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An Empirical Analysis on Potential Tax Treaties in AFTA: The Case of Thailand and Vietnam1

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An Empirical Analysis on Potential Tax Treaties in AFTA: The Case of Thailand and Vietnam[1]

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Abstract

It is widely accepted that as barriers to trade and investment are removed in free trade areas, developing member countries tend to compete in offering tax and tax-related incentives to attract investing multinational corporations. Despite the statutory tax rates, the realised corporate tax expenses can be revealed by their effective tax rates (ETRs). Theoretical foundation has addressed the non-optimality of the current competitive tax policy packages offered by most developing countries. This paper calculates the corporate ETRs across sectors in Thailand and Vietnam during 2005-2008. Further analysis considers the values of inbound investments, the structure of their profits and their contributions to the country's fiscal revenue. For both countries, the domestic-specific sectors encounter the highest average ETRs with moderate to high profit rates and contributed the highest share to the fiscal revenue. The capital-intensive export-oriented sectors incur the lowest ETRs with low to average profit rate and contributed the least to the fiscal revenue. Panel regressions across industries suggest that, considering potential tax treaties within ASEAN Free Trade Area, the overall current competitive effective tax rates can still be raised without adversely affecting FDI inflows.

Keywords: AFTA, Corporate Taxes, FDI, Fiscal Revenue
JEL Classification Codes: H21, H73, H87

1. Introduction and Rationale

Since its inception in 1989, the main objective of Asia Pacific Economic Co-operation (APEC) is to achieve the "Bogor Goals" of free and open trade and investment in Asia Pacific by the year 2010 for developed economies and 2020 for developing economies. Some positive side-effects brought about by the advancement of economic integration are the heightening productivity, accelerated potential economic growth and higher standard of living. It is observable that trade in Asia and the Pacific has expanded rapidly in mid-1980s, despite the structural break in 1998 during the Asian financial crisis. The more intensified inter-dependency and closer economic relations in the region necessitate and lead to many initiatives to increase policy co-ordination in various areas of economics.

Despite the positive outcomes of advanced economic integration and reduction of tariff barriers, there can be new kinds of threats and instability introduced into the region. Massive and rapid capital movement and fraudulent financial transactions are a few to mention. This further allows opportunities for conflicts of taxation rights and tax avoidance. Simultaneously, there are preferential domestic tax treatments amongst countries so as to promote more influx of capital and prevent the outflow of capital. The tendency is highly visible in countries less endowed with natural resources and limited in promising industries. For international tax theorists, this phenomenon is known as "tax competition". As tax competition becomes intensified, tax bases in the economies become eroded and the ground for national finance deteriorates.

[1] Views expressed do not necessarily represent those of the institution where the author is affiliated and CHE-TRF, the research funding bodies. Please do not use for reference without the author's permission.

At present, it is urgently important for the public sectors, particularly among the developing countries in the region, to prepare for the emerging challenges caused by the reduction of inter-jurisdictional barriers against the movement of capitals. A pioneer study in this paper starts from within the sub-group of developing countries in APEC, namely Thailand Vietnam; both are member countries of ASEAN Free Trade Area (AFTA). The rationale for possible tax co-operations and treaties within AFTA should, therefore, be worth considering in terms of policy research. Later on in the future, when the full effects of the economic integration within APEC will be realised, further analyses can be extended to include new data.

As one of the rare inter-juristic tax research employing economic analyses in Thailand and many developing Asian countries, this paper focuses on the case of domestic corporate income tax policy packages in Thailand and Vietnam. The latter has particularly been an emerging attractive recipient of foreign direct investment (FDI), receiving an increasing share, for the past few years. These two countries are selected in the study for several reasons. In terms of labour costs and their close proximity, Thailand is said to be losing comparative advantage to Vietnam in several sectors. Of all the cumulative FDI inflows during 1999-2007 to ASEAN, manufacturing constitutes a major share of 35.43 percent. In terms of cumulative FDI inflows to the manufacturing sector during 2003-2007, Thailand and Vietnam have almost equal share of approximately 17.39 percent and 17.38 percent, respectively.

This paper conducts four major tasks. First, the case studies analyse the impacts and influences of corporate income tax decisions of the government on the investment decision of the multinational enterprises within an economic integration. The empirical analysis applies to the cases of Thailand and Vietnam as members of AFTA. The decisions of the governments can be reflected by the effective corporate tax rates to be explored by employing the realised corporate tax expenses of the firms registered in the stock markets of the two countries. This will also indicate how the actual corporate tax burdens of firms deviate from the statutory rates of 30 percent and 28 percent in Thailand and Vietnam, respectively, during 2005-2008. The decisions of the firms can be reflected by the nature and quantity of FDI inflows in each sector. Second, the analysis goes on to consider the impacts of corporate tax policy packages on the quality of FDI inflows by firms. This can be observed in the profit levels among firms in the same sector. Third, the analysis extends to consider the impacts of the effective tax rates on the fiscal revenue from corporate taxes. Fourth, policy implications regarding the possibility of tax co-operations and treaties within AFTA, which may develop into APEC level, are to be derived from the empirical findings. The result should serve as an alternative policy guideline toward a more favorable condition and increased mutual gains for Thailand as well as other countries in ASEAN as a whole.

2. Theoretical Foundation

Several factors can influence the flows of FDI decision by multinational enterprises. Major factors can include access to markets, profit potentials, political and general macroeconomic stability, legal regulatory framework, labour skills and basic infrastructure. From time to time, governments may wish to weigh between the objectives of offering a competitive tax scheme and the desire to collect satisfactory share of domestic tax revenue from the multinational enterprises. Decision making by the governments became more difficult at the more advanced level of economic integration. It is, therefore, important to empirically assess the different tax schemes within economic integration and their impacts on the domestic corporate tax revenue. The methodology employed in the research is a modification of the general framework of the two widely known theoretical models of multinationals' transfer pricing and government regulations in Horst (1971) and Copithorne (1971). Generally, in a two-country model, when they jointly optimise a common revenue function, the resulting tax rates in both countries are above the competitive regime level.

3. Data and Description of the Methods

The standard view on cross-country capital movement, according to Becker et al (2010), implies that "high-tax countries have lower equilibrium stocks of FDI (quantity effect), but the marginal unit of investment contributes more to tax revenue (quality effect) than in low-tax countries because of the higher marginal return and larger tax rates." At the margin, it can further infer that high-tax countries are expected to receive higher-quality investment than low-tax countries. Currently, the statutory corporate tax rates in Thailand and Vietnam are 30 percent and 28 percent, respectively. Nevertheless, in order to recognise the magnitude of the realised tax expenses of the firms, it is necessary to employ the effective tax rates using real data.

This paper calculates the effective tax rates (ETRs) of the firms and consider their effects on the quantity and quality of FDI movement. The ETRs are calculated from the available financial statement of the firms in the Stock Exchange of Thailand (SET) and the Hochiminh Stock Exchange (HOSE) of Vietnam. The SET has been opened in 1975 as the Securities Exchange of Thailand under legislation passed in 1974, its later name changed to the Stock Exchange of Thailand in 1991. HOSE was originally Ho Chi Minh City Securities Trading Centre and later transformed into Hochiminh Stock Exchange on 8 August 2007. According to Rochananonda (2006), approximately 60 percent of the corporate income comes from companies listed in the SET. For the case of Vietnam, the financial statement of firms in the stock exchange has a more universal format across the board, making it more accurate for the analysis. Previous analysis for Thailand by Rochanonda solved for the ETRs during 2001-2004 using a relatively similar approach. This paper continues the analysis for the period 2005-2008 but includes a broader cross-country data set and extends further on to a more comprehensive panel regression analysis.

The ETRs are calculated from 240 companies listed in SET during 2005- 2008. To maintain the consistency of the data, these exclude firms which are listed in the Market for Alternative Investment (MAI) and financial intermediation. For the case of Vietnam, the ETRs are calculated from 121 companies during the same period. The ETRs are calculated from the firm's corporate income tax expenses out of the profit. These figures also reflect the outcome of the multinational firms' decisions in allocating their resources across jurisdictions. The analysis then considers the relationship between the solved ETRs with FDI inflows in terms of the amount and the profit level and their contributions to corporate tax revenue among all the companies considered.

Table 1: Average ETRs and Average Change in ETRs by Sector, Thailand and Vietnam, 2005-2008

Sectors	Average ETR		ETR, Average Change	
	Thailand	Vietnam	Thailand	Vietnam
Domestic Specific Sectors	18.95%	17.92%	3.10%	6.24%
Labour-intensive Export-oriented Sectors	16.66%	14.15%	0.07%	8.83%
Capital-intensive Export-oriented Sectors	15.03%	12.80%	3.99%	3.46%
All Sectors Average	17.09%	15.09%	2.27%	3.20%

Source: Author's calculation based on financial statements of firms in SET and HOSE

In investigating how tax rates in each sector contribute to the fiscal revenue in Thailand and Vietnam, panel estimation is applied. This allows for more degrees of freedom. Moreover, the omitted variable bias can be controlled and the problem of multi-co linearity can be reduced. According to Hsiao (2003), this improves the accuracy of parameter estimates. The calculated results of the 240 companies in Thailand and 121 companies in Vietnam are averaged and then grouped into sectors. The estimated function involves the following variables: corporate tax revenue contribution (CT) of each sector as a dependent variable on foreign direct investment (FDI) inflows, effective tax rates (ETR) and profit (PROF) by sector.

The data on FDI is obtained from the Bank of Thailand's electronic database and General Statistics Office of Vietnam, and the corporate tax revenue is obtained from the Revenue Department of Thailand and the General Statistics Office of Vietnam. The dummy variable indicates whether the source of FDI is from an ASEAN country. The function is treated as log-linear which has an interpretation as elasticities. The estimation results and the tests for joint significance and serial correlation are shown in Table 4.

4. Major Research Findings

While the national statutory tax rates on corporation in Thailand and Vietnam are 30 percent and 28 percent, respectively, the average ETRs are approximately 17 percent and 15 percent, respectively. This reveals that corporations have received various tax-related incentives introduced by the authorities of both countries. However, these incentives are unevenly distributed across different sectors as the ETRs vary from 10 percent to 25 percent in the two countries (see Tables 2 and 3). Since the Thai and Vietnamese governments place their focus on export-oriented sector, particularly the capital-intensive sectors such as electrical appliances, and machinery, it can be observed that the ETRs in these two sectors had significantly reduced on average during 2005-2008. Most capital-intensive industries relies more on tax incentives, for example, they prefer to depreciate assets due to their possession of fixed assets. On the contrary, tax incentives on the domestic-specific sectors might not be the key factor on investment decisions. The location-specific advantages such as domestic market seem more influential. The average ETRs of firms in domestic-specific sectors in both countries are approximately 18-19 percent, which is higher than those of the export-oriented sectors.

It is observed that during the period of analysis, the average profit of most sectors in Vietnam remain high compared to Thailand. Currently, Vietnam poses high prospects to attracting more FDI. This is different for the case of Thailand whose domestic market has become relatively more saturated. However, similarly to Thailands experience during the early 1990s, the use of investment promotion policies such as tax incentives or other privilege is usually effective in the short-run, but unsustainable in the long run. Eventually, emerging countries in the region can compete in lowering their tax rates and providing investment promotion incentives. This could turn out to be a zero-sum game.

Table 2: Average ETRs, Average Profit and Average Tax Contribution by Sector in Thailand, 2005-2008

Sector	Average ETR	ETR, Average Change	Average Profit	Average Tax Contribution
Domestic-Specific Sectors	**18.95%**	**3.10%**	**13.40%**	**15.25%**
Trade	21.52%	5.08%	2.34%	12.53%
Construction & materials	15.69%	8.90%	7.64%	1.05%
Services	20.97%	1.29%	20.49%	37.29%
real estate	17.61%	-0.47%	23.11%	10.12%
Labour-intensive Export-oriented Sectors	**16.66%**	**0.07%**	**9.97%**	**1.20%**
Food & sugar	14.04%	-5.10%	5.86%	1.38%
Textiles	17.57%	-1.52%	11.82%	1.63%
Metal & non metallic	18.38%	6.83%	12.23%	0.61%
Capital-intensive Export-oriented Sectors	**15.03%**	**3.99%**	**11.00%**	**4.01%**

Electrical appliances	9.58%	-5.25%	8.14%	0.84%
Machinery & transport equipments	16.80%	-7.23%	8.17%	1.98%
Chemical and petroleum products	18.72%	20.49%	16.68%	9.23%
All Sectors Average	**17.09%**	**2.27%**	**11.65%**	**7.66%**

Source: Author's calculation based on data from SET, Bank of Thailand and Revenue Department

Table 3: Average ETRs, Average Profit and Average Tax Contribution by Sector in Vietnam, 2005-2008

Sector	Average ETR	ETR, Average Change	Average Profit	Average Tax Contribution
Domestic-Specific Sectors	**17.92%**	**6.24%**	**16.57%**	**9.79%**
Construction	16.44%	4.28%	20.65%	11.48%
Mining & Quarrying	15.44%	4.03%	19.55%	2.77%
Real Estate	17.22%	5.95%	25.63%	20.86%
Services	24.91%	7.66%	10.25%	3.89%
Telecommunication	15.61%	85.84%	6.79%	9.98%
Labour-intensive Export-oriented Sectors	**14.15%**	**8.83%**	**10.97%**	**3.13%**
Fishery	10.27%	10.77%	7.30%	3.90%
Food & Sugar	12.62%	7.33%	17.76%	4.00%
Forestry	14.20%	30.57%	10.91%	0.42%
Labour-intensive Manufacturing	19.53%	1.21%	7.93%	4.19%
Capital-intensive Export-oriented Sectors	**12.80%**	**3.46%**	**17.44%**	**7.71%**
Chemicals & Pharmaceuticals	9.55%	60.32%	18.93%	7.88%
Electrical Appliances	10.19%	-10.29%	28.21%	2.24%
Manufacturing	17.26%	0.25%	12.99%	15.62%
Petroleum	14.21%	14.48%	9.62%	10.91%
Transportation	13.77%	-17.77%	8.88%	1.88%
All Sectors Average	**15.09%**	**3.20%**	**14.67%**	**7.14%**

Source: Author's calculation based on data from HOSE, General Statistics Office of Vietnam and Ministry of Finance

In Table 4, the panel regression across industries in Thailand and Vietnam suggests that, considering potential tax treaties within AFTA, the overall current competitive ETRs can still be raised to increase the joint tax revenue. That is, the regression suggests that a 1 percent increase in ETR would increase the sectors' tax revenue contribution by approximately 0.68 percent. Interestingly, the calculated effective tax rate has gradually increased over the last few years, the average ETRs across sectors in Thailand were 17.07 percent in 2005, 16.25 percent in 2006, 16.85 percent in 2007 and 18.18 percent in 2008. In Vietnam, the rates were 14.97 percent in 2005, 13.51 percent in 2006, 15.67

percent in 2007 and 16.20 percent in 2008. There had, in fact, been base-broadening measures by the governments which vary quite significantly across industries.

Table 4: Estimation Results for OLS Panel Data Regression using Thailand and Vietnam Data
Dependent variable: LCT

Variable	Coefficient Estimates	Standard Error	t-value
LETR	0.6807	0.2358	2.89**
LFDI	-0.1251	0.2390	-0.18
LPROF	0.2036	0.0753	2.70**
DUM	0.0076	0.1222	0.06
CONS	0.0587	0.4035	0.14
Wald (joint): Chi^2 = 307.3 [0.000] **			
Wald (dummy): Chi^2 = 0.021 [0.884]			
AR (1) test: N (0,1) = -1.240 [0.215]			
AR (2) test: N (0,1) = -1.008 [0.313]			

***, **, and * indicate significance at $p<0.001$, $p<0.05$, and $p<0.1$, respectively.

5. Conclusions and Policy Implications

Overall, the results show that as cross-national non-tax barriers are removed and with a more intense degree of economic integration and co-operation, corporate taxes across countries tend to matter more for location decision. For countries with similar proximity and domestic market size, multinational enterprises and governments tend to take differential tax rates in their decision making in terms of investment and tax policies. However, it should be noted that economic structure, accommodating infrastructure, human resource, returns from research and development investment, stable political condition, improvement in protective laws and intellectual rights are necessary conditions in the long-run. These conditions cannot be compensated by merely introducing low taxes and investment privileges alone.

At present, it can be observed that countries in the region are in varying stages of development. The diversity of tax systems and the increasingly tensed economic integration in the region not only bring about the possibility of double taxation but also double exemption. To cope with this complexity and sophistication, more co-operation in the area of administration between tax authorities have become increasingly important. In Asia and the Pacific, the priority that calls for urgent attention must be on enhancing the calibre of the staff of the authority and reducing the gap between tax administration systems of each country before promoting co-operation between inter-jurisdictional tax authorities. Amongst countries in Asia, Japan has been rather advanced in taking steps in this matter. For instance, the country had supported institutions such as the National Tax Agency (NTA) of Japan, the National Tax College and Japan International Cooperation Agency (JICA) to train tax officials from developing countries, thereby contributing to the improvement in tax administration.

The last point that needs to be remarked concerns the prospects of unitary taxation and tax harmonisation in the region. For unitary tax system to function smoothly, an agreement on accounting method and allocation principle amongst the member economies must be unanimously reached. This difficult process would require a long transitional period as the new system is completely different from the existing Arm's Length Principle. Business enterprise would definitely change their behaviour and the overall consequences remain to be seen. As for the path to pursue harmonisation of taxation, even the EU, with relatively more homogeneous and integrated member economies, has encountered some degrees of difficulty. Needless to say, it will be a drastic process for countries of so much diversity in Asia and Pacific region to experience. Moreover, the issue is subject to strong political debates. The countries required to reduce their tax will oppose to the harmonisation. Furthermore, the taxpayers of the countries required to raise tax will exert political pressure against harmonisation. Therefore, the situation suggests that the initial step toward complete harmonisation might be to start from developing bilateral tax treaties into multilateral ones as well as developing the personnel in the authorities responsible for tax issues.

The current research on the prospects of tax treaties within economic integration offers a preliminary insight for potential cross-country tax consideration for AFTA in the next few years. There remain several research possibilities to be explored, some of which will be mentioned. First, when the effects of economic integration become more fully realised in the next few years, the analysis should extend to include more countries and longer time period. Second, while most studies place their major focuses on corporate income taxes as tariff barriers and non-tariff barriers within free trade areas are removed, other taxes and their importance must also be recognised. For example, environmental taxes are receiving increasing interests among investors and policy makers which, lacking proper administration, may eventually create possible regulatory loopholes.

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