 to determine the likelihood of tax avoidance and tax evasion from respondents' attitudes. A binary logistic regression model can be developed for examining the relationship between the problem factors calculating or paying personal income tax that should be addressed affecting tax avoidance attitudes, designed as follows:

$$TA = \beta_0 + \beta_1 gender + \beta_2 age + \beta_3 education + \beta_4 income + \beta_5 CC + \beta_6 UNFAIR + \beta_7 CF + \beta_8 PENAL + \beta_9 INF + \beta_{10} LASSIST + \beta_{11} HTRATE + \beta_{12} NCOVER + \varepsilon \quad (1)$$

$$EV = \beta_0 + \beta_1 gender + \beta_2 age + \beta_3 education + \beta_4 income + \beta_5 CC + \beta_6 UNFAIR + \beta_7 CF + \beta_8 PENAL + \beta_9 INF + \beta_{10} LASSIST + \beta_{11} HTRATE + \beta_{12} NCOVER + \varepsilon \quad (2)$$

Results

1. Multicollinearity Diagnosis

The multicollinearity test (untabulated) was used to ensure that all independent variables in this study were not moderately or highly correlated. Therefore, VIF or variance inflation factors was used to examine the relationship between each predictor. VIF mean of the problem factors affecting the calculation or payment of personal income tax that should be addressed was 2.17, without the multicollinearity problem. VIF can be described as independent variables are independent of each other and can be used in models. In the Hausman test, there was no endogeneity problem between the explanatory variable and the error term of the model.

2. Discussing the effect of problem factors influencing tax avoidance and tax evasion

In order to determine the relationship between problem factors that should be addressed that affect tax avoidance or tax evasion attitudes, the estimated results are shown in table 4 and 5. In table 4, an analysis of the relationship between the problem factors for personal income tax that should be addressed in relation to tax avoidance is shown in this table. It can be seen from the binary logit model 1, The unfairness in paying taxes was found to be the significant positive correlation with the likelihood of tax avoidance at a 0.01 significance level. It can be explained that for the problem of tax injustice in the payment of taxes should be fixed increments by one point, the tax avoidance rate increased to 1.260 when all other factors remained constant. Moreover, the problem of tax allowances that do not cover actual taxpayers' expenses that should be addressed was significantly positively correlated with tax avoidance at the 0.01 significance level. It explains that for one score increase on the problem of taxpayers incurred expenses that should be addressed, the tax avoidance rate increased to 1.144 times, given all the other factors in the model hold constant. Likewise, the problem that should be solved in terms of the complexity of calculating personal income tax has a significant positive effect at a significance level of 0.01. In other words, for a one unit increase in personal income tax complexity calculation problem score, the tax avoidance rate increases by 1.136 times when all other variables are constant.

Table 4: The logit model of personal income tax problems on tax avoidance – Dependent variable: TA

$$TA = \beta_0 + \beta_1 gender + \beta_2 age + \beta_3 education + \beta_4 income + \beta_5 CC + \beta_6 UNFAIR + \beta_7 CF + \beta_8 PENAL + \beta_9 INF + \beta_{10} LASSIST + \beta_{11} HTRATE + \beta_{12} NCOVER + \varepsilon$$

	Binary Logit Model 1				Binary Logit Model 2			
Variable	Coefficient	Std Error	Z	Exp(b)	Coefficient	Std Error	Z	Exp(b)
Constant	-0.409*	0.233	-1.754	0.664	-0.413*	0.211	-1.954	0.662
Gender_f	-0.348***	0.086	-4.071	0.706	-0.362***	0.085	-4.256	0.696
Age_2	-0.457***	0.121	-3.771	0.633	-0.478***	0.120	-3.998	0.620
Age_3	-0.724***	0.122	-5.935	0.485	-0.733***	0.119	-6.139	0.481
Age_4	-0.864***	0.130	-6.636	0.422	-0.863***	0.127	-6.776	0.422
Age_5	-0.724***	0.202	-3.576	0.485	-0.712***	0.198	-3.598	0.491

Table 4 (continued).

Variable	Binary Logit Model 1				Binary Logit Model 2			
	Coefficient	Std Error	Z	Exp(b)	Coefficient	Std Error	Z	Exp(b)
Edu_B	-0.106	0.133	-0.802	0.899				
Edu_M	-0.241	0.161	-1.501	0.786				
Edu_P	-0.196	0.363	-0.539	0.822				
Inc_2	-0.307**	0.144	-2.122	0.736	-0.347**	0.139	-2.491	0.707
Inc_3	-0.130	0.154	-0.843	0.878	-0.202	0.145	-1.392	0.817
Inc_4	-0.162	0.171	-0.943	0.851	-0.260	0.158	-1.644	0.771
Inc_5	0.381*	0.201	1.895	1.464	0.267	0.186	1.437	1.307
CC	0.094*	0.052	1.804	1.098	0.127***	0.041	3.141	1.136
UNFAIR	0.221***	0.051	4.347	1.247	0.231***	0.049	4.749	1.260
CF	0.043	0.056	0.762	1.044				
PENAL	-0.015	0.046	-0.327	0.985				
INF	0.043	0.049	0.881	1.044				
LASSIST	-0.001	0.049	-0.009	1.000				
HTRATE	-0.092*	0.053	-1.739	0.912	-0.082	0.052	-1.567	0.922
NCOVER	0.131***	0.049	2.654	1.140	0.134***	0.048	2.802	1.144
Number of observations = 2,708					Number of observations = 2,708			
AIC = 3,561.168					AIC = 3,551.537			
C-statistic = 0.66					C-statistic = 0.66			
Hosmer-Lemeshow X^2 (8) = 8.78 (*p*-value = 0.361)					Hosmer-Lemeshow X^2(8) = 3.86 (*p*-value = 0.870)			
Wald X^2 = 205.0, Prob > X^2= 0.000					Wald X^2 = 201.7, Prob > X^2= 0.000			
Pseudo R^2= 0.061					Pseudo R^2= 0.060			
Log Likelihood = -1,759.584					Log Likelihood = -1,761.769			
Classification of cases: correctly classified = 58.43%					Classification of cases: correctly classified = 58.73%			

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

Table 5 shows the results of an analysis of the relationship between problem factors related to tax calculations that should be corrected and tax evasion attitudes from the model 2. The results of analysis with the binary logistic regression model showed that the personal income tax rate problem had the most significant positive correlation with the likelihood of tax evasion at a significant level of 0.05. it could explain that keeping all other factors constant, when the personal income tax rate problem as a problem that should be solved increases one unit, it is 1.301 times more likely to evade tax. Moreover, the problem of lack of assistance from the Revenue Department staff as an issue that should be addressed, it was found to have a significant positive correlation to tax evasion at a significant level of 0.05. It can be demonstrated that for a one unit increase in the problem of lack of assistance from the Revenue Department staff, the odds of being in tax evasion attitudes are increased by a factor of 1.281 when keeping all other variables constant. Moreover, the problem of tax injustice had a significant positive correlation to tax evasion at a significance level 0.05. In other words, if a one-

unit score increases on tax injustice, the tax evasion rate will increase to 1.261 times when all other factors remain constant.

As for the problem of tax allowances that do not cover actual taxpayers' expenses which should be solved, the factor was significantly negative for tax evasion at a significant level of 0.05. It can be said that given all the other variables in the model hold constant, for a one unit increase in the problem of tax allowances that do not cover actual taxpayers' expenses which should be solved, the odds of being in tax evasion (versus not being in tax evasion) decrease by a variable of 0.775. Perhaps, a variety of tax allowances cannot be used for some groups of taxpayers. For example, single taxpayers cannot deduct child allowances. Taxpayers who do not purchase life insurance cannot deduct life insurance premium paid. As a result, they are unnecessary to evade the tax.

When the employers delayed giving tax information to taxpayers, this issue should be addressed as one of the important problems. The results showed that there was a negative correlation to tax evasion at a significant level of 0.05. It could explain that for one unit increase on the problem of delayed receipt of information from the employers, the odds of being in tax evasion decrease by a variable of 0.751, given all the other determinants in the model hold constant. Perhaps, delayed information from the employers makes taxpayers have not enough times to evade tax.

Table 5: The logit model of personal income tax problems on tax evasion –: Dependent variable: EV

$$EV = \beta_0 + \beta_1 gender + \beta_2 age + \beta_3 education + \beta_4 income + \beta_5 CC + \beta_6 UNFAIR + \beta_7 CF + \beta_8 PENAL + \beta_9 INF + \beta_{10} LASSIST + \beta_{11} HTRATE + \beta_{12} NCOVER + \varepsilon$$

Variable	Binary Logit Model 1				Binary Logit Model 2			
	Coefficient	Std Error	Z	Exp(b)	Coefficient	Std Error	z	Exp(b)
Constant	-0.841	0.558	-1.507	0.431	-0.911*	0.505	-1.805	0.402
Gender_f	0.083	0.193	0.429	1.086				
Age_2	0.777***	0.259	3.000	2.175	0.747***	0.250	2.985	2.111
Age_3	0.527*	0.287	1.838	1.694	0.484*	0.270	1.789	1.622
Age_4	0.187	0.299	0.626	1.206	0.098	0.274	0.358	1.103
Age_5	-0.292	0.466	-0.627	0.747	-0.415	0.446	-0.931	0.660
Edu_B	0.021	0.289	0.074	1.022	-0.045	0.270	-0.166	0.956
Edu_M	-0.562	0.377	-1.493	0.570	-0.673*	0.348	-1.936	0.510
Edu_P	1.398	0.910	1.536	4.049	1.308	0.896	1.459	3.697
Inc_2	-0.074	0.307	-0.241	0.929				
Inc_3	-0.118	0.328	-0.360	0.888				
Inc_4	-0.294	0.397	-0.741	0.746				
Inc_5	-0.243	0.425	-0.571	0.785				
CC	-0.056	0.123	-0.453	0.946				
UNFAIR	0.254**	0.120	2.112	1.289	0.232**	0.113	2.060	1.261
CF	-0.116	0.134	-0.862	0.891				
PENAL	0.131	0.112	1.171	1.140				

Table 5 (continued).

Variable	Binary Logit Model 1				Binary Logit Model 2			
	Coefficient	Std Error	Z	Exp(b)	Coefficient	Std Error	z	Exp(b)
INF	-0.306**	0.120	-2.553	0.736	-0.286**	0.113	-2.524	0.751
LASSIST	0.263**	0.121	2.177	1.301	0.248**	0.117	2.114	1.281
HTRATE	0.262**	0.129	2.033	1.300	0.263**	0.127	2.073	1.301
NCOVER	-0.246**	0.124	-1.977	0.782	-0.255**	0.121	-2.104	0.775
Number of observations = 517					Number of observations = 517			
AIC = 713.301					AIC = 700.588			
C-statistic = 0.664					C-statistic = 0.655			
Hosmer-Lemeshow X^2 (8) = 2.92 (*p*-value = 0.939)					Hosmer-Lemeshow X^2(8) = 9.54 (*p*-value = 0.299)			
Wald X^2 = 39.7, Prob > X^2= 0.0054					Wald X^2 = 37.2, Prob > X^2= 0.000			
Pseudo R^2= 0.063					Pseudo R^2= 0.058			
Log Likelihood = -335.650					Log Likelihood = -337.294			
Classification of cases: correctly classified = 46.09%					Classification of cases: correctly classified = 53.13%			

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

Discussion

Considering the relationship between the complexity of personal income tax calculations and tax avoidance attitudes, this issue should be significantly addressed. Not only does this simplify the problem for taxpayers, but this solution also encourages people to be more willing to pay their taxes because the tax system meets the needs of calculating and paying taxes conveniently, rapidly, and accurately. In addition to the complexity of calculating taxes, another issue that the Revenue Department and the government should solve is that the actual expenses that are required by law are inconsistent with the list of actual expenses of the taxpayers. Similarly, Isa, Youssof & Mohdali (2014) mention tax complexity caused lower voluntary tax compliance. If the government do not solve this issue seriously, it seems that taxpayers may deliberate to disclosure their own income and expenses. As a result, government may collect less revenue income.

Another problem that should be addressed affecting both tax avoidance and tax evasion is tax injustice. Injustice in the tax system has resulted in increased tax avoidance in line with the ideas cited in the literature review. Higher income tax rates had a positive impact on tax avoidance and tax evasion (Adebisi& Orsaa, 2013) and IMF (2011) mentions that unfairness in the tax system is an excuse for non-tax compliance, not to contribute to tax evasion. It is not difficult to solve these problems, but the Revenue Department will pay attention to improve the standards of service to the people. There are a variety of ways to provide taxpayer assistance, including an email, hotline or call center, comprehensive web-based tax education, and on-site service. Nevertheless, it is important that the staff have sufficient knowledge and appropriate advice. Importantly, the Revenue Department and the government need to create concrete measures to encourage taxpayers to have the correct attitude towards taxation.

Conclusions

Revenue from personal income tax in Thailand seems that it was not affected from COVID-19 pandemic because of a slightly decrease of tax collection. However, tax avoidance and tax evasion are still the significant problems that may be hidden in personal income tax in Thailand. Thus, the purpose of this study is to investigate problems of calculating and paying personal income tax affecting tax avoidance and tax evasion. Online questionnaire was launched, and the final sample was 3,384 respondents. A logistic regression model was used for analysis the relationship of problems of calculating or paying personal income tax towards tax avoidance and tax evasion attitudes. The results found that problems of complexity of personal income tax calculation and tax allowance that do not cover actual taxpayer's expense play a significant role on tax avoidance attitude. Problems of personal income tax rate and lack of assistance from tax officers have an important role on tax evasion attitude. In addition, perceived unfairness on tax payment influences on both tax avoidance and tax evasion behaviour.

Suggestions and Limitations

From above problems, the Revenue Department should decrease tax complexity and increase tax allowances to solve tax avoidance. Lower personal income tax rate and improving quality of services can decrease tax evasion. Finally, unfairness of tax payment should be solved to decrease tax avoidance and tax evasion problems. Nevertheless, this study has some limitations that should be concerned. Firstly, taxpayers' attitude towards of problems of calculating and paying personal income tax is subjective. Level of strongly agree and disagree of each taxpayer are not equal. Finally, further research may be a comparison of problems of personal income tax in Asean countries affecting tax avoidance and tax evasion.

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