

Influence of Income Tax Payment on Business Investment: A Case Study of Listed Companies from the Stock Exchange of Thailand

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ABSTRACT

The study aimed to investigate the level and pattern of income tax payment and business investment of listed companies from the Stock Exchange of Thailand (SET) during 2014 to 2018, and to examine an influence of income tax payment on business investment. Using annual reports during 2014 to 2018, population and sample were listed companies in the SET. Descriptive analysis and panel data analysis were used to analyze the data of this study. As the results, there was a decrease of income tax payment of Thai listed companies during 2014 to 2017 before increasing dramatically from 2017 to 2018, while there was an increase of business investment during period being study. Moreover, the study found a negatively significant influence of income tax on business investment, while there was a positive relationship between industry type, business size, and business investment level. This study has demonstrated an effective of income tax payment policy in Thailand on increasing private investment level. Implications of study were to demonstrate whether positive accounting theory can be used to explain the negative relationship between income tax payment reduction and business investment level in Thailand as well as the other countries.

Keywords: Income tax payment, Business investment, the Stock Exchange of Thailand

INTRODUCTION

The majority income of government from many countries around the world has come from tax payment. There are two main tax categories which are personal and income taxes. On one hand, personal tax is collected from the people who have personal income over standard rate of the revenue department. On the other hand, income tax is kept from net profit of business units such as partnership, limited company, or listed company. In Thailand, income tax payment rate has been changed from 30 percent of businesses' net profit to 23 percent in 2012, and reducing to 20 percent since 2013 (Nhoochong and Buranakunaporn, 2017). There are several reasons why Thai government would reduce income tax payment rate which are (1) to reduce cost and expanse of business units, (2) to let business units have competitive advantage, and (3) to increase investment from domestic and international business units (Pratomsrimek et al., 2018). Moreover, after Thailand has become a part of ASEAN Economic Community (AEC), business units of AEC member countries can move to invest and run their businesses in the other member countries. For example, in terms of service industry, ASEAN business units can invest their businesses in the other

AEC member countries up to 70 percent (Tooaytajom and Leurcharusmee, 2017). Therefore, it is quite important for Thai government to motivate investment from international business units of AEC member countries to Thailand as well as to protect investment transfer from domestic business units either. However, the other AEC member countries also have policy to reduce income tax payment rate as same as Thailand. For example, Singapore provides income tax payment rate as 17 percent, while Malaysia and Vietnam have 25 percent, and 22 percent (Tooaytajom and Leurcharusmee, 2017).

Income tax payment rate reduction can benefit investment growth because business units will have more net profit after paying income tax. Therefore, more net profit left can be used to increase for business investment. The negative relationship between income tax payment reduction and business investment level can be explained by positive accounting theory (Watts and Zimmerman, 1986) that private organizations will increase more investment, if government relieve its regulations or standards (Banwarie, 2011). In this case, although Thai government will get less income from income tax payment rate reduction of business units, it will still can earn more income from personal tax payment because there will be more employment from higher investment level (Chatiwong, 2017). However, there are two main environments (as internal and external environments) and several factors that can change business investment level such as business size, industry type, profitability, solvency and risk, political and legal impacts, and economic change (Dackehag & Hansson, 2012; Sarkar, 2012; Garcia-Sanchez et al., 2014).

However, there are several research problems that need to be mentioned and solved. Firstly, previous studies of relationship between income tax payment and investment indicated mixed results. On one hand, most literatures found a negative relationship between income tax payment and investment (Padovano & Galli, 2002; Lee & Gordon, 2004; Dackehag & Hansson, 2012; Sarkar, 2012; Tangsawasdirat, 2014; Tooaytajom, & Leurcharusmee, 2017; Pratomsrimek et al., 2018). This is because business units will increase more investment, if government relieve or reduce its regulations or standards in this case income tax payment rate reduction. On the other hand, some prior studies found no relationship between both variables (NhooHong & Buranakunaporn, 2017; Chanagul, 2018). Secondly, even though there were several previous studies in this area, most literatures used only economic data rather than accounting and financial data to consider and test the relationship between income tax payment and business investment level (Dackehag & Hansson, 2012; NhooHong & Buranakunaporn, 2017; Chanagul, 2018). Finally, there were not many literatures investigating the longitudinal study of income tax payment and business investment after the tax rate reduction since 2013 in Thailand. Therefore, reducing income tax payment rate from 30 percent to 20 percent still does not been demonstrated whether it is right policy of Thai government.

From research problems above, this study aimed to investigate the level and pattern of income tax payment and business investment of listed companies from the Stock Exchange of Thailand (SET) during 2014 to 2018, and to examine an influence of income tax payment on private investment. Within two main research objectives, there were two research questions which are (1) what was the level and pattern of income tax payment and private investment of listed companies from the SET during 2014 to 2018? and (2) was there the influence of income tax payment on business investment level of Thai listed companies, if so how?

There are several contributions expected in this study. In terms of theoretical contribution expected, the study will demonstrate whether positive accounting theory can be used to explain

the relationship between income tax payment reduction and business investment level in Thailand as well as the other countries. By using accounting and financial data, this study will shed the light of business investment level change from Thai listed companies whether their investment level can be influenced by income tax payment. This study can be the database using accounting and financial data instead of economic data. In terms of practical contributions, reducing income tax payment rate from 30 percent to 20 percent can be demonstrated whether it is right policy of Thai government to have more business investment level as main benefit and more employment in the country as the other benefit.

The study structure had begun with theoretical perspective which positive accounting theory was used to explain the influence of income tax payment on private investment level following by literature review and hypothesis development. Next section, methods, consisting of population and sample, data collection and variable measurement, and data analysis, was mentioned. The final two sections were findings and discussions, and summary and suggestion for future study were provided.

THEORETICAL PERSPECTIVE

Positive accounting theory is used to explain the level and pattern of income tax payment and private investment of listed companies in a longitudinal study as well as the influence of income tax payment on private investment level. This is because positive accounting theory was mentioned as the motivation of government policies and regulations to private firms on the special conditions and benefits (Watts & Zimmerman, 1986; Banwarie, 2011). For example, if gross domestic product (GDP) rate of that countries is getting better, it will lead a direct international investment from the other countries. GDP is included currency rate, taxes rate, and private consumption (Garcia-Sanchez et al., 2014). Moreover, positive accounting theory is also used to forecast an accounting process of private firms on their government policies (Watts & Zimmerman, 1986). There are three main notions of positive accounting theory which are (1) the bonus plan notions, (2) the debt covenant notion, and (3) the political cost notion (Chatiwong, 2017).

By using the political cost notion, thus, private firms have to face with government political costs which are included political risks and costs (Patten and Trompeter, 2003). For example, if government would like its private firms spending more investment or employment, the government will launch the indulgent regulations or policies such as lower rate of taxes policy and the other alleviations. Another meaning is that there will be negative relationship between government taxes policy and private firms' actions and activities. There were several numbers of literature used positive accounting theory to explain the influence of government policies and regulations on private firms' actions and activities such as Patten and Trompeter (2003), Banwarie (2011), Garcia-Sanchez et al. (2014), and Tooaytajom and Leurcharusmee (2017). For instant, Tooaytajom & Leurcharusmee (2017) found that there was increase of automotive industry's investment in ASEAN countries from the other region countries during 2004 to 2014. It is because most ASEAN member countries provided and set lower rate of income taxes and the other related taxes of international investment.

Therefore, positive accounting theory of the political cost notion can be used to explain two main objectives of this study which are investigate the level and pattern of income tax payment and private investment of listed companies from the Stock Exchange of Thailand (SET) during 2014 to 2018, and to examine an influence of income tax payment on private investment.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Income tax is a direct tax paying from business units such as partnership, limited company, or listed company. Income tax is collected from business's net profit under the concept of risk payment ability. For example, business units will not pay for their income tax, if they still get loss. Income tax is one of main revenue of many countries around the world. In addition, government from each country used income from tax for distributing revenue to remote area or country side, promoting national growth, and having economic stabilization of country. Income tax rate in Thailand used to be 30 percent of net profit before reducing to 23 percent in 2012 and 20 percent since 2013. There are several reasons why Thailand had reduced income tax payment rate. The first reason of tax payment rate reduction is that Thai government would like to motivate both domestic and international business units to have more investment in Thailand. The second reason is that Thailand become a member of AEC which business units in AEC member countries can transfer their investment from their country to the other AEC member countries. For example, business units in service can move their investment to the other AEC member countries up to 70 percent. The third reason is that there is not only Thailand reducing income tax payment rate, but the other AEC member countries also reduce their tax payment policy such as 25 percent in Malaysia, and 22 percent in Vietnam. The final reason is that though Thai government will have less income from income tax payment rate reduction, they will earn more from personal tax payment because there will be more employment from higher and greater investment level from business units.

Income tax payment is seen as operational cost of business, therefore, it has influenced for business decision making on actions and activities in this case increasing investment. For example, Blundell and Bond (1998) found that income tax payment rate had negative influenced to investment decision making. Tooaytajom and Leurcharusmee (2017) also used the model of Bludell and Bond (1998) to test the influence of income tax payment on international investment. They found that there was a negative relationship between income tax payment rate reduction and international investment in ASEAN countries consisting of Indonesia, Malaysia, the Philippines, Vietnam, and Thailand. This is because between income tax payment rate reduction can lead international investment growth of automotive industry from international companies. On the other prior study, NhooHong and Buranakunaporn (2017) found that reducing of income tax payment rate can (1) protect moving capacity out of country from domestic business units, and (2) encourage international investment to move their capacity in.

To test the influence of income tax payment on business investment, there were mixed results from previous studies. For example, most studies found the negative influence of income tax payment policy on private domestic and international investments (Padovano & Galli, 1999; Patten & Trompeter, 2003; Lee & Gordon, 2004; Dackehag & Hansson, 2012; Sarkar, 2012; Garcia-Sanchez et al., 2014). This is because, based on political cost notion of positive accounting theory, private firms will invest more, if government reduce its political costs in this case tax payment policy. In addition, the private firms had been motivated by government policy on providing special conditions or benefits (Banwarie, 2011). However, there were two prior studies based on Thailand finding no influence of taxes payment on private investment (Tangsawasdirat, 2014; Chanagul, 2018). It may be because there was not only income tax payment factor, but also the other factors influencing business investment level change such as internal and external environments. Therefore, to demonstrate the influence of income tax payment on private investment, this study will hypothesize that:

H: There is a negative influence of income tax payment on business investment.

METHODS

Population and sample used in this study was all listed companies from the Stock Exchange of Thailand (SET) during 2014 to 2018. However, the study excluded (1) listed companies in financial industry and property fund and REITs section of property and construction industry, (2) no annual reports between 2014 and 2018, (3) listed companies in the Market for Alternative Investment of Thailand (MAI), (4) listed companies registering in the SET after 2014, and (5) listed companies under rehabilitation. There were 271 listed companies using as the samples after conditions above, therefore, 1355 corporate annual reports were used to collect the data.

Annual reports during 2014 to 2018 were used to collect the data in this study. This is because the annual reports are contained auditor reports. Moreover, annual report is a statutory report which is widely recognized as the principle means for corporate communication of actions and activities (Suttipun, 2018). The variables' instruments were constructed into testing an influence of income tax payment on business investment level. There were three groups of variables as independent variable (income tax payment), dependent variable (business investment), and control variable (corporate characteristics). Income tax payment was measured by income tax payment as million baht unit in income statement from annual report during 2014 to 2018 (Dackehag & Hansson, 2012; Sarkar, 2012; Garcia-Sanchez et al., 2014), while business investment level was measured by total non-current asset as million baht in financial position statement from annual reports during 2014 to 2018 (Tangsawasdirat, 2014; Chanagul, 2018). In terms of control variable used by corporate characteristics, there were four variables used in this study consisting of business size, industry type, profitability, and risk. Business size was measured by total market capitalization as million baht (Boonyanet & Promsen, 2018; Suttipun, 2018), profitability was measured by financial ratio namely return on asset (ROA) (Ishak & Abidin, 2018; Velte, 2018), risk was measured by financial ration namely debt per equity (Garcia-Sanchez et al., 2014; Tangsawasdirat, 2014), and industry type was measured by dummy variables as 1 = industry within Thailand 4.0 policy, and 0 = otherwise (Chanagul, 2018). Table 1 indicates variable measurement used in this study.

Table 1. Measurement of variables.

Variable	Notation	Measurement
1. Business investment	INVEST	Total non-current asset (Million baht)
2. Income tax	TAXES	Income taxes payment (Million baht)
3. Industry type	INDUS	Dummy variables as 1 = industry with Thailand 4.0 policy, and 0 = otherwise
4. Firm size	SIZE	Market capitalization (Million baht)
5. Profitability	PROFIT	Return on asset (ROA)
6. Risk	RISK	Debt per equity

To investigate the level and pattern of income tax payment and private investment of listed companies from the Stock Exchange of Thailand (SET) during 2014 to 2018, and to examine an influence of income tax payment on private investment, SPSS version 23 was used to analyze in this study. In more detail, descriptive analysis was used to study the level and pattern of income tax payment and private investment of Thai listed companies during period being study, while panel data analysis was used to test the influence of income tax payment on private investment of

1355 corporate annual reports during 2014 to 2018. The equation used in this study was indicated as:

$$\text{INVEST} = a + b_1\text{TAXES} + b_2\text{INDUS} + b_3\text{SIZE} + b_4\text{PROFIT} + b_5\text{RISK} + \text{error}$$

Where:

INVEST = Income tax payment

TAXES = Business investment

INDUS = Industry type

SIZE = Business size

PROFIT = Profitability

RISK = Risk

FINDING AND DISCUSSION

From 271 samples used in this study, the results were found that there was a decrease level of income tax payment during 2014 to 2017 from 374.21 million baht to 304.09 million baht, while there was an increase from 2017 as 304.09 million to 2018 as 452.96 million baht. On the other variable, private investment was risen during period being study from 17,782.87 million baht to 24,241.25 million baht. The reason of higher income tax payment in 2018 was because the Revenue Department of Thailand had set effective measurement of income tax collection by auditing and analyzing listed companies that provided either loss in their income statements, or high accounting profit but low income tax payment. In addition, the Revenue Department has also considered on fake tax invoice users.

Table 2. Level of pattern of income taxes payment and private investment (Unit: Million baht).

Variables	2014	2015	2016	2017	2018	Average
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Income taxes payment	374.21 (243.50)	337.86 (171.44)	326.54 (175.62)	304.09 (183.89)	452.96 (335.13)	371.10 (285.76)
Private investment	17,782.87 (10,025.03)	19,122.81 (9,899.57)	21,561.60 (10,246.56)	22,271.27 (10,125.32)	24,241.25 (10,616.60)	20,995.96 (10,119.02)

Although panel data analysis was required to test the influence of income tax payment on private investment in this study, correlation matrix was also used to test multicollinearity problem among variables used in the study. Therefore, Table 3 indicates that a correlation matrix was used to test for multicollinearity between the six variables used in this study, consisting of one dependent variable, one independent variable, and four control variables. Based on a fixed effects model for panel testing, the variance inflation factor (VIF) of the correlation matrix between the variables was 4.873, which indicates that there was no multicollinearity which would be indicated by a VIF exceeding 10 (Vanstraelen et al., 2012). The low coefficients in the correlation matrix between the variables used in the study therefore indicated that multicollinearity was unlikely to be a problem in the multiple regression (Suttipun, 2018). Thus, multicollinearity problem was not existed in

this study. Based on the correlation coefficients between the seven variables used in this study, there was a positively significant correlation between INVEST and SIZE at 0.01 level, while INVEST had a negative correlation with TAX at 0.01 level. On the other hand, there was no significant correlation between INVEST, INDUS, PROFIT, and RISK at 0.05 level.

Table 3. Correlation matrix.

Variable	INVEST	TAXES	INDUS	SIZE	PROFIT	RISK
INVEST	1	-.612**	.010	.694**	.010	.006
TAXES		1	.000	.624**	.047	.003
INDUS			1	-.008	.054*	.021
SIZE				1	.010	.005
PROFIT					1	.026
RISK						1
Mean	20,995.96	371.10	.804	32,037.966	5.716	1.038
SD	10,119.02	285.76	.396	15,012.366	4.222	1.174
VIF.	-	4.873	1.004	4.859	1.013	1.001

Note: ** is significant at 0.01, and * is significant at 0.05.

To examine an influence of income tax payment on private investment of 1355 corporate annual reports during 2014 to 2018, panel data analysis was used to analyze (Table 4). The study found that there was a negatively significant influence of TAXES on INVEST at 0.01 level. Using control variables, INDUS and SIZE had positively significant correlation with INVEST at 0.01 level, while there was not relationship between PROFIT, RISK, and INVEST at 0.05 level. The reason of negative influence of income tax payment on private investment in Thailand was consistent with many previous related literatures (Padovano & Galli, 2002; Patten & Trompeter, 2003; Lee & Gordon, 2004; Dackehag & Hansson, 2012; Sarkar, 2012; Garcia-Sanchez et al., 2014). It is because private firms will invest more, if government reduce its political costs in this case income tax payment policy (Patten & Trompeter, 2003). Moreover, the private firms had been motivated by government policy on providing special conditions or benefits (Banwarie, 2011). Thus, the hypothesis in this study is accepted.

Table 4. Panel data analysis.

Variable	Beta	t	Sig.
(Constant)	-	-6.324	.000**
TAXES	-.042	-5.410	.000**
INDUS	.018	6.014	.000**
SIZE	1.033	33.809	.000**
PROFIT	.002	.296	.767
RISK	.001	.126	.899
R Square		.752	
Adjust R Square		.750	
F value (sig.)		767.707**	
N		1355	

Note: ** is significant at 0.01, and * is significant at 0.05.

Using control variables in multiple regression model, the result of positive relationship between industry type and private investment was similar with Lee and Gordon (2004) and Garcia-Sanchez et al. (2014). This is because Thai government has set the policy of Thailand 4.0 which the industries are chosen to be Thailand flagship industries. There are ten industries consisting of five old industries namely five first S-Curve (next generation automotive, smart electronics, affluent, medical and wellness tourism, agriculture and biotechnology, and food for the future), and five new industries namely five S-Curve (robotics, aviation, biochemical, digital, and medical hub). Therefore, special conditions and benefits from Thai government will go to top 10 industries' target rather than the other industries that why companies in both S-Curve industries had more investment spending than companies in the other industries.

In terms of corporate size as control variable, the result of this study was consistent with prior related studies (Dackehag & Hansson, 2012; Garcia-Sanchez et al., 2014; Suttipun, 2018). This is because the main reason of bigger firms come from their shareholders or investors investment, therefore, if companies will have more capital from shareholders or investors, they have to invest more on both current and non-current assets in another meaning business investment (Suttipun, 2018).

However, there was no significant relationship between profitability, risk, and private investment. For example, in terms of profitability, corporate profitability may not go to investment, but dividend payment, debt and expense payment, redemption, and retain earning collection (SET, 2018). In terms of risk, this may be because it is depended on situations. On one hand, if firms would like to reduce their risk, they may reduce investment and sell assets to pay for debt. On the other hand, the companies can have more equity by having more investment to reduce risk either. Thus, it causes no relationship between risk and investment.

SUMMARIES AND SUGGESTIONS FOR FUTURE STUDY

From two main research objectives, there were two research questions which are (1) what was the level and pattern of income tax payment and private investment of listed companies from the SET during 2014 to 2018?, and (2) was there the influence of income tax payment on private investment of Thai listed companies, if so how? As the results, the study found that there was a decrease level of income tax payment during 2014 to 2017, while there was an increase from 2017 to 2018. On the other variable, private investment was risen during period being study. Moreover, the study also found that there was a negatively significant influence of income tax payment on private investment. Using control variables, type of industry and size of company had positively significant correlation with private investment, while there was not relationship between profitability, risk, and private investment.

There are several contributions and implications from the results of this study which are separated into theoretical and practical contributions. In terms of theoretical contribution, the result of negative relationship between income tax payment rate reduction and business investment level can demonstrate positive accounting theory that can be used to explain the reaction of business units after government relieve regulations or standards in this case income tax payment rate reduction. The result also sheds the light of business investment level change from Thai listed companies in the main capital market using accounting and financial data. Next, the result of study provides the effects of government policy change in Thailand as well as the other countries in ASEAN.

In terms of practical contribution, the result can demonstrate the successful policy of Thai government about income tax payment rate reduction from 30 percent to 20 percent. This is because the policy can encourage business units to have more investment in Thailand over 18 percent during period being study. In addition, there was an increase of business investment level from 17,782.84 million baht in 2014 to 20,995.86 million baht in 2018. On the other contribution, employment rate in Thailand may be higher and greater by higher level of business investment during 2014 to 2018. Finally, although Thai government may have less revenue from income tax payment reduction policy from listed companies, they will have more revenue from personal tax payment because of higher employment.

However, the study has some limitations. First, the study had focused on only listed companies in the Stock Exchange of Thailand which is main capital market in Thailand, but partnership, limited company, and listed company in alternative capital market are not included to investigate for the influence of income tax payment on investment. Second, although this study used five year to test the relationship between income tax payment and business investment level, the study did not survey change of business investment level before and during the change of income tax payment reduction policy during 2011 to 2013. Finally, the study used only secondary data to investigate pattern of income tax payment and business investment, however, there may be the other factors influencing on investment level that did not be considered in this study. Therefore, for future study suggestion, longer period of study with the other potential factors will be used to test the relationship between both variables. Moreover, future study will use the other groups of business units as samples to consideration.

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