รายงานวิจัยฉบับสมบูรณ์

โครงการ

สนธิสัญญาด้านภาษีในกลุ่มความร่วมมือทางเศรษฐกิจเอเชียแปซิฟิก และนัยทางการคลังระหว่างประเทศ

Tax Treaties in Asia Pacific Economic Integration & Cross-country Fiscal Implications

โดย

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สนับสนุนโดยสำนักงานคณะกรรมการการอุดมศึกษา
และสำนักงานกองทุนสนับสนุนการวิจัย

Abstract

Given the various initiatives to intensify ASEAN integration and ASEAN Free Trade Area, the long-term trend of intra-ASEAN foreign direct investment inflows during the past two decades has shown a positive projection. Amidst this scenario, member countries compete in offering tax and tax-related incentives to attract investing multinational corporations. Despite the statutory tax rates announced by jurisdictions, the realised corporate tax expenses can be revealed by their effective tax rates. Theoretical foundation has addressed the non-optimality of the current competitive tax policy packages offered by most developing countries. This research project empirically investigates the effective corporate tax rates (ETRs) in Thailand and Vietnam, calculated from the publicly available financial information of 240 companies listed in the Stock Exchange of Thailand and 121 companies listed in the Hochiminh Stock Exchange of Vietnam during 2005-2008. The analysis considers value of inbound investments, the structure of their profit which reflects investment quality, and their contributions to the countries' corporate fiscal revenue. For both countries, the domestic-specific sector has 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 to increase the joint fiscal revenue without significantly harming investment inflows.

บทคัดย่อ

ภายใต้ความพยายามผลักดันให้ความร่วมมือทางเศรษฐกิจใน ASEAN และข้อตกลงเขตการค้าเสรีอาเซียน (AFTA) มีความเข้มข้นมากยิ่งขึ้น แนวโน้มการลงทุนภายใน ASEAN ในระยะยาวในช่วง 20 ปีที่ผ่านมีแนวโน้มเพิ่มขึ้นอย่างต่อเนื่อง ท่ามกลางสถานการณ์ดังกล่าว ประเทศสมาชิกต่างพากันแข่งขันลดอัตราภาษีและเสนอแรงจูงใจในรูปแบบสิทธิพิเศษหลากหลาย เพื่อดึงดูดการลงทุนต่างชาติ แม้ว่าอัตราภาษีเงินได้นิติบุคคลตามกฎหมายจะอยู่ในอัตราที่ค่อนข้างสูง แต่ภาระทางภาษีที่บริษัทข้ามชาติแบกรับจริงสามารถสะท้อนจากอัตราภาษีที่แท้จริง (ETRs) ได้ชัดเจนกว่า พื้นฐานทางทฤษฎีได้แสดงให้เห็นถึงความไม่เป็นอุตมภาพของการแข่งขันทางภาษีในประเทศกำลังพัฒนาที่กำลังเกิดขึ้น งานวิจัยฉบับนี้คำนวณ ETRs ในประเทศไทยและประเทศเวียดนามจากข้อมูลสาธารณะของบริษัท 240 แห่งในตลาดหลักทรัพย์แห่งประเทศไทย และ 121 แห่งในตลาดหลักทรัพย์โฮชิมินห์ในประเทศเวียดนาม ระหว่างปี ค.ศ. 2005-2008 การวิเคราะห์พิจารณาถึงการไหลเข้าของการลงทุนข้ามชาติ โครงสร้างกำไรและนัยทางการคลัง สำหรับทั้งสองประเทศที่นำมาพิจารณา พบว่าภาคอุตสาหกรรมที่เน้นตลาดในประเทศจะมีอัตรา ETRs ที่สูง มีกำไรในระดับปานกลางถึงระดับสูง และก่อให้เกิดรายได้ทางการคลังในภาครัฐในสัดส่วนที่สูง ส่วนภาคอุตสาหกรรมที่ใช้ปัจจัยทุนเข้มข้นและเน้นการส่งออกมีอัตรา ETRs ในระดับต่ำ อัตรากำไรในระดับต่ำถึงระดับปานกลาง และก่อให้เกิดรายได้ทางการคลังในสัดส่วนที่ต่ำที่สุด ในการวิเคราะห์ข้อมูลอนุกรมเวลาภาคตัดระหว่างอุตสาหกรรมของทั้งสองประเทศ พบว่า หากจะพิจารณาความเป็นไปได้ในความร่วมมือทางภาษีระหว่างประเทศใน AFTA ก็จะทำให้ ETRs และ รายได้ทางการคลังเพิ่มมากขึ้นโดยไม่ส่งผลกระทบที่มีนัยสำคัญต่ออัตราภาษีตามกฎหมายและการลงทุนข้ามชาติ

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Executive Summary

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, the accelerated potential economic growth and the 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 are 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.

At present, it is urgently important for the public sectors to prepare for the emerging challenges caused by the reduction in inter-jurisdictional barriers

to the movement of capitals. A pioneer study can start from within the sub-group of developing countries in APEC like Thailand and selected ASEAN countries, forming their own ASEAN Free Trade Area (AFTA). The rationale for possible tax co-operations and treaties within AFTA should, therefore, be worth considering at this initial attempt to scientifically analyse the issue. 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 from more countries.

As one of the rare inter-juristic tax research projects employing economic analysis in Thailand and Asia, this research focuses on the case of domestic corporate income tax policy packages in Thailand and Vietnam which are members of a free trade area sub-set of APEC, that is, AFTA. The latter has particularly been an emerging attractive recipient of 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 foreign direct investment (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 research project 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. 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. This should result in a more favourable condition and increased mutual gains for Thailand as well as other countries in ASEAN as a whole.

The organisation of this Report is as follows. Chapter I explains the significance of the research and introduces the rationale of the research and its objectives. Chapter II briefly recalls the background, purposes and goals of economic integration in Association of Southeast Asian Nations (ASEAN) and Asia Pacific Economic Co-operation (APEC). Chapter III touches on the important tax issues in the context of economic integration in Thailand and ASEAN countries. An overview of the tax revenue structure in Thailand and Vietnam are also briefly mentioned as a background related to the analysis in the later section. Chapter IV portrays an overview of FDI in Thailand, Vietnam and overall ASEAN countries. Chapter V reviews major theoretical foundation of the model. Chapter VI shows the empirical analyses on effective tax rates and the quality of foreign direct investment. Chapter VII extends to the fiscal tax revenue consideration and its implications. Chapter VIII concludes and provides policy implications along with further research suggestions.

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 conduct a theoretical and empirical assessment of 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). 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.

Major Research Findings and Policy Implications

The effective tax rates (ETRs) of the firms in Thailand and Vietnam and their effects on the quantity and quality of FDI movement are calculated and analysed. In the first part of the analysis in Chapter VI, the ETRs are calculated from the available financial statement of 240 firms in the Stock Exchange of Thailand (SET) and 121 firms in the Hochiminh Stock Exchange (HOSE) of Vietnam during 2005-2008. Previous analysis for Thailand by Rochanonda (2006) solved for the ETR during 2001-2004 using a relatively similar approach. This research 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 in Chapter VII. The ETR is calculated from the firm's corporate income tax expenses out of the profit. This figure also reflects the outcome of the multinational firms' decisions in allocating their resources across jurisdictions.

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. 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 sector 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 which are domestic-specific sectors in both countries are approximately 18-19 percent, which are 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 becomes relatively more saturated. However, similarly to Thailand's 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.

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 1.04 percent for Thailand's data and 0.68 percent when combining the data from Thailand and Vietnam. 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 been base-broadening measures by the government which vary quite significantly across industries.

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 the more necessary conditions in the long-run. These conditions cannot be compensated by merely introducing low taxes and investment privileges alone.

Prospects on Regional Tax System Synchronisation in AFTA

As cross-border transactions by business enterprises become complex and sophisticated along with fierce tax competition between jurisdictions, traditional efforts to secure or allocate taxation rights by means of domestic law or tax treaty may no longer suffice. A more integrated procedure must, therefore, be considered. One ideal possibility for countries in the region to pursue is switching from independent taxation to unitary taxation. The unitary

taxation system levies tax on world-wide income and, through simplified administration and formula, distribute the revenue amongst the member countries. Another possibility is the harmonisation of taxation system can be done through levelling off corporate and income taxation in countries within the region. This system would prevent incentives to transfer income from high tax countries to low tax countries.

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 so much 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.

บทสรุปผู้บริหาร

บทนำและหลักการ

ตั้งแต่เริ่มก่อตั้งเมื่อปี ค.ศ. 1989 กลุ่มประเทศในความร่วมมือทางเศรษฐกิจเอเชียแปซิฟิก (APEC) ได้มีนโยบายที่หลากหลายเกิดขึ้นเพื่อการเปิดเสรีทางการค้าและการลงทุนเพิ่มมากขึ้นโดยลดข้อกีดกันการเคลื่อนย้ายสินค้า บริการ และแรงงานระหว่างประเทศให้น้อยลง เพิ่มการอำนวยความสะดวกในการประกอบธุรกรรมทางเศรษฐกิจ และเพิ่มความร่วมมือด้านเศรษฐกิจและพิธีการทางการปฏิบัติมากขึ้น ผลพวงในทางบวกที่เกิดจากการพัฒนาการรวมกลุ่มและความร่วมมือทางเศรษฐกิจส่วนหนึ่งคือการเจริญเติบโตของผลผลิตมวลรวมภายในประเทศ และระดับความเป็นอยู่โดยรวมที่สูงขึ้น ที่ผ่านมาการเติบโตทางการค้าในเอเชียแปซิฟิคขยายตัวอย่างรวดเร็วในช่วงกลางทศวรรษที่ 1980 ถึงแม้ว่าการขยายตัวจะหยุดชะงักลงในปี ค.ศ. 1998 ก็ตาม

แม้ว่าการพัวพันธ์ทางระบบเศรษฐกิจระหว่างหลายประเทศจะก่อผลในทางบวกหลายประการ แต่ปรากฏการณ์นี้ก็สามารถนำภัยคุกคามที่ส่งผลกระทบต่อความมั่นคงของระบบเศรษฐกิจในภูมิภาคได้เช่นกัน การเคลื่อนย้ายทุนระหว่างประเทศปริมาณมหาศาล และการซื้อขายที่ปลอมแปลงในตลาดการเงินที่เกิดมากขึ้นได้สร้างความขัดแย้งในเรื่องสิทธิทางการเก็บภาษีระหว่างประเทศในภาครัฐและความพยายามหลีกเลี่ยงการเสียภาษีในภาคเอกชน ในขณะเดียวกันแต่ละประเทศอาจเลือกปฏิบัติในการเก็บภาษีเพื่อจูงใจการไหลเข้าประเทศของเงินทุนและป้องกันไม่ให้เงินทุนไหลออกนอกประเทศ แนวโน้มนี้มักเห็นได้เด่นชัดในประเทศที่มีทรัพยากรน้อยและมีอุตสาหกรรมที่มีความสามารถทางการแข่งขันต่ำ นักทฤษฎีทางภาษีระหว่างประเทศเรียกปรากฏการณ์ดังกล่าวว่าเป็น “การแข่งขันทางภาษี” เมื่อการแข่งขันทางภาษีดุเดือดมากขึ้น ก็จะไม่เป็นผลดีต่อฐานภาษีในระบบการคลังของแต่ละประเทศ

ในปัจจุบัน ภาครัฐมีความจำเป็นเร่งด่วนที่จะต้องเตรียมความพร้อมเพื่อเผชิญกับความท้าทายที่เกิดจาการลดกำแพงกีดกันการเคลื่อนย้ายปัจจัยทุนระหว่างประเทศ การศึกษาในระยะเบื้องต้นสามารถเริ่มจากการศึกษาภายในกลุ่มย่อยที่เป็นประเทศกำลังพัฒนาใน APEC เช่นประเทศไทยและบางประเทศในสมาคมประชาชาติแห่งเอเชียตะวันออกเฉียงใต้ (ASEAN) ที่จะรวมตัวเป็นเขตการค้าเสรีอาเซียน หลักการสำหรับความเป็นไปได้ในการริเริ่มความร่วมมือทางภาษีและการมีสนธิสัญญาระหว่าง

กลุ่มประเทศในข้อตกลงเขตการค้าเสรีอาเซียน (AFTA) จึงเป็นประเด็นสำคัญที่ควรนำมาวิเคราะห์ในเชิงวิชาการ นอกจากนี้ ในอนาคตเมื่อผลของการรวมกลุ่มมีความเด่นชัดมากยิ่งขึ้น การวิเคราะห์ก็สามารถขยายขอบเขตให้กว้างขึ้นเพื่อรวมข้อมูลของจำนวนประเทศมากขึ้น

ในฐานะหนึ่งในงานวิจัยที่วิเคราะห์ภาษีระหว่างประเทศในแง่มุมเศรษฐศาสตร์ที่มีจำนวนไม่มากนัก งานวิจัยฉบับนี้เน้นไปในกรณีศึกษาภาษีเงินได้นิติบุคคลภายในประเทศไทยและประเทศเวียดนามซึ่งเป็นประเทศสมาชิกใน AFTA ซึ่งเป็นกลุ่มย่อยใน APEC ประเทศเวียดนามเป็นประเทศที่กำลังจะได้รับความสนใจจากนักลงทุนต่างประเทศเป็นจำนวนมาก โดยมีการลงทุนโดยตรงข้ามชาติ (FDI) ในปริมาณและสัดสวนที่มากขึ้นอย่างต่อเนื่องในระยะเวลาไม่กี่ปีที่ผ่านมา งานวิจัยได้นำสองประเทศดังกล่าวมาวิเคราะหด้วยเหตุผลหลายประการด้วยกัน ในเรื่องต้นทุนค่าแรงและที่ตั้งทางภูมิศาสตร์ ประเทศไทยกำลังจะเผชิญกับความเสียเปรียบเวียดนามในหลายภาคส่วนอุตสาหกรรม ระหว่างปี ค.ศ. 1999-2007 FDI ที่เข้าสู่ประเทศใน ASEAN ภาคการผลิตอุตสาหกรรมมีสัดส่วนเป็นร้อยละ 35.43 ของ FDI ทั้งหมด และ FDI ในด้านการผลิตอุตสาหกรรมสะสมระหว่างปี ค.ศ. 2003-2007 ในประเทศไทยและเวียดนามมีสัดส่วนร้อยละ 17.39 และ 17.38 ตามลำดับ

งานวิจัยฉบับนี้มีวัตถุประสงค์การทำวิจัยอยู่สี่ประการโดยหลัก ประการแรกเป็นการวิเคราะห์เชิงกรณีศึกษาพิจารณาถึงผลกระทบของภาษีเงินได้นิติบุคคลที่มีต่อการตัดสินใจของบริษัทข้ามชาติในประเทศที่อยู่ในการรวมกลุ่มทางเศรษฐกิจ การวิเคราะห์เชิงสถิติประยุกต์ใช้กับกรณีประเทศไทยและประเทศเวียดนามซึ่งเป็นสมาชิกใน AFTA การตัดสินใจเชิงนโยบายของรัฐบาลในแต่ละประเทศสามารถสะท้อนได้จากอัตราภาษีที่แท้จริง (ETRs) ซึ่งสามารถคำนวณได้จากต้นทุนภาษีเงินได้ของบริษัทในตลาดหลักทรัพย์ในทั้งสองประเทศ การคำนวณดังกล่าวจะบ่งบอกถึงการเบี่ยงเบนภาระภาษีที่แท้จริงจากอัตราภาษีตามกฎหมายที่ประกาศของประเทศไทยและเวียดนามในอัตรา 30 และ 28 ตามลำดับ การตัดสินใจของบริษัทข้ามชาติสามารถพิจารณาจากลักษณะและปริมาณของ FDI ในแต่ละภาคการผลิต ประการที่สอง การวิเคราะห์ขยายไปสู่ผลของนโยบายภาษีเงินได้นิติบุคคลที่มีต่อคุณภาพการลงทุนที่สะท้อนได้ส่วนหนึ่งจากอัตรากำไรของแต่ละบริษัท ประการที่สามการวิคราห์พิจารณาถึงผลกระทบของ ETRs ต่อรายได้ทางการคลังจากภาษีเงินได้นิติบุคคล ประการที่สี่ เป็นการพิจารณาเชิงนัยทางนโยบายในประเด็นความเป็นไปได้ในความร่วมมือและสนธิสัญญาทางภาษีภายใน AFTA ซึ่งในอนาคตสามารถพัฒนาไปสู่ระดับ APEC นัยทางนโยบายที่ได้จากการ

วิเคราะห์น่าจะนำไปสู่สภาวะและผลประโยชน์สำหรับประเทศไทยและประเทศในกลุ่มความร่วมมือในภาพรวม

การจัดเล่มรายงานฉบับนี้มีดังนี้ บทที่หนึ่งอธิบายถึงความสำคัญของงานวิจัย หลักการและวัตถุประสงค์ บทที่สองกล่าวถึงภูมิหลัง วัตถุประสงค์ของการรวมกลุ่มทางเศรษฐกิจในประเทศอาเซียน และความร่วมมือทางเศรษกิจในเอเชียแปซิฟิกโดยสังเขป บทที่สามกล่าวถึงประเด็นสำคัญเกี่ยวกับภาษีในการรวมกลุ่มสำหรับประเทศไทย และประเทศในอาเซียน ภาพรวมทางภาษีในประเทศไทยและประเทศเวียดนามจะถูกกล่าวถึงโดยสังเขปเพื่อเป็นข้อมูลส่วนหนึ่งของการวิเคราะห์ บทที่สี่กล่าวถึงภาพรวมของ FDI ในประเทศไทย ประเทศเวียดนาม และประเทศใน ASEAN ในภาพรวม บทที่ห้าทบทวนพื้นฐานทางทฤษฎี บทที่หกแสดงถึงผลของการวิเคราะห์ ETRs และคุณภาพของ FDI บทที่เจ็ดขยายการวิเคราะห์ไปสู่ผลกระทบทางการคลังในแต่ละประเทศ บทที่แปดสรุป เสนอนัยทางนโยบายและงานวิจัยที่ควรจะเกิดขึ้นต่อไปในอนาคต

พื้นฐานทางทฤษฎี

มีหลายปัจจัยที่สามารถกำหนดการไหลเข้าไหลออกของ FDI ปัจจัย หลักประกอบด้วย ความสามารถในการเข้าถึงตลาด กำไร ความมั่นคงทางการเมืองและเศรษฐกิจมหภาค กรอบกฎหมาย คุณภาพแรงงานและโครงสร้างพื้นฐานเป็นต้น รัฐบาลในแต่ละประเทศมักจะต้องเผชิญกับการตัดสินใจช่างน้ำหนักการให้ความสำคัญระหว่างวัตถุประสงค์การกำหนดนโยบายภาษีที่มีความแข่งขันสูงกับความสามารถในการเพิ่มรายได้รัฐบาลจากบริษัทข้ามชาติ การตัดสินใจของรัฐบาลจะเกิดความยากลำบากมากขึ้นเมื่อระดับการรวมกลุ่มเศรษฐกิจมีความเข้มข้นมากยิ่งขึ้น ดังนั้น จึงเป็นเรื่องสำคัญที่จะต้องมีการพิจารณาในเชิงทฤษฎีและเชิงปริมาณผลของโครงสร้างอัตราภาษีต่างๆภายในการรวมกลุ่มทางเศรษฐกิจต่อรายได้ทางการคลัง พื้นฐานทฤษฎีที่นำมาประยุกต์ใช้พัฒนามาจากกรอบแนวคิดที่เป็นพื้นฐานของงานวิจัยหลายชิ้นเกี่ยวกับบริษัทข้ามชาติและนัยทางการคลังในปัจจุบันของ Horst (1971) and Copithorne (1971) ในแบบจำลองตามกรอบแนวคิดดังกล่าว ได้พิสูจน์ทางทฤษฎีแล้วว่า การที่สองประเทศร่วมกันพิจารณาภาษีร่วมกัน อัตราภาษีจะสูงกว่าอัตราภาษีภายใต้การแข่งขัน และเพิ่มรายได้ทางการคลังในภาพรวมของทั้งสองประเทศ

ผลการวิเคราะห์และนัยทางนโยบาย

การวิเคราะห์ผลของ ETRs ในประเทศไทยและประเทศเวียดนามต่อการไหลเข้าออก FDI ในส่วนแรกในบทที่หก พิจารณาจากเอกสารการเงินของบริษัท 240 แห่งในตลาดหลักทรัพย์แห่งประเทศไทย 121 แห่งในตลาดหลักทรัพย์โฮชิมินห์ของประเทศเวียดนาม ระหว่างปี ค.ศ. 2005-2008 การวิจัยที่ผ่านมาโดย Rochanonda (2006) คำนวณ ETRs ระหว่างปี ค.ศ. 2001-2004 โดยใช้วิธีที่คล้ายกันกับงานวิจัยฉบับนี้ แต่งานวิจัยฉบับนี้พัฒนาต่อไปสำหรับช่วงเวลา ค.ศ. 2005-2008 และขยายกรอบการวิเคราะห์ข้อมูลข้ามประเทศ นอกจากนี้ยังขยายการวิเคราะห์ไปในเชิงเศรษฐมิติในบทที่เจ็ด การคำนวณ ETRs คำนวณจากรายจ่ายภาษีที่แท้จริงของบริษัทต่อกำไรที่เกิดขึ้น ข้อมูลนี้จะสะท้อนถึงผลของการตัดสินใจจัดสรรทรัพยากรระหว่างประเทศของบริษัทข้ามชาติ

อัตราภาษีตามกฎหมายของประเทศไทยและประเทศเวียดนามในช่วงการวิเคราะห์คือร้อยละ 30 และ 28 ตามลำดับ แต่ ETRs ที่คำนวณได้คือ ประมาณ ร้อยละ 17 และ15 ตามลำดับ ผลที่ได้ออกมาแสดงให้เห็นว่าบริษัทข้ามชาติได้รับแรงจูงจัยในการลงทุนที่เป็นภาษีและเกี่ยวข้องกับภาษีจากภาครัฐของทั้งสองประเทศ อย่างไรก็ตามแรงจูงใจดังกล่าวไม่ได้กระจายอย่างทั่วถึงระหว่างแต่ละภาคส่วนของธุรกิจ โดย ETRs มีอัตราที่ต่ำสุดถึงประมาณร้อยละ10 และสูงสุดถึงประมาณร้อยละ 25 ในสองประเทศทั้งสองประเทศได้เน้นไปในเรื่องอุตสาหกรรมที่เป็นภาคการส่งออกโดยเฉพาะภาคที่ใช้ปัจจัยทุนเข้มข้น เช่นเครื่องไฟฟ้าและเคื่องจักรเนื่องจาก ETRs ในภาคส่วนดังกล่าวได้ลดลงอย่างมีนัยสำคัญในช่วงเวลาที่ทำการวิเคาะห์ ในทางกลับการ ภาษีไม่ใช่ปัจจัยหลักสำหรับภาคการผลิตที่เน้นตลาดภายในประเทศ เนื่องจากภาคการผลิตที่เน้นปัจจัยท้องถิ่นจะขึ้นอยู่กับข้อได้เปรียบต่าง ๆทางภูมิศาสตร์มากกว่า โดยอัตรา ETRs ในภาคอุตสาหกรรมนี้จะมีอัตราอยู่ที่ประมาณร้อยละ 18-19 ซึ่งสูงกว่าภาคการส่งออกมาก

ระหว่างช่วงปีที่ทำการวิเคราะห์ กำไรเฉลี่ยภาคการผลิตส่วนใหญ่ในเวียดนามจะสูงกว่าในประเทศไทยเนื่องจากในปัจจุบันประเทศเวียดนามกำลังอยู่ในช่วงที่ได้รับความสนใจจากนักลงทุนเป็นอย่างมากและยังมีแนวโน้มการเปิดตลาดมากขึ้น แต่สำหรับประเทศไทย ซึ่งตลาดในประเทศเริ่มมีความหนาแน่นเพิ่มขึ้น กำไรจึงน้อยกว่าโดยเปรียบเทียบ อย่างไรก็ตาม ประสบการณ์ในกรณีประเทศไทยในระยะแรกเริ่ม ได้แสดงให้เห็นว่า การส่งเสริมการลงทุนโดยเครื่องมือภาษีและสิทธิพิเศษต่างๆ ได้ผลในระยะสั้น แต่

อาจไม่ยั่งยืนในระยะยาว เนื่องจาก ประเทศอื่นๆ ใกล้เคียงก็สามารถทำเช่นนั้นได้ และในที่สุดก็จะไม่มีประเทศใดได้รับประโยชน์เลยในการแข่งขันที่มีผลเสียต่อสภาพทางการคลัง

การวิเคราะห์สมการถดถอยข้อมูลอนุกรมเวลาภาคตัดขวางในอุตสาหกรรมในประเทศไทยและประเทศเวียดนาม แสดงให้เห็นว่า หากพิจารณาแนวโน้มความร่วมมือทางภาษีระหว่างสองประเทศภายใต้ AFTA ก็จะส่งผลให้ได้ ETRs ที่สูงขึ้นและในขณะเดียวกัน ก็ไม่ก่อผลเสียต่อการลงทุนอย่างมีนัยสำคัญ ผลของสมการบ่งบอกว่าหากเพิ่ม ETR ร้อยละ 1 จะเพิ่มรายได้ทางการคลังร้อยละ 1.04 ในกรณีใช้เฉพาะข้อมูลประเทศไทย และ จะเพิ่มรายได้ทางการคลังร้อยละ 0.68 ในกรณีใช้ข้อมูลของทั้งสองประเทศ จะเห็นได้ว่าอัตราภาษีที่แท้จริงที่ผ่านมาในประเทศไทยและประเทศเวียดนามได้มีแนวโน้มที่สูงขึ้น ในกรณีประเทศไทย ETRs เฉลี่ยเพิ่มขึ้นจากร้อยละ 17.07 ในปี 2005 เป็นร้อยละ 18.18 ในปี 2008 ส่วนในประเทศเวียดนามอัตราได้เพิ่มจากร้อยละ 14.97 ในปีเป็นร้อยละ 16.20 ในปี 2008

โดยภาพรวม ผลจากการลดกำแพงกีดกันทางการค้าและการเคลื่อนย้ายทุนและการรวมกลุ่มระหว่างประเทศทำให้อัตราภาษีเงินได้นิติบุคคลมีผลต่อการตัดสินใจของนักลงทุนข้างชาติอย่างมีนัยสำคัญ สำหรับประเทศในภูมิภาคเดียวกันที่มีความคล้ายกันในหลาย ๆด้าน เช่นตลาดในประเทศ และภูมิศาสตร์ บริษัทข้ามชาติและรัฐบาลย่อมพิจารณาความแตกต่างระหว่างภาษีและนัยทางนโยบายการดึงดูดการลงทุน อย่างไรก็ตาม ปัจจัยที่สำคัญที่แท้จริงในระยะยาวคือ โครงสร้างทางเศรษฐกิจ ทรัพยากรมนุษย์ ผลตอบแทนจากการวิจัยและพัฒนา สภาพทางการเมือง และกรอบกฎหมายที่มีความแน่นอน ปัจจัยเหล่านี้ไม่สามารถทดแทนได้โดยการลดภาษีหรือให้สิทธิพิเศษต่างเท่านั้น

แนวโน้มด้านความสอดคล้องเรื่องระบบภาษีในเขตการค้าเสรีอาเซียน

เมื่อเกิดธุรกรรมทางเศรษฐกิจระหว่างพรมแดนเพิ่มขึ้นโดยผู้ประกอบการประกอบด้วยการแข่งขันด้านภาษีโดยรัฐบาลของแต่ละประเทศมีความรุนแรงมากขึ้น วิธีการต่าง ๆของภาครัฐไม่ว่าจะโดยอาศัยระบบนิติบัญญัติภายในประเทศหรือสนธิสัญญาด้านภาษีก็ตามก็อาจจะไม่สามารถมีประสิทธิภาพเท่าที่ควรอีกต่อไป ดังนั้นจึงมีความร่วมมือระหว่างรัฐบาลในการหาวิธีการที่จะแก้ไขปัญหาในเรื่องนี้เกิดขึ้นบ้างแล้วสำหรับบางประเทศ วิธีหนึ่งที่เป็นไปได้ก็คือการเปลี่ยนจากที่แต่ละประเทศมีความเป็นเอกเทศในการจัดระบบภาษีเองมาเป็นการใช้ระบบภาษีเดียวกันหมด (Unitary Taxation) การใช้ระบบภาษีเดียวกันหมดคือการเก็บภาษีที่ประเทศใดประเทศ

หนึ่ง เช่นเก็บที่ประเทศที่ตั้งถิ่นฐาน ไม่ว่าแหล่งรายได้จะมาจากไหนก็ตาม หลังจากนั้นก็มีการจัดสรรรายได้ทางภาษีระหว่างประเทศสมาชิกโดยใช้วิธีและสูตรที่ตกลงกันไว้ อีกวิธีหนึ่งที่สามารถเป็นไปได้ก็คือการใช้ระบบที่แต่ละประเทศเก็บภาษีเองแต่มีอัตราภาษีเดียวกันหมด (Harmonisation of Taxation System) ซึ่งในระยะแรกแต่ละประเทศอาจมีอัตราภาษีที่ใกล้เคียงกันและต่อมาก็สามารถทำให้เท่ากันในที่สุด วิธีนี้จะป้องกันมิให้เกิดความพยายามที่จะเคลื่อนย้ายรายได้จากประเทศที่มีอัตราภาษีที่สูงกว่าไปสู่ประเทศที่มีอัตราภาษีที่ต่ำกว่าอีกต่อไป

ในปัจจุบันประเทศในภูมิภาคเอเชียและแปซิฟิคแต่ละประเทศมีระดับการพัฒนาที่แตกต่างกันมาก ความหลากหลายของระบบภาษีประกอบกับความโยงใยระหว่างระบบเศรษฐกิจหนึ่งกับอีกระบบเศรษฐกิจในภูมิภาคมิใช่เพียงทำให้เกิดการเก็บภาษีซ้ำซ้อนแต่ยังอาจก่อให้เกิดการหลีกเลี่ยงการเสียภาษีซ้ำซ้อนด้วยเช่นกัน ในการเผชิญกับเรื่องที่สลับซับซ้อนและมีความละเอียดอ่อนเช่นนี้ควรต้องมีการร่วมมือทางด้านการบริหารการจัดการและดำเนินการระหว่างหน่วยงานด้านภาษีที่เกี่ยวข้อง ประเด็นแรกที่ควรได้รับการพิจารณาเป็นอย่างยิ่งคือการเพิ่มขีดจำกัดความสามารถและการอบรมเจ้าหน้าที่ที่เกี่ยวข้อง เพื่อลดความแตกต่างของระบบภาษีในแต่ละประเทศก่อนที่จะมีการร่วมมือทางด้านนโยบาย ในบรรดาประเทศในเอเชีย อาจกล่าวได้ว่าญี่ปุ่นจะเป็นประเทศที่ริเริ่มการพัฒนาในเรื่องดังกล่าวก่อนประเทศอื่นโดยสนับสนุนสถาบัน เช่น National Tax Agency (NTA) of Japan, the National Tax College และ Japan International Cooperation Agency (JICA) เพื่ออบรมเจ้าหน้าที่ทำงานด้านภาษี

ประเด็นสุดท้ายคือเรื่องแนวโน้มการใช้ระบบ Unitary Taxation และ Tax Harmonisation ในภูมิภาค ก่อนที่สามารถใช้ระบบ Unitary Taxation ได้อย่างราบรื่นก็ต้องมีข้อตกลงในเรื่องระบบบัญชีและการจัดแบ่งระหว่างประเทศสมาชิคอย่างเป็นเอกฉันฑ์เป็นขั้นแรกซึ่งคงต้องมีการเจรจากันหลายรอบเนื่องจากระบบใหม่นี้มีความแตกต่างจากระบบเดิมคือ Arm's Length Principle โดยสิ้นเชิง นอกจากนี้ผลกระทบต่อพฤติกรรมทางธุรกิจของบริษัทข้ามชาติจะเป็นอย่างไรก็คงจะต้องรอดูต่อไป สำหรับเรื่องเส้นทางสู่การมีระบบภาษีที่ใช้อัตราใกล้เคียงหรืออัตราเดียวกัน แม้แต่สหภาพยุโรปที่ขึ้นชื่อว่าเป็นต้นแบบฉบับของการรวมตัวของระบบเศรษฐกิจของโลกก็ยังต้องเผชิญกับปัญหาอันมากมาย ดังนั้นคงปฏิเสธไม่ได้ว่าการเข้าไปสู่ระบบดังกล่าวในภูมิภาคเอเชียแปซิฟิคจึงเป็นหนทางที่ไม่ราบเรียบนักอย่างแน่นอน ประเทศที่ต้องถูกลดอัตราภาษีคงต่อต้านการเข้าสู่ระบบใหม่นี้ และในขณะเดียวกันผู้เสียภาษีในประเทศที่จะต้องเพิ่มอัตราภาษีคงใช้วิธีกดดันทางการเมืองทุกวิถีทางเพื่อต่อต้านการเข้าสู่ระบบดังกล่าว

ดังนั้นสำหรับระยะเบื้องต้นนี้ขั้นแรกตอนแรกเพื่อเตรียมความพร้อมในการเข้าสู่ระบบภาษีใหม่นั้นควรจะเริ่มจากการพัฒนาสนธสัญญาด้านภาษีแบบทวิภาคีที่มีอยู่ไปสู่สนธิสัญญาแบบภาหุภาคีก่อน รวมทั้งพัฒนาบุคลากรที่เกี่ยวข้องไปพร้อมๆ กัน

Final Report

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Chapter I
Introduction

I.1: Significance of the Research

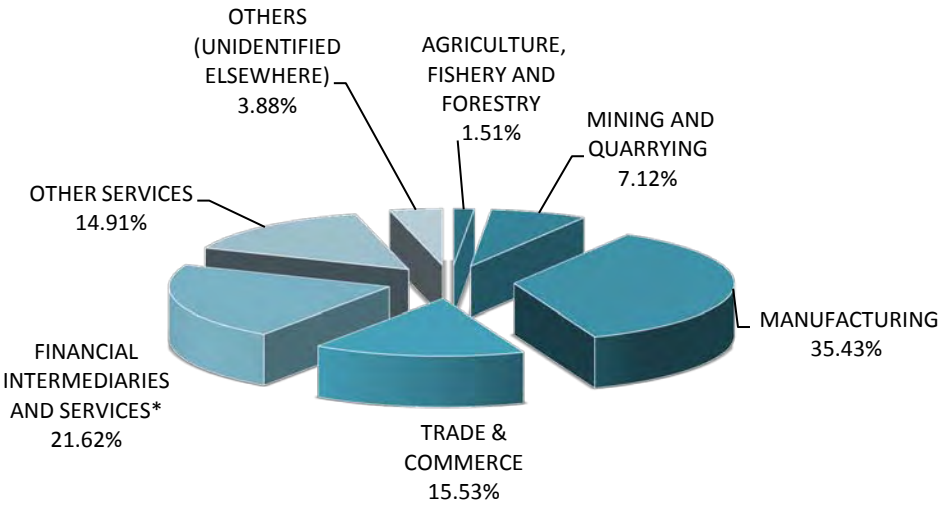
Since its inception in 1989, the main objective of Asia Pacific Economic Co-operation (APEC) is to achieve the "Bogor Goals" of free and open trade and investment in Asia Pacific by the year 2010 for developed economies and 2020 for developing economies. Some positive side-effects brought about by the advancement of economic integration are the heightening productivity, the accelerated potential economic growth and the 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 Currency Crisis, the increasing trend of trade and investment has regained its direction in recent years. 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. For instance, in May 2000, known as the 'Chiang Mai Initiative', the ASEAN+3 (ASEAN members + China, Japan and Korea) Finance Ministers Meeting, held in Chiang Mai, agreed to form a network of bilateral swap agreements and repurchase agreements amongst ASEAN+3 members.

Despite the positive outcomes of advanced economic integration and reduction of tariff barriers, there are 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.

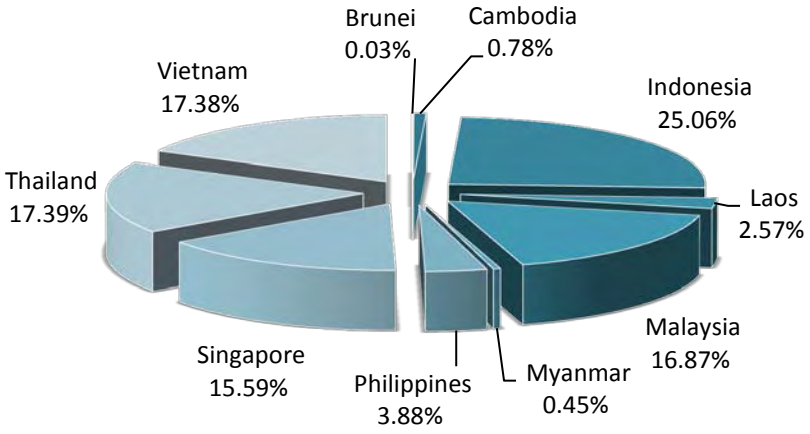
At present, it is urgently important for the public sectors to prepare for the emerging challenges caused by the reduction in inter-jurisdictional barriers to the movement of capitals. A pioneer study can start from within the sub-group of developing countries in APEC like Thailand and selected ASEAN countries, forming their own ASEAN Free Trade Area (AFTA). The rationale for possible tax co-operations and treaties within AFTA should, therefore, be worth considering at this initial attempt to scientifically analyse the issue. 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 from more countries.

Figure 1.1: Percentage Share of Cumulative FDI Inflows to ASEAN by Sector, 1999-2007



Source: Author's calculation and illustration based on ASEAN FDI Database; ASEAN Secretariat
*Financial intermediaries and services (including insurance)

Figure 1.2: Percentage Share of Cumulative FDI Inflows in Manufacturing to ASEAN by Country, 2003-2007



Source: Author's calculation and illustration based on ASEAN FDI Database; ASEAN Secretariat.

As one of the rare inter-juristic tax research projects employing economic analysis in Thailand and Asia, this research focuses on the case of domestic corporate income tax policy packages in Thailand and Vietnam which are members of a free trade area sub-set of APEC, that is, AFTA. The latter has particularly been an emerging attractive recipient of 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 foreign direct investment (FDI) inflows during 1999-2007 to ASEAN, manufacturing constitutes a major share of 35.43% (Figure 1.1). In terms of cumulative FDI inflows to the manufacturing sector during 2003-2007, Thailand and Vietnam have almost equal share of approximately 17.39% and 17.38%, respectively (Figure 1.2).

This research project 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. 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 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. This should result in a more favourable condition and increased mutual gains for Thailand as well as other countries in ASEAN as a whole.

I.2: Organisation of the Report

This Chapter explains the significance of the research and introduces the rationale of the research and its objectives. The organisation of the rest of the report is as follows. Chapter II briefly recalls the background, purposes and goals of economic integration in the Association of Southeast Asian Nations (ASEAN) and Asia Pacific Economic Co-operation (APEC). Chapter III touches on the important tax issues in the context of economic integration

in Thailand and ASEAN countries. An overview of the tax revenue structure in Thailand and Vietnam are also briefly mentioned as a background related to the analysis in the later section. Chapter IV portrays an overview of FDI in Thailand, Vietnam and overall ASEAN countries. Chapter V reviews major theoretical foundation of the model. Chapter VI shows the empirical analyses on effective tax rates and the quality of foreign direct investment. Chapter VII extends to the fiscal tax revenue consideration and its implications. Chapter VIII concludes and provides policy implications along with further research suggestions.

Chapter II
Background of Economic Integration in ASEAN & Asia and the Pacific

II.1: Development of ASEAN and APEC

On 7th August 1967, the Association of Southeast Asian Nations (ASEAN) was developed and established. The ASEAN Declaration, also known as the "Bangkok Declaration", was signed by the foreign ministers of the give countries at the Ministry of Foreign Affairs in Bangkok, Thailand. The earlier major emphasis was on the development of political sovereignty which had been the major issue of such co-operation. Then, it extends to promotion of common interests in economic, social, cultural, technical, scientific and administrative areas. The original member countries were Indonesia, Malaysia, Philippines and Singapore. In the later years, there were more member countries, namely Brunei Darussalam (1984), Vietnam (1995), Lao PDR (1997), Myanmar (1997) and Cambodia (1999). This made ASEAN an economic association of ten member states, consisting of 570 million people with a combined GDP of more than US$ 1,460 billion (World Bank, 2010). ASEAN trade grew from US$ 10 billion in 1967 to US$ 1,711 billion in 2008 (ASEAN Secretariat, 2009). With its combined trade value, ASEAN is the fourth largest trading entity in the world, following the European Union, the United States and Japan.

Wongboonsin (2005) summarised the three major periods of ASEAN development, namely, during the cold war, after the cold war and during the period of globalisation as follows:

1. Cooperation during the cold war. During the cold war period, the threat of communism had become a common threat to peace and stability among the ASEAN countries. In the first decade of ASEAN (1967-1976), co-operation had emphasised on three main dimensions including trust,

understanding and consultations to achieve economic, social and political stability. During the second decade (1977-1986), the co-operation emphasised on resolving common problems among member states such as cross-border terrorism and Cambodia and Indo-China refugees.

2. Co-operation after the Cold War. After the cold war, there was still uncertainty towards the future of political stability in the region. Co-operation among ASEAN members began to expand to include other countries in the Asia Pacific. As a strategy to regain its power in the world, ASEAN proposed political restructuring by two means. The first was the enlargement of ASEAN. The second was the expansion of its role toward Asia Pacific region though talks about the problems with other powerful countries which are non-members. For example, the ASEAN Post-Ministerial Conference (ASEAN PMC) and the ASEAN Regional Forum had attracted dominant non-member countries into the negotiation forum.

3. Cooperation in the era of globalisation. In the forth decade of ASEAN development the initiation of the ASEAN Vision 2020 was formalised under the 2nd ASEAN Summit in December 1997. The meeting identified schemes to enhance political stability and resolve existing problems of political instability.

In 1990s, there had been increasing drive toward a more intense economic integration among ASEAN countries and their major trading partners. This resulted in a co-operative forum, the major influential one of which was Asia Pacific Economic Co-operation (APEC). APEC was established in 1989 for the purpose of facilitating economic growth, co-operation, trade and investment in the Asia-Pacific region. It is the only inter-governmental grouping in the world that operates on the basis of open dialogue and respects for the views of all participants who have equal say as a representative of their countries. However, there are no binding commitments among the groups. Compliance may be achieved through discussion and mutual support in the form of economic and technical co-operation.

At present, APEC comprises of 21 economic jurisdictions, namely, Australia, Brunei Darussalam, Canada, Chile, People's Republic of China, Hong Kong China, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Chinese Taipei, Thailand, United States and Vietnam. APEC population is over 2.5 billion people. The combined GDP of all the jurisdictions accounts for 19 trillion US dollars, making up 47 percent of the total world trade. The APEC Fact Sheet issued by its Secretariat states that the institution's main objective is to achieve the 'Bogor Goals' of free and open trade and investment in the Asia-Pacific by the year 2010 for developed economies and 2020 for developing economies. These include: trade and investment liberalisation with less barriers to the movement of goods, services and people across the borders in the region, business facilitation and economic and technical co-operation.

II.2: Development of CEPT and AFTA

Initially, the proposal for APEC was opposed by some ASEAN countries, particularly Malaysia, which favoured the creation of East Asia Economic Caucus (EAEC). This was intended to be a free trade zone within ASEAN, China, Japan and Korea proposed in 1990 by former Malaysian Prime Minister Dr. Mahathir bin Mohamad in response to the deficiency of AFTA in terms of stimulating economic development and his strong Asian standpoint of integration without western nations. The intention was to counter-balance the growing influence of western nations, particularly the United States, in APEC. However, the proposal for EAEC failed as it faced heavy opposition from the United States and refusal of participation from Japan (Aslam, 2009).

Despite the failure to establish EAEC, member states continued to work for further integration. As a follow-on, in 1992, the agreement on the Common Effective Preferential Tariff (CEPT) scheme was signed with the

aim to reduce intra-regional tariffs and remove non-tariff barriers over the ten years period among member states and increase the region's competitive advantage as a production base. In practice, for example, an ASEAN member may impose tariffs on goods entering from outside ASEAN based on its own national schedules. However, for goods originating within ASEAN, they are to reduce and apply a tariff rate of 0 to 5 percent among member states by 2003 (see ASEAN Secretariat, 2010b, 2010c; and Philippines Tariff Commission, 2007 for details). The principles of CEPT had later become the main framework for the ASEAN Free Trade Area (AFTA), signed on 28th January 1992 in Singapore. The primary goals of AFTA were to increase ASEAN's competitive as a production base geared for the world market, and attract more foreign investment (FDI) to ASEAN. With general exceptions for the protection of national security, public morals, the protection of human, animal or plant life and health, and protection of articles of artistic, historic, or archaeological value, ASEAN members have agreed to enact zero tariff rates on virtually all imports by 2010 for the original signatories, and 2015 for Cambodia, Myanmar, Lao PDR and Vietnam.

After the 1997 financial crisis, a revival of EAEC was established in Chiang Mai, known as the Chiang Mai Initiative. This was a bilateral swap arrangements that later developed into a multilateral currency swap arrangement among ASEAN, People's Republic of China, Japan and South Korea, commonly known as ASEAN+3, countries to address short-term liquidity difficulties in the region and to supplement the existing international financial arrangements. The intention of this arrangement was to avoid future recurrence of the crisis whereby a pool of foreign exchange reserves is established to be accessible by participating central bank to fight against currency speculation (Ministry of Finance, Japan, 2010).

In the 21st century, ASEAN continued to expand its integration. ASEAN+3 was the first in improving the existing ties with the People's Republic of China, Japan and South Korea. This was followed by larger

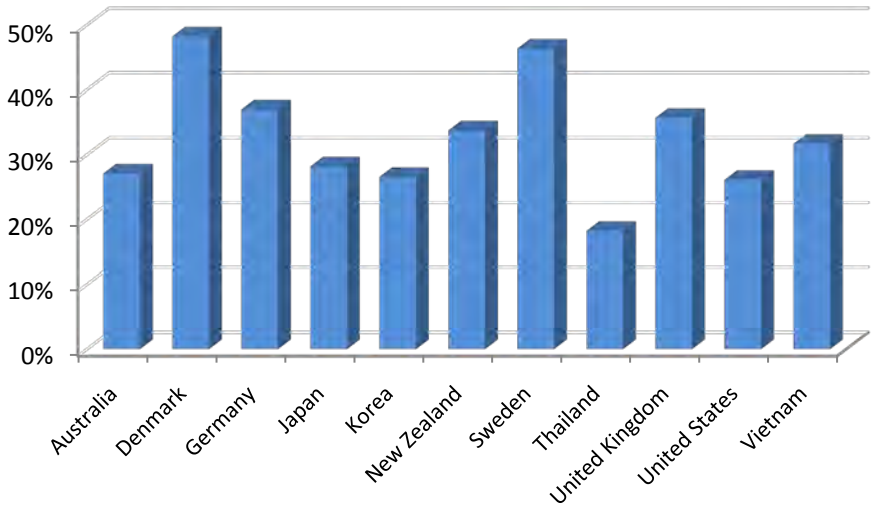
collaboration in the East Asia Summit first held in Kuala Lumpur in December 2005. The Summit included ASEAN+3 countries and India, Australia and New Zealand. During this time, several ASEAN countries had become more engaged in free trade area (FTA) with outside countries to heighten their liberalization. Thailand, for example, started formalizing FTA negotiations in 2002 with major trading countries like Bahrain, Australia, India and China, and later in 2004, with Peru, New Zealand, Japan and United States. Singapore also concluded FTAs with several countries by that time. (Department of Trade Negotiations, 2010).

The new groupings of ASEAN plus other countries outside the region was intended to be a pre-requisite for the planned Ease Asian Community, which was supposedly patterned after European Community (EC). The Council of East Asian Community (CEAC) established in Japan in May 2004, is an organisation to study the concept of an East Asian Community which was triggered by the Network of East Asian Think-Tanks (NEAT) in 2003 in Beijing and of the East Asia Forum EAF in 2003 in Seoul (The Council on East Asian Community, 2005). These studies provide the possibility of ASEAN creating an economic community and assisted toward the possibility of drafting an ASEAN Charter enforced in December 2008 at Jakarta providing a new legal framework and establishing a number of new organs to boost the ASEAN community-building process (ASEAN Secretariat, 2008). ASEAN identified its aims to complete all FTAs with China, Japan, South Korea, India, Australia and New Zealand by 2013, and establish the ASEAN Economic Community by 2015. Therefore, in the midst of this new dynamic trade environment, analysis of corporate tax treaties within FTAs should be one of the major issues of concerns for academicians and policymakers in order for countries to derive the full potential benefits from such economic integration.

Chapter III
Important Tax Issues in Thailand, Vietnam & ASEAN countries

III.1: Overview of the Tax Structure in Thailand

Figure 3.1: Comparison of Percentage Share of Tax Revenue over GDP, Thailand, Vietnam and some OECD countries, 2008

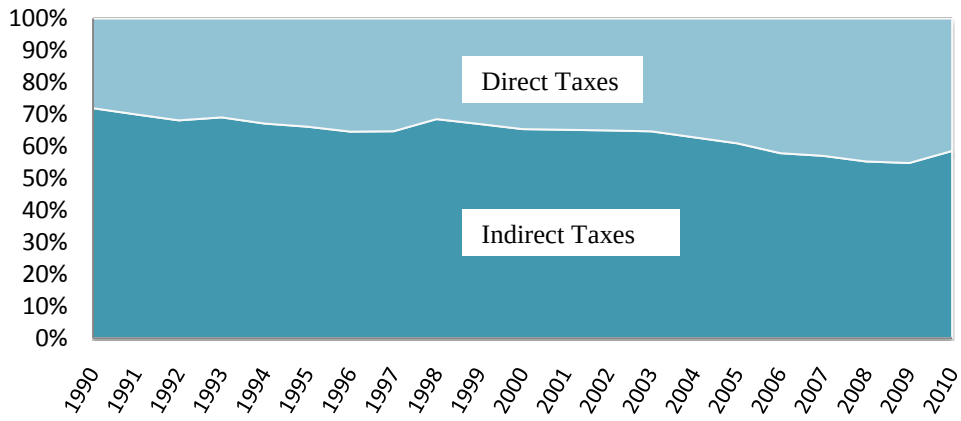


Source: Revenue Department, Bank of Thailand for Thailand, World Development Indicator and General Statistics Office of Vietnam for Vietnam data; and OECD Stat for OECD countries data

The tax revenue in Thailand is the major source of revenue. The total tax revenue was approximately 10,128 billion Baht in 2010. During the two-decade period of 1990-2010, the revenue from taxes averaged around 89 percent of the total government revenue and approximately 17 percent of gross domestic product (GDP). In 2008, the revenue from taxes over GDP was 18.16 percent and 31.65 percent in Thailand and Vietnam, respectively. The low percentage of tax revenue over GDP in Thailand reflects the smaller size

and role of the public sector relative to the size of the economy compared with those of Vietnam and developed countries (Figure 3.1).

Figure 3.2: Percentage Share of Direct and Indirect Taxes in Total Tax Revenue, 1990-2010



Source: Author's illustration based on data from Revenue Department, Excise Department, Customs Department, Budget Bureau, Treasury Department, and the Comptroller General's Department

Taxes can generally be classified into direct and indirect taxes. The direct taxes in Thailand include personal income tax, corporate income tax and petroleum income tax. The indirect taxes consist of value-added taxes, excise taxes, specific business tax, customs duties and stamp duties. The revenue from indirect taxes has long dominated the government revenue until the present. However, the trend in Figure 3.2 shows that the share of revenue from direct taxes has been continuously increasing. In 1990, the revenue from indirect taxes constitutes approximately 72 percent of the total tax revenue; in 2000, the share reduced to 65 percent and in 2010, it had reduced to approximately 59 percent.

After the Asian financial crisis in 1997, the Thai economy grew continuously and taxpayers, in particular, a corporation, began to pay income

taxes after finishing the five-year loss carry-forward deduction. Among the types of taxes in Table 3.1, the value-added tax generated the most revenue of all taxes in Thailand, amounting to approximately 28% in 2010. This is followed by corporate income tax revenue, about 26% of the total tax revenue in the same year. The third highest source of revenue is the excise tax, around 23% of the total revenue in the same year. It can also be observed that corporate income tax is increasing in its share of the total revenue. It can also be observed that there is a decline in customs duties revenue. This has been because of the settlement in Free Trade Area (FTAs) between Thailand and trading partners as indicated in Chapter II. The Thai government is obliged to reduce the tariff rates across the board subsequently.

Table 3.1: Composition of Tax Revenues in Percentage Share by Tax Category

Tax Category	1990	1995	2000	2005	2010
Personal Income Tax	11.03%	11.83%	12.80%	11.10%	11.79%
Corporate Income Tax	16.51%	21.57%	20.29%	24.83%	25.72%
Value-Added Tax	-	22.40%	26.84%	29.07%	28.41%
Specific Business Tax	-	3.89%	2.37%	1.98%	1.30%
Excise Tax	20.54%	21.32%	23.53%	21.06%	22.96%
Customs Duties	25.51%	17.65%	12.16%	8.32%	5.50%
Other Taxes	26.42%	1.35%	2.01%	3.64%	4.33%
Total Tax Revenue	100.00%	100.00%	100.00%	100.00%	100.00%

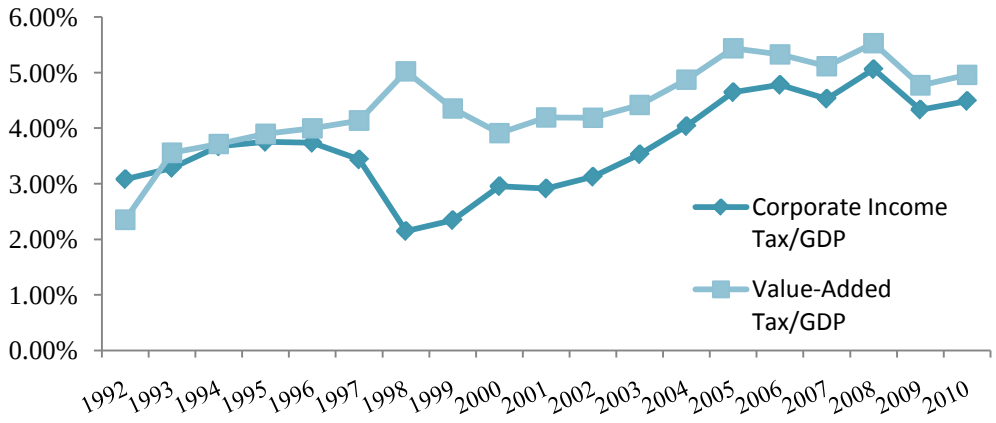
Source: Author's calculation based on data from Revenue Department, Excise Department, Customs Department, Budget Bureau, Treasury Department, and the Comptroller General's Department

III.2: Corporate Income Tax in Thailand

Corporate income tax in Thailand is a direct tax levied on a juristic company or partnership established under Thai or foreign law and carries on business in Thailand or derives certain types of income from Thailand. This also includes any joint venture and any trading or profit-seeking activity carried on by a foreign government or its agency or by any other juristic body incorporated under a foreign law. The revenue from corporate income tax

plays an important role in Thailand's tax revenue. The corporate tax revenue in Thailand was approximately 454,565 million Baht. The corporate tax revenue generated 3.08 percent of the GDP in 1992 before the crisis. After the crisis in 1997, the share of corporate income tax decreased for a few years and began to recover since 2000. In 2010, the corporate income tax made up 4.49 percent of GDP, the second highest source of tax revenue after value-added tax whose contribution to GDP was 4.96 percent (Figure 3.3).

Figure 3.3: Corporate Income Tax over GDP and Value-Added Tax over GDP, Thailand, 1992-2010



Source: Author's illustration based on data from Revenue Department and Excise Department

One of the major objectives of tax reform in the past was to increase Thailand's competitiveness. Others may include compensating declining tax revenues, and supporting the macroeconomic objectives and the income distribution issues. The rationale is that to increase competitiveness on trade and investment, the total income tax burden should not be different from that of Thailand's competitors. Income taxes, both personal income tax and corporate income tax, are the key factor that businesses consider before investing. In Thailand, the personal income statutory tax rate (37 percent) and the corporate income statutory tax rate (30 percent) are relatively high, compared with those of neighbouring countries, except the Philippines. In Malaysia, for example, the personal income tax and corporate income tax rates are 29 percent and 28 percent, respectively (Table 3.2).

Table 3.2: Regular Business Tax Regime in some ASEAN Countries

	Indonesia	Malaysia	Philippines	Thailand	Vietnam
Standard Corporate Income Tax Rate	30%	28%	35%	30%[1]	28%[2]
Personal Income Tax Rate	Progressive rate from 5-35%, depending on amount of taxable income	Progressive rate from 0-28%, depending on amount of taxable income	Progressive rate from 5-32%, depending on amount of taxable income	Progressive; 0-37%, depending on amount of taxable income	Progressive; 0-40%, depending on the amount of taxable income
Interest, Dividends and Capital Gains	Interest: 15% Dividends:15% Capital gains: 35%	Interest: 28% Dividends: 0% Capital gains: 0%	Interest: 20% Dividends: 19% Capital gains: 10.5%	Interest: 15% Dividends:10% Capital gains: 0%	Interest: 0% Dividends: 0% Capital gains: 0%
Depreciation (method and allowance; buildings versus plant and machineries	Buildings: straight-line-basis: 5%. Plant and machinery: 25% declining balance or 12.5% straight line.	Buildings: straight-line-basis; 10% first year, 3% thereafter. Plant and machinery: straight-line basis; 14% for 6 years	Buildings and plant and machinery: straight-line, double-declining balance, or the sum-of-the-years-digits methods. Rates not defined; based on economic or useful life of the asset or the ones used for financial reporting	Buildings: straight-line basis; 5%. Plant and machinery: straight-line basis; 20%	Buildings: straight-line basis; 5%. Plant and machinery: straight-line basis; 10%

Source: Botman et al (2008)

[1] However, progressive rate for small businesses (with paid-up capital below 5 million baht) or company registered at the Stock Exchange of Thailand from 20% to 25% to 30%.

[2] Vietnam's National Assembly approved the new CIT reduction from 28% to 25% on 3 June 2008.

The description regarding corporate income tax in Thailand states as follows (see more details in the Revenue Department website at http://www.rd.go.th/publish/6044.0.html):

"Corporate income tax (CIT) is levied on both Thai and foreign companies. A Thai company means a company incorporated under the law of Thailand. Thai company is subject to tax in Thailand on its worldwide net profit at the end of each accounting period (12 months). A foreign company means a company incorporated under foreign law. Generally, a foreign company is treated as carrying on business in Thailand if it has an office, a

branch or any other place of business in Thailand or has an employee, agent, representative or go-between for carrying on business in Thailand. A foreign company carrying on business in Thailand is subject to CIT only for net profit arising from or in consequence of business carried on in Thailand, at the end of each accounting period. However, a foreign company engaged in international transport is subject to tax on its gross receipts. When a foreign company disposes its profit out of Thailand, such profit will be subject to tax on the sum disposed. Profit also means any sum set aside out of profits as well as any sum which may be regarded as profit.

A foreign company, not carrying on business in Thailand but deriving certain types of income from Thailand, such as service fees, interests, dividends, rents, professional fees, is subject to corporate income tax on the gross amount received. It is collected in the form of withholding tax by which the payer of income shall deduct the tax from the income... The corporate income tax rate in Thailand is 30% on net profit. However, the rates vary depending on types of taxpayers.

In the calculation of CIT of a company carrying on business in Thailand, it is calculated from the company's net profit on the accrual basis. A company shall take into account all revenue arising from or in consequence of the business carried on in an accounting period and deducting there from all expenses in accordance with the condition prescribed by the Revenue Code. As for dividend income, one-half of the dividends received by Thai companies from any other Thai companies may be excluded from the taxable income. However, the full amount may be excluded from taxable income if the recipient is a company listed in the Stock Exchange of Thailand or the recipient owns at least 25% of the distributing company's capital interest, provided that the distributing company does not own a direct or indirect capital interest in the recipient company. The exclusion of dividends is applied only if the shares are acquired not less than 3 months before receiving

the dividends and are not disposed of within 3 months after receiving the dividends."

III.3: Thailand's Double Tax Agreement[1]

Double taxation is a case where tax is being levied twice from the same amount of income in two or more states. A Double Tax Agreement between Thailand and other countries is to avoid or eliminate double taxation. If the rate of tax stipulated in the Revenue Code is different from that of an agreement, the rate which is more beneficial to the taxpayer is applied. Residents of Thailand and contracting states are eligible to benefits granted in the DTA. Thailand first concluded the double tax agreement (DTA) with Sweden in 1963. The Thai DTA network continues to be expanded and updated. So far, Thailand has concluded DTAs with 52 countries (as of May 2006). The DTA that Thailand has with countries in APEC are shown in Table 3.3. In general a DTA comprises 4 major parts:

A. Scope

(1) Persons Covered

The DTA applies to persons who are residents of the Contracting States. In order to be classified as a Thai resident and be entitled to treaty benefits, a person must be one of the following:

- An individual who stays in Thailand for a period or periods exceeding in the aggregate 180 days in a tax year;
- A juristic person who is incorporated under the Civil and Commercial Code of Thailand.

(2) Taxes Covered

The DTA applies to only income taxes, namely personal income tax, corporate income tax and petroleum income tax. Other indirect taxes such as value added tax and specific business tax are not covered by the DTA.

[1] Information extracted from Revenue Department www.rd.go.th/publish/21973.0.html

B. Types of income

In general the DTA does not stipulate any specific item of income and tax rate. It provides whether the source or resident country is entitled to tax certain income. If the source country has taxing rights, the income will be subject to tax according to the domestic laws of that country.

The DTA also prescribes a tax rate level on investment income; namely, dividends, interest and royalties. Then the source country can tax such income at a rate not exceeding the rate prescribed within the agreement. In many cases the tax rates within the DTA are lower in comparison to the domestic tax rates in order to reduce tax impediments to cross border trade and investment.

Some Articles of the DTA clearly do not allow the source country to exercise taxing rights on income such as income from international air transport and business profits provided that the business is not carried through a permanent establishment in the source country.

C. Elimination of double taxation

The focus of a DTA is the elimination of double taxation. Each DTA may prescribe different methods of elimination of double taxation of a person by the resident country:

(1) Exemption method

The country of residence does not tax the income which according to the DTA is taxed in the source country.

(2) Credit method

The resident country retains the right to tax the income which was already taxed in the source country. It calculates its tax on the basis of the taxpayer's total income including income from the other country which according to the DTA is taxed in that other country. However, it allows a deduction from its own tax for the tax paid in the other country. Where a DTA does not exist with a particular country, there are provisions within the Royal

Decree No. 300 which allow unilateral credit relief against Thai tax for tax paid in the other country by a Thai juristic person.

D. General provisions

The last part of the double tax agreement provides administrative assistance such as exchange of information between tax administrations and dispute resolution procedures.

Table 3.3: Thailand's DTA with countries in APEC

Country	Entered into force	Tax Year of Enforcement
Australia	27 December 1989	1 January 1990
Canada	16 July 1985	1 January 1985
China, P. R.	29 December 1986	1 January 1987
Hong Kong	7 December 2005	1 January 2006
Indonesia (amendment)	21 October 2003	1 January 2004
Japan	30 August 1990	1 January 1991
Korea (amendment)	29 June 2007	1 January 2008
Malaysia	2 February 1983	1 January 1983
New Zealand	14 December 1998	1 January 1999
Philippines	11 April 1983	1 January 1983
Singapore	27 April 1976	1 January 1976
United States of America	15 December 1997	1 January 1997
Vietnam	31 December 1992	1 January 1993

Source: Revenue Department www.rd.go.th/publish/29163.0.html

III.4: Corporate Income Tax in Vietnam[2]

The overall revenue from taxes in Vietnam in 2008 was approximately 155,212 billion Dongs. Table 3.4 shows an overview of tax composition in Vietnam. It can be observed that taxes on consumption significantly contributed to the tax revenue, followed by taxes on foreign invested firms and tax on high income earners. The taxes on foreign invested firms show an increasing trend since 2002 until the present.

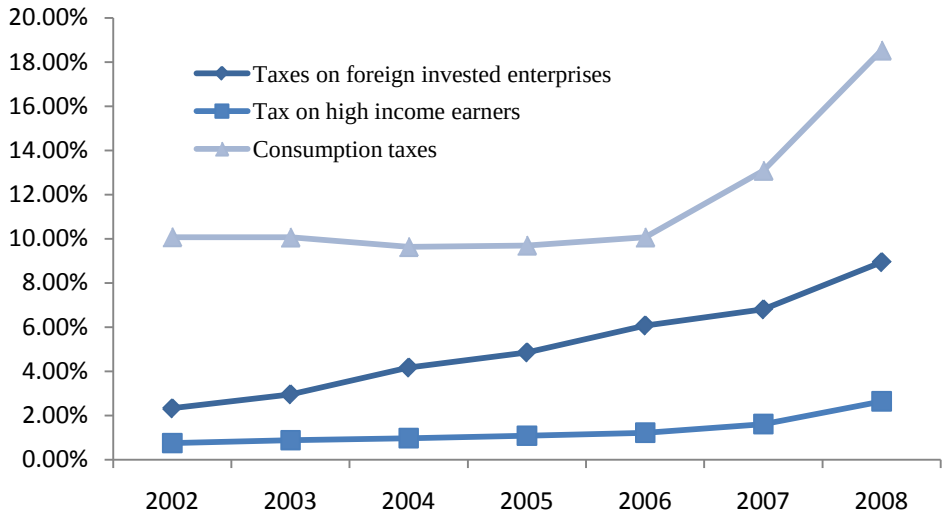
[2] Information obtained from the courtesy of Vietnam Institute of Finance. Additional information extracted from Global Legal Group's *International Comparative Legal Guide to: Corporate Tax 2011*, a Chapter on Taxes in Vietnam; and Vietnam Briefing News, www.vietnam-briefing.com/news

Table 3.4: Tax Revenue Composition of Vietnam by Tax Category

Tax Category	2005	2006	2007	2008
Taxes on foreign invested enterprises	29.65%	33.42%	29.90%	28.25%
Tax on agricultural land use	0.21%	0.14%	0.11%	0.06%
Tax on high income earners	6.58%	6.70%	7.07%	8.34%
License tax	4.35%	4.35%	5.42%	4.77%
Export and import duties, special consumption tax; Surtax on import	36.76%	33.99%	36.56%	38.61%
VAT on imports	22.46%	21.40%	20.95%	19.97%
Total Tax Revenue	100.00%	100.00%	100.00%	100.00%

Source: General Statistics Office of Vietnam

Figure 3.4: Share of Vietnam Taxes on Foreign Invested Enterprises, Tax on High Income Earners and Consumption Taxes over GDP, 2002-2008



Source: General Statistics Office of Vietnam
Note: Consumption taxes include export and import duties, special consumption taxes, surtax on imports and VAT on imports.

In Vietnam, the headline rate of corporate income tax on profits is currently 25 percent. This rate had been reduced from 28 percent on 3 June 2008 to allow companies in Vietnam to become more competitive. The revised incentive regime provides two preferential tax rates, 20 percent which will apply for 10 years and the 10 percent which will apply for 15 years; it

dropped the 15 percent tax rate. However, the rate that is applicable to the activities of prospecting, exploration and mining of petroleum and gas ranges from 32 percent to 50 percent, respectively. In practice, CIT is paid on a quarterly basis. The tax base is the accounting profit in the annual financial statements prepared in accordance with Vietnamese accounting standards, subject to adjustments stipulated by the Law on CIT. In particular, assessable income shall equal to the taxable income less exempt income and losses carried forward from previous years. Taxable income is computed by starting with revenue/turnover and deducting allowable incurred expenses. Additional adjustments are made for expenses that are not deductible for income tax purposes. Taxable income is the difference between total revenue, whether domestic or foreign sourced, and deductible expenditures, plus other additional income.

Although Vietnamese accounting law provides a possibility for a parent company to prepare consolidated financial statements at the end of annual accounting periods, Vietnamese tax law does not permit a group company to file a consolidated tax return. There is no relief in Vietnam for losses of overseas subsidiaries. Losses arising from an offshore investment project of a Vietnamese company shall not be permitted to be offset against the Vietnamese taxable income generated by the company for CIT purposes.

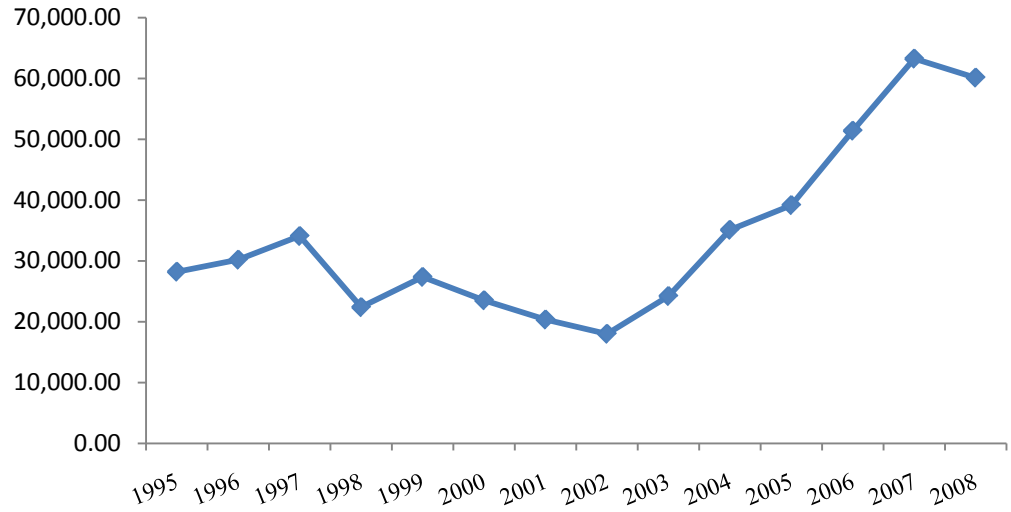
For multinational companies, most relevant Vietnamese taxes aside from CIT and VAT include personal income tax, import and export tax, special sales tax, foreign contractor withholding tax; natural resource tax, registration fees (similar to stamp duty in other jurisdictions), business license tax, property tax; currently there are no actual property taxes in Vietnam but there are land use fees to be paid to the government by certain users such as foreign invested enterprises; and compulsory social insurance/health insurance and unemployment insurance contributions (which may be similar to payroll tax in other jurisdictions). The taxable profits of a local branch of multinationals must be determined in the same way as other independent

entities in Vietnam. A local branch can, however, claim a tax deduction on the management expenses which are allocated to the branch by its overseas head office up to the level allowed by CIT regulation.

Chapter IV
Foreign Direct Investment in ASEAN, Thailand and Vietnam

IV.1: Overview of FDI in ASEAN

Figure 4.1: Net FDI Flows to ASEAN, 1995-2008, US$ Million



Source: ASEAN FDI Database, ASEAN Secretariat

The net foreign direct investment (FDI) flows to ASEAN in 2008 was US$ 63,260 million. The FDI flows in Figure 4.1 shows an increasing trend during the past decade. According to ASEAN Foreign Direct Investment Statistics Database, indicated in Table 4.1, FDI inflow from ASEAN during 2006-2008 was 15 percent of total FDI inflows to ASEAN which ranked second after EU whose share was 22.3 percent. Amidst this scenario, member countries compete in offering tax and tax-related incentives as a package to attract investing multinational corporations from within and outside ASEAN.

Table 4.1: Top Ten Sources of FDI Inflows to ASEAN, US$ million

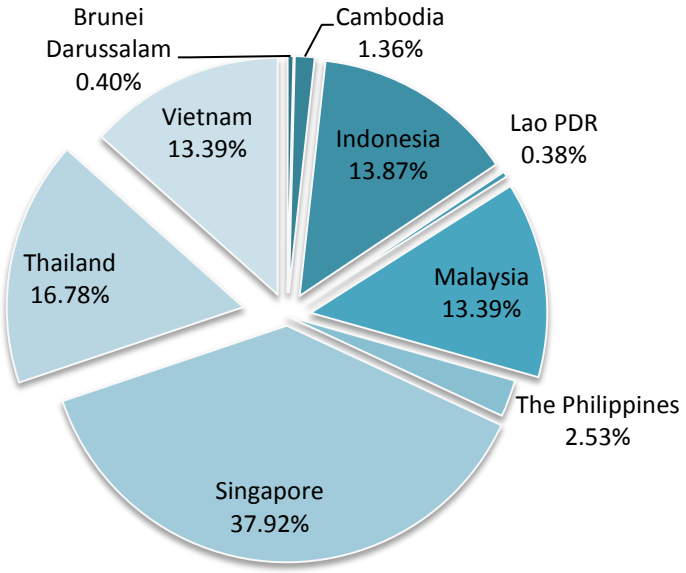
County/Region	Cumulative Value, 2006-2008	Cumulative Share, 2006-2008
European Union (EU)-25	41,244.94	22.34%
ASEAN	28,079.20	15.21%
Japan	26,281.88	14.24%
USA	13,288.85	7.20%
Other Central & South America[1]	6,744.93	3.65%
Bermuda	5,848.44	3.17%
Republic of Korea	5,644.64	3.06%
Cayman Island	5,501.05	2.98%
Hong Kong	3,443.28	1.87%
China	3,391.18	1.84%
Total Top ten	139,468.41	75.56%
Others[2]	45,117.50	24.44%
Total FDI inflow to ASEAN	184,585.90	100.00%

Source: ASEAN FDI Database

[1] Includes countries in Central and South America, other than Argentina, Brazil, Mexico and Panama

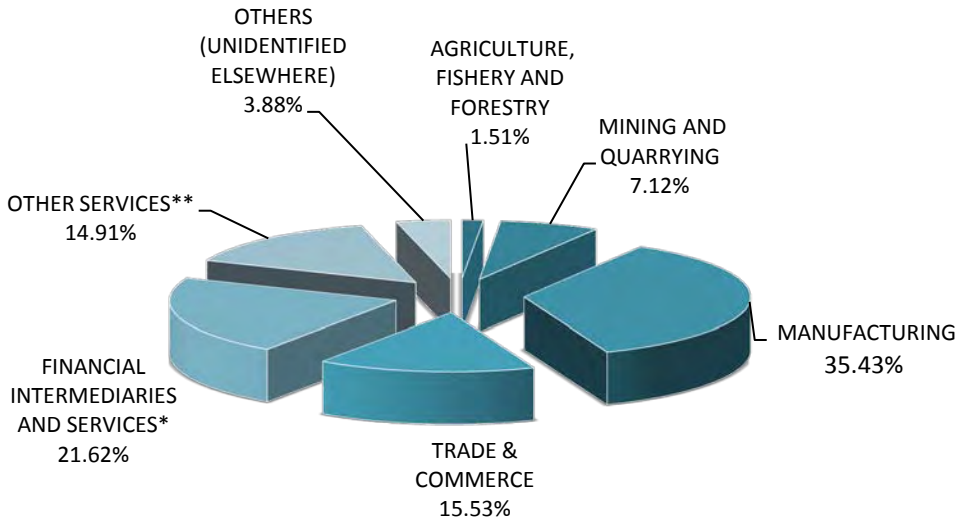
[2] Includes inflow from all other countries, as well as total reinvested earnings and inter-company loans in the Philippines.

Figure 4.2: Percentage Share of Total FDI inflow to ASEAN, 2008



Source: ASEAN Finance and Macro-economic Surveillance Unit Database, ASEAN Merchandise Trade Statistics Database, ASEAN Foreign Direct Investment Statistics Database

Figure 4.3: Percentage Share of Cumulative FDI Inflows to ASEAN by Sector, 1999-2007

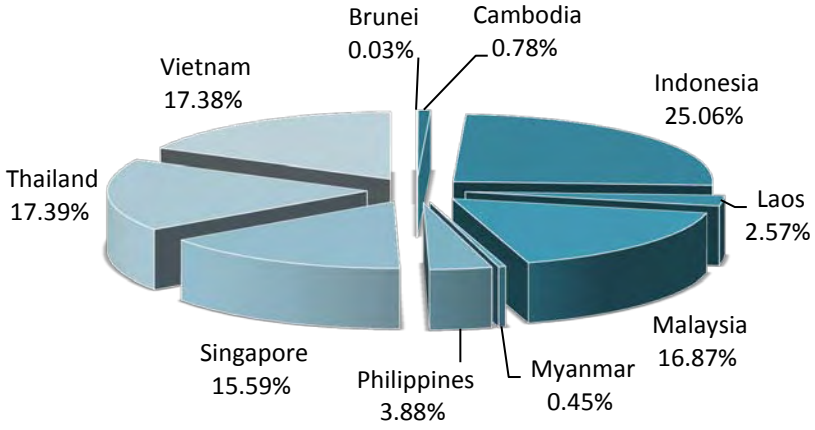


Source: Author's calculation and illustration based on ASEAN FDI Database; ASEAN Secretariat

*Financial intermediaries and services (including insurance)

**Other services include construction, real estates and other related services.

Figure 4.4: Percentage Share of Cumulative FDI Inflows in Manufacturing to ASEAN by Country, 2003-2007



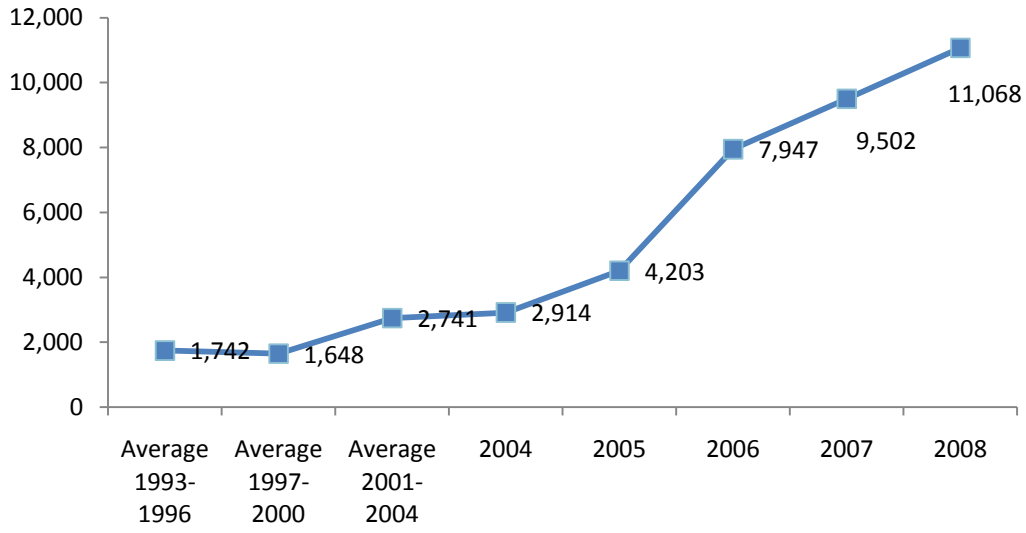
Source: Author's calculation and illustration based on ASEAN FDI Database; ASEAN Secretariat.

The total FDI inflow to ASEAN in 2008 was US$ 60,137 million, the share to member countries is shown in Figure 4.2. In terms of the total share of FDI inflow, Singapore receives the highest share of approximately 38 percent, followed by Thailand, Indonesia, Malaysia and Vietnam of approximately similar proportion. The nature of FDI into ASEAN divides into several major sectors as illustrated in Figure 4.3. Singapore and Thailand receives high proportion of investment on financial intermediaries and services as well as trade and commerce. Much of the mining and quarrying sector goes to Brunei, Laos, Myanmar and Vietnam. Figure 4.4 illustrates the cumulative share of FDI in manufacturing sector among ASEAN countries. Indonesia seems to be the largest recipient of manufacturing sector, followed by Thailand and Vietnam with similar proportion.

In 2010, Southeast Asian countries saw a significant rebound in FDI inflows. Due to favourable demographic and robust domestic demand, Indonesia and Vietnam are expected to be the most attractive to foreign investors. Other countries are also expected to receive increase FDI inflows but at slower pace. Thailand, although having domestic demand and strong export sectors, the country faces political risks. There will be general election in 2011 and businesses are expected to delay plans until the political atmosphere becomes more stable. For Malaysia, the recently announced 10-year Economic Transformation Program (ETP) is expected to help boost the country's attractiveness to foreign investors in the coming years.

Along with various initiatives to intensify the Association of Southeast Asian Nations (ASEAN) integration and ASEAN Free Trade Area (AFTA), the long term trend of intra-ASEAN foreign direct investment (FDI) inflows during the past two decades has shown a positive projection (Figure 4.5).

Figure 4.5: Intra-ASEAN FDI Inflows, US$ Million

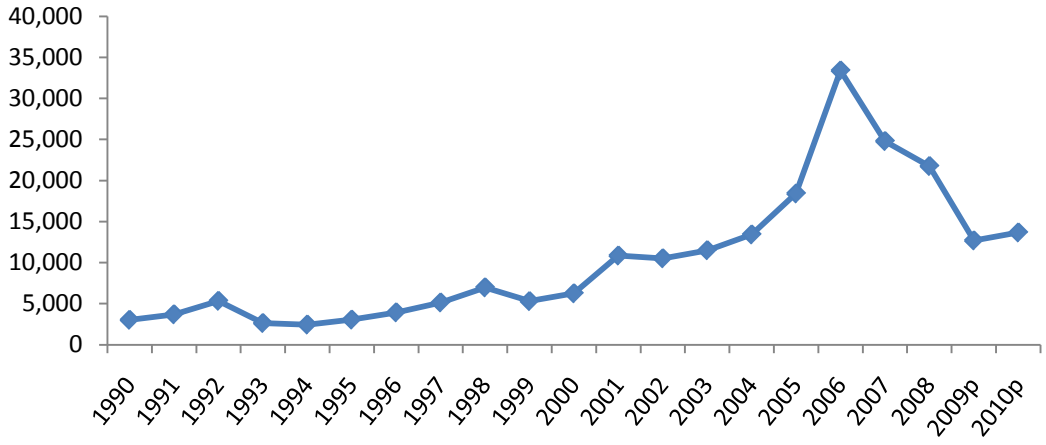


Source: UNCTAD FDI/TNC and ASEAN FDI Databases, ASEAN Secretariat

Pertaining to their motives, multinational corporations cautiously plan so as to enhance investment flows from regions of low anticipated profits to those of high returns. In terms of internal efficiency, production costs can be reduced as factor prices tend to differ across nationals. Moreover, through FDI within economic integration, it can bypass protective instruments and some restrictions in the importing member country (for the case of export-oriented investments). For instance, both EU and non-EU multinationals investing in the European Union circumvented a common external tariff barrier and benefitted from location-specific advantages. Taking into account the behaviour of multinationals, member countries in the EU have been jointly considering about optimising tax policy designs through tax treaties. The same holds true for the future of ASEAN as the degree of integration becomes more intense.

IV.2: Overview of FDI in Thailand

Figure 4.6: Total FDI Inflow to Thailand, 1990-2010, US$ Million



Source: Bank of Thailand

The overall FDI inflow to Thailand during the last two decades is represented in Figure 4.6. In common with other Southeast Asian countries, FDI has been one of the important factors contributing to the economic growth in Thailand. FDI inflow to Thailand has been on the rise with exceptional pace since 1988. This increase was partially due to the 1985 Plaza Accord, upon the sharp appreciation of Japanese yen causing a rise in production cost. The effects spread to several Asian newly industrialising economies (NIEs) at that time like Taiwan, Hong Kong and Singapore. This led to a relocation of several Japanese companies' production base in Thailand and other developing counties, particularly in the labour-intensive industries. During this period, the Thai government considered switching from import substitution to export promotion. This also induces FDI to the country. Other factors aside from Plaza Accord which induce FDI to Thailand include stability of Thai baht, devaluation of currency that generates competitiveness of the products in the global market and the low wages due to the conservative minimum wage policy. There was also the Investment Promotion Act in 1987

that allows tax privileges and the establishment of industrial and export processing zones (Tangkitvanich et al, 2004). The trend began to decline in 1994 due to the completion of production bases of NIEs, emergence of infrastructure and human resource bottlenecks, and existence of domestic and international political instability in Thailand (Pupphavesa and Pussarungsri, 1994).

In 1997, there was a financial crisis in Asia which could have negative impact on the Thai economy. However, it turned out that FDI was more profitable during the economic downturn since cost of investment reduced excessively inducing increasing number of mergers and acquisitions. Siamwalla et al (1999) explained that the revival of FDI to Thailand after 1997 was the result of several supporting factors including the exchange rate shift, promising growth of recipient economies, cheap and good quality inputs into the production, special privileges granted by the Thai government in support of foreign industries, and stability of political and economic policies in Thailand.

Tangkitvanich et al (2004) divides the periods of FDI development policies as shown in Table 4.2.

Table 4.2: Thailand's Major Developments in FDI Policy Regime

Period	Development
State Capitalism (1940s-1950s)	• **State monopolisation of most imports and exports.**
Import Substitution (1958-1971)	• **First Economic Development Plan (1961-1966) brings reduction in direct government involvement in the economy and greater promotion of private investment.** • **Import substitution policy was introduced.** • **High level of protection in the form of tariff and local content requirement provided for capital-intensive industries, i.e. Automobile and Steel industry.** • **High tariff imposed on finished consumer products.** • **Industrial Promotion Act of 1960 establishes an organization that later becomes the Board of Investment, establishing the use of tax concessions.** • **Tariff structures revised several times to give greater protection to domestic industries.** • **Balance of payments problems arise due to the import of parts and components, leading to discussions of the sustainability of the import substitution policy.**

Export Promotion (1972-1992)	• **Third Economic Development Plan (1972-1976) brings shift toward export promotion.** • **Investment law revised in 1972 to provide exemptions from duty on raw materials and intermediate items for exporting industries.** • **Alien Business Law of 1972 enacted, prohibiting foreigners from entering several business areas.** • **21 provinces were designated as investment zones.** • **Investment Promotion Act in 1977 introduced income tax holidays and 50% concessionary import duty on machinery.** • **Four investment zones established in 1978.** • **Tax incentives on raw materials and machinery reduced for Bangkok and Samut Prakarn to promote industrial decentralization.** • **Baht devaluations between 1983 and 1991.** • **Investment Promotion Act revised in 1987 introducing tax privileges and refunds, industrial zones, and export-processing zones.** • **6th Economics Development Plan (1987-1991) aims to improve income distribution and reduce incomes disparity.** • **Encourage industries to locate away from city areas.**
Promotion of Industrial Decentralization (1993-1996)	• **Seventh Economics Development Plan (1992-1996) aims to reduce income disparity between urban and rural areas and promote sustainable development.** • **Investment Promotion Act revised in 1993 to promote industrial decentralization with incentives provided to encourage industrial to locate outside Zone 1.** • **Local content requirement eliminated for motorcycles in anticipation of the TRIMs Agreement of 1995.**
Post Crisis Liberalization (1997-present)	• **Liberalization extended as part of IMF-led reform package.** • **Foreign Business Act 1999 enacted, allowing full foreign participation in most manufacturing sectors.** • **Condominium Act revised in 1998 to allow foreigners to wholly own buildings on two acres or less of land.** • **Corporate Debt Restructuring Advisory Committee established to monitor and accelerate debt restructuring.** • **ASEAN Investment Agreement adopted in 1998.** • **Bankruptcy Act revised in 1999 to establish a central bankruptcy court.** • **Local content requirements eliminated for vehicle assembly in 1999.** • **Foreigners allowed to own 100% of shares in promoted manufacturing projects in 2000.** • **Local content requirements eliminated in dairy products in 2003.**

Source: Tangkitvanich et al (2004), p. 244

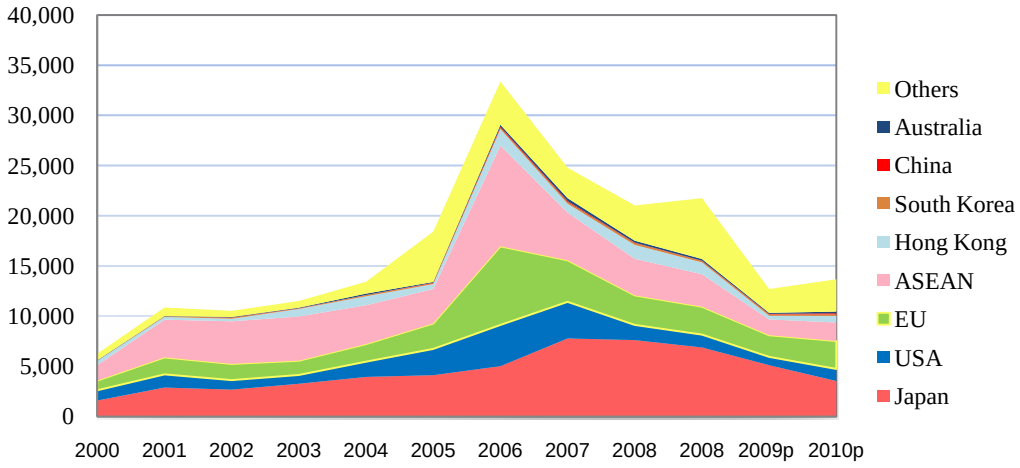
The Board of Investment provides tax and non tax incentive for foreign investors. Tax incentives include corporate income tax holidays up to 8 years, import duty reductions or exemptions on machinery and raw materials, additional 50 percent reductions of corporate income tax for 5 years, double deduction of public utility costs, and 25 percent deductions for infrastructure construction or installation costs in addition to normal capital depreciation. Non-tax incentives include land ownership rights for foreign investors, permission to bring in foreign experts and technicians, work permit and visa

facilitation where by a One-Stop-Shop will be provided to assist foreign investors and Visas and Work Permits can be issued in 3 hours. Exemption from corporate income tax and dividend tax can last for around three to eight years depending on the zones that the businesses are located in. Zone 1 provides the lowest incentive with tax holidays for 3 years, while zone three provides the highest incentives with tax holidays for eight years. Only for priority activities that foreign investors will be given maximum priorities regardless of zones. These priority activities include agriculture and agro-industries, biotechnology, molds & dies, jigs and fixtures, farm machinery and food processing machinery, sintered products, alternative energy, research and development, and software development. BOI had also set out new policy direction for 2010 called the "Investment Promotion Policy for Sustainable Development" where provision of incentives would be more specific on three groups of targeted industries namely 1) activities that are related to manufacture of eco-friendly material and product, e.g. bio plastic; 2) activities that are related to energy saving and alternative energy; and 3) activities that are involved in high technology, e.g. automotive electronics, biotech, nano-tech, and functional textile (Asawachintachit, 2010 and BOI, 2004).

The survey by UNCTAD (2004) indicates that in 2004-2005 Thailand ranks the third in economic attractiveness in FDI after China and India. With the rapidly rising wages in several newly developing economies, several investors had found Thailand to be still an attractive country for investment where in 2006 FDI value had increase at tremendous level with several investing countries doubling investment capital during that year. Even though there seems to be a downward trend since 2005 due to increasing competition from Asian countries becoming more liberalised, as well as political instability during some period, and external factors like the US crisis in 2008 which had also impact Japan's economy and FDI worldwide, the overall trend still show potential for growth. In 2008-2009, FDI from major countries started to

reduce consistently as political riot in Thailand makes investors feel uncertain about the economic and investment stability. Still, with the development of economic integration among ASEAN and other economies (China, India, Australia, New Zealand, Korea, and Japan) in terms of free trade areas (FTAs), this seems to generate positive impacts on Thailand's investment climate. With the reduction in tariff and non-tariff barriers, greater liberalisation of services, trade facilitation measures, improved investment rules and more transparent regulatory environment, Thai government, particularly BOI, are positive about the impacts of FDI from formulating FTAs. In fact, FTAs with developed countries tend to add credibility to Thai government's policies and would induce FDI inflows from other countries. However, for small countries like Thailand, this could lessen the bargaining power in negotiating with developed countries. This could be one of the reasons why the intensification of integration within the region of Southeast Asia is being observed. However, the strength and success also depends on the internal administration, one of which is the tax issue discussed in this research.

Figure 4.7: FDI Inflow to Thailand by Country, 2000-2010, US$ Million



Source: Author's calculation and illustration based on data from the Bank of Thailand

Four major countries with highest FDI inflows to Thailand include Japan, Singapore, which has very dominant share among ASEAN countries, US and Hong Kong (Figure 4.7 and Table 4.2). In terms of the number of firms, Japan has the highest share of foreign participation of 37.9 percent in 2000 followed by Taiwan 16.8 percent, European countries 12.3 percent, US 7.5 percent, China 6.9 percent, Singapore 4.4 percent and Korea 2.5 percent (Hill, 2004).

Table 4.3: FDI Inflow to Thailand from ASEAN, by country, 1990-2010, US$ Million

Country	1990	1995	2000	2005	2010p
Brunei	0.83	0.04	0.00	6.66	0.32
Indonesia	2.56	12.39	5.38	4.74	3.34
Malaysia	18.11	14.07	22.66	122.48	174.26
Philippines	0.25	0.59	0.92	30.99	40.06
Singapore	459.45	346.13	1,504.35	3,268.66	1,614.18
Cambodia	0.00	1.33	2.31	1.78	6.23
Laos	0.17	4.18	4.10	0.83	6.00
Myanmar	0.00	0.00	0.63	0.10	0.22
Vietnam	0.00	0.01	0.22	1.39	0.73
ASEAN	481.36	378.73	1,540.58	3,437.63	1,845.34

Source: Bank of Thailand

Only after 1999 had FDI from Japan increased and had been a major contributor to Thailand's economic revival representing a significant amount of capital inflow until 2008. In the beginning of 2008, Japan's total direct investment in Thailand totalled 3,154 million US dollars representing 30 percent of net FDI into Thailand. It was the highest level of Japanese FDI in Thailand. According to Iwami (2009), Japan's outward direct investment in 2008 grew by 53 percent which represent the highest percentage of FDI from Japan. The increase in investment was different from that in the early 1980s which concentrated on manufacturing sector. Instead the increase in FDI went

to non-manufacturing sector which increased 115 percent in 2008 due to two reasons. First, there was an increase in non-manufacturing sector investment represented by a series of investments by Japanese financial institutions to strengthen their capital base. Second, with the rising commodity prices, this had doubled the investments in the mining industry to secure the investor's access to natural resources. However, the surge in Japanese investment was short lived as the US economic crisis imposes a negative growth on the Japanese economy. Particularly during the fourth quarter of 2008 onwards, Japanese economy shrank by double digit percentages. The impact from the US crisis was very severe as it led to dramatic decrease in Japanese exports and the drop in private-sector capital investment with the largest impact on the manufacturing sector whereby investment dropped by 24.3 percent. Thus, the impact on the Japanese economy reflected a fatal impact on the Japanese investment atmosphere worldwide as well as in Thailand where value of FDI dropped significantly from US$ 3,154 million in 2007 to US$ 2,533 million in 2008 and further to US$ 2,267 million in 2009.

Apart from Japan, Figure 4.7 illustrates that ASEAN investment in Thailand is also substantial. During past decade, Intra-ASEAN FDI flows have grown substantially. According to Uttama (2009), there was a growth of 52 percent in intra-FDI flows or of US$ 9.5 billion in value during 2007. This was facilitated by the ASEAN Investment Area (AIA) agreement in 1998 and enlarged through the ASEAN Comprehensive Investment Agreement (ACIA) in 2007. Major ASEAN countries investing in Thailand included Singapore, Malaysia and Indonesia. Singapore is largest investor among the ASEAN countries. Singapore contributed over 90 percent of investment capital in Thailand as compared with other ASEAN 5 (Brunei Darussalam, Indonesia, Malaysia, Philippines and Singapore).

Although Singapore had continuously been a major investor in Thailand amongst ASEAN countries, their movement of capital inflow had been significant after 2000. With the high level of savings and outward

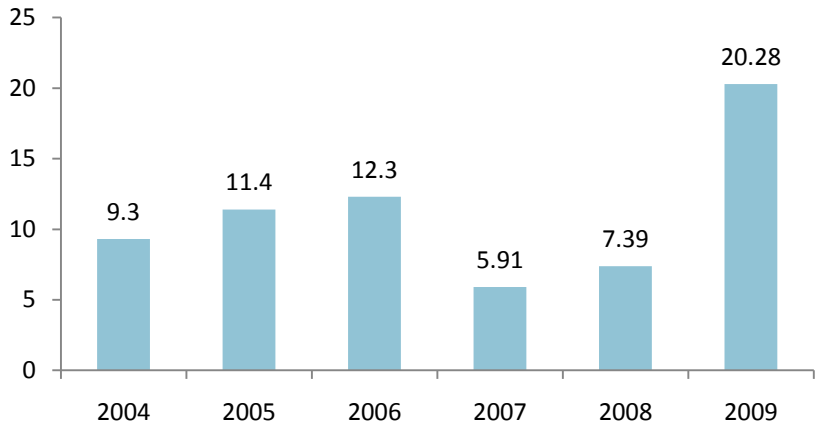
looking strategy, Singapore's investment in Thailand had concentrated in the following sectors namely finance, petroleum, and real estate where many came in the form of loans to affiliated companies. Reasons for the large amount of foreign capital from Singapore had been attributed to the increasing acquisitions of firms by Singaporean investors mainly among financial and insurance services and manufacturing sectors. Examples of Singaporean FDI in financial services include United Overseas Bank, Singapore's largest bank, bought Thailand's Bank of Asia from ABN Amro, the Dutch financial group; and investment of Temasek Holding in Thailand's Shin Corporation (Manager Online, 2006). However, after the political problem engaged by a Singaporean firm and a Thai company in 2006 along with the instability in the Thai economy in 2006, investment from Singapore dropped drastically until the present.

The third major country investing in Thailand is United States with total value of FDI during the past 3 decades from 1980-2009 of around 9.16 billion US dollar. In the early 1980s, US had been the largest investor into Thailand. Value of FDI investment from US to Thailand peaked in 1997 with inflows of US$ 1.28 billion. However, after mid-1998, FDI from US gradually reduced until the present. Investment from US had been focused in financial, trade, service and industrial sector mainly in resource-based industries (relatively large proportion of FDI in the chemical industry). The value of FDI to Thailand was negative during 2007 – 2009 as US entered the economic crisis and slowly trends of FDI started to recover as US crisis situation improves.

FDI from Hong Kong represents the third largest investor in Asian region to Thailand. The amount of FDI increased steadily from US$ 54 million in 1981 to US$ 582 million in 1992 and was highest at US$ 613 million in 2003. Many of the investment went to resource based projects especially in the canned food, wood furniture, and rubber industry products which are export oriented industries (Pupphavesa, 1991). Apart from Hong

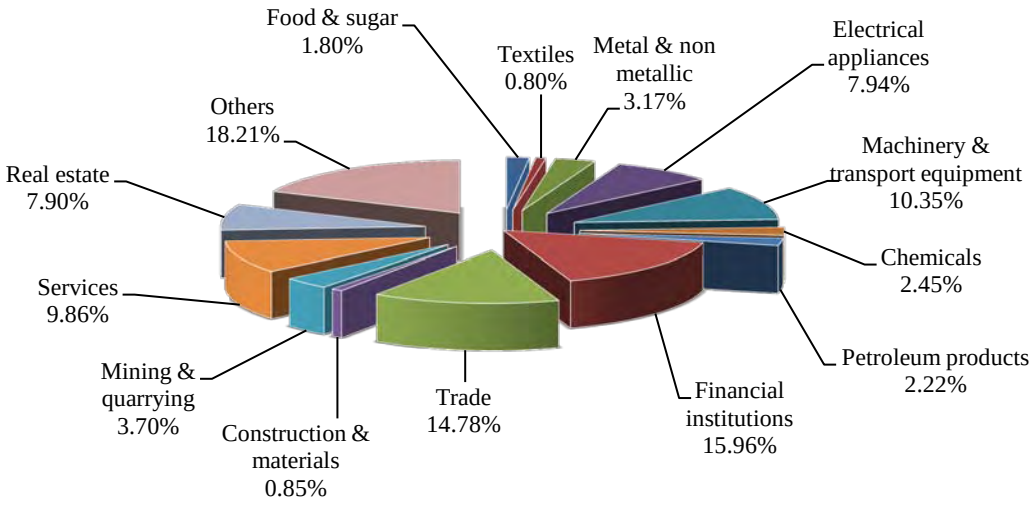
Kong, Taiwan's investment in Thailand is also significant. Taiwan started to increase their FDI into Thailand since 1987 with the largest investment of US$ 280 million in 1990, third largest foreign capital supplier in that year. Taiwanese investment in Thailand is concentrated in manufacturing industries with a few in finance, trade and construction. During 1988-1990s, Taiwan's investment in Thailand increased significantly mainly in labour intensive light industries such as textile, electronic parts, plastics, food processing, and agricultural products. Many of the Taiwanese investment in Thailand are also concentrated on the export-oriented industries. However, as the scales of Taiwanese firms are relatively smaller as compared to Japan, US, and Hong Kong investors, they contributed significantly in terms of number of establishments in Thailand (Akrasane, 1991). The trend of Taiwanese investment application in Thailand is illustrated in Figure 4.8.

Figure 4.8: Trend of Taiwanese Investment Application in Thailand, Billion Baht



Source: International Affairs Division, Board of Investment, Thailand

Figure 4.9: Percentage Share of FDI Inflow to Thailand by Sector, Average 2005-2008



Source: Author's calculation and illustration based on data from the Bank of Thailand

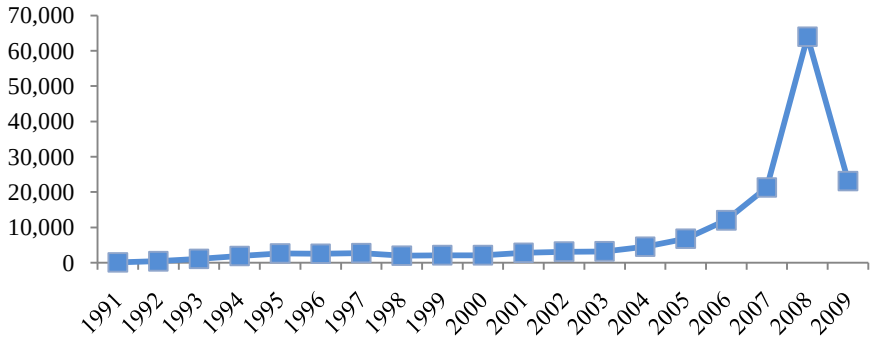
The inflow of FDI in industrial sector, which include electrical appliances, machinery and transport equipment and metal and non-metallic industries, has received the highest share among all the sectors. It had already been mentioned that the reason for Thailand's rapid economic growth in the early 1990s was due to the FDI where growth reached double digit. Moreover, Thailand's transformation in from agricultural to industrial economy has also been supported by FDI especially in the electronics and automobile industry where these are export-oriented. It was after the crisis that there seems to be structural problems in industrial and financial sectors that contributed to the crisis. However, by that time, Thailand's competitive advantage over other countries in terms of labour cost began to diminishes. Investors started to shift to China and later on Vietnam. Thailand had been criticised for its incapability of shifting toward higher value-added activities due to under-investment in appropriate skill trainings. Despite the loss of

competitive advantage, the share in the industry remains still dominant as shown in Figure 4.9.

IV.3: Overview of FDI in Vietnam

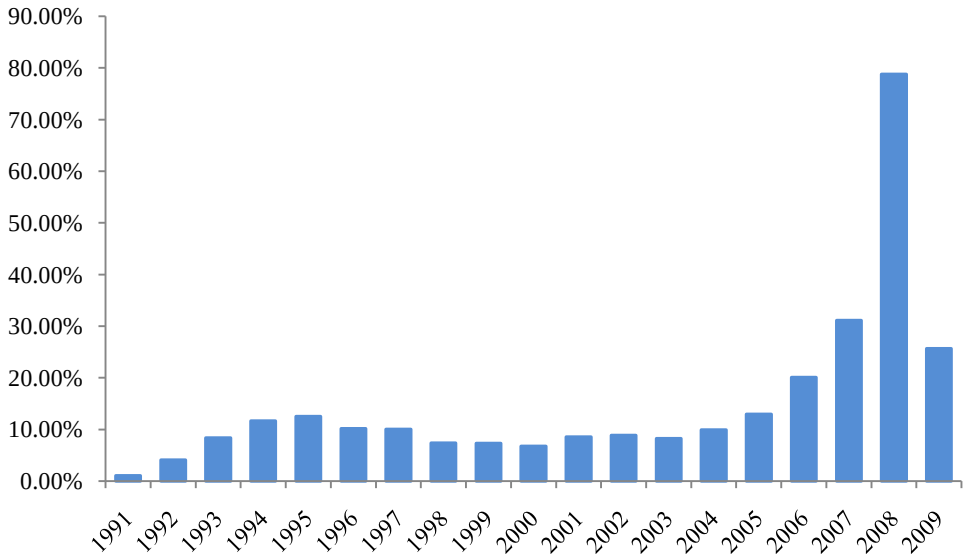
Vietnam has experienced the transition from a central planning system to a socialist-oriented market system. The transition process involves the liberalisation of markets and opening up of the economy to trade and investment in the global market. This also includes the increasing of recognition of private property rights. During the past decade, the country has experienced a significant structural change. The shares of industry and services over GDP had steadily increased to approximately 40 percent and 39 percent, respectively, while the share of agriculture, including fisheries and forestry had declined to around 21 percent. During the same period, the average GDP growth rate was about 7.25 per year, where the rate was 5.3 percent in 2009. Vietnam is said to be one of the fastest growing economy in the region. This also, however, resulted in a significant trade deficit and inflation of around 10 percent.

Figure 4.10: FDI Inflow to Vietnam 1990-2009, US$ Million



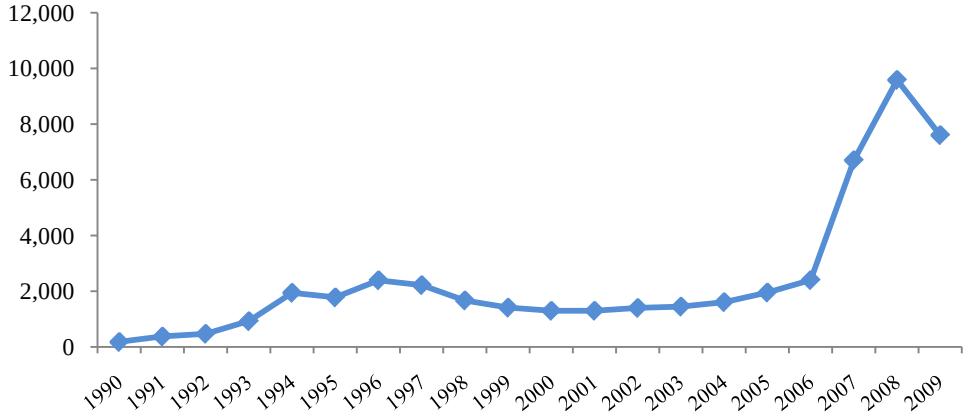
Source: Freeman (2002) for 1991-2000; Vietnam International Trading & Consulting (2010) for 2001-2009

Figure 4.11: FDI Inflows to Vietnam as percentage of GDP



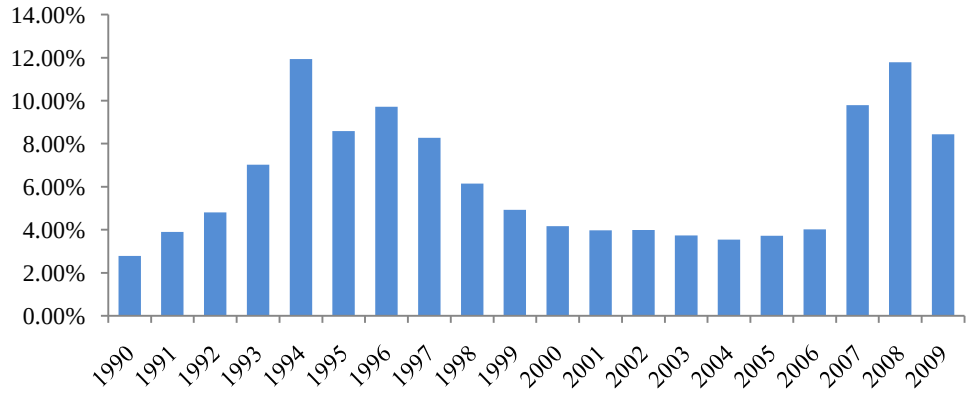
Source: Freeman (2002), Vietnam International Trading & Consulting (2010) and World Bank (2010)

Figure 4.12: FDI Net Inflow to Vietnam 1990-2009, US$ Million



Source: World Development Indicator 2011

Figure 4.13: Share of net FDI inflow to Vietnam as percentage of GDP



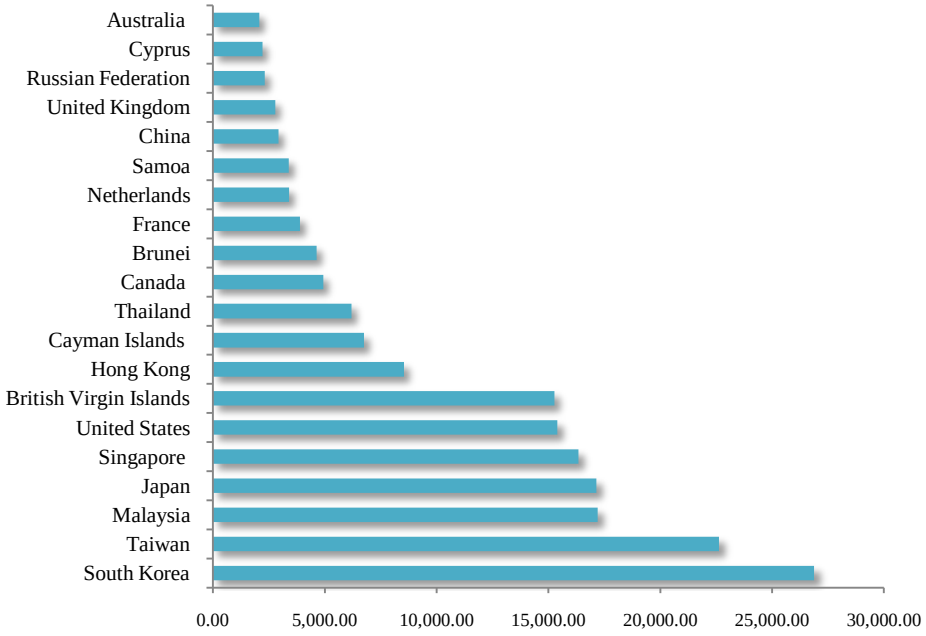
Source: World Development Indicator 2011

Vietnam assumed its accession to the World Trade Organisation (WTO) in January 2007, after which the country began a new phase of foreign direct investment with a dramatic increase since FDI has seen a dramatic increase over the past decade. From Figure 4.11, the share of FDI inflow to GDP has risen considerably from 13 percent in 2005 to 79 percent in 2008. According to a survey conducted by the Asian Business Council Vietnam ranked third for investment attraction among Asian nations in the 207-2009 period after China and India *(Vietnam Investment Review* no. 837).

The trend started to slow down in 2009 due to the global financial crisis which led multinationals to delay investment plan, investment projects, scarcity of credits, other regional countries has raised up their competitions indexes, which could attract more FDI flow and other reasons such as competitiveness of infrastructure, administration processes. Figures 4.12 and 4.13 also show the net FDI inflows to Vietnam in amount and percentage of GDP, respectively. Even though the registered FDI suffer a dramatic reduction compared to a year earlier, the disbursed FDI at around US$10 billion was not significantly different to the prior year. It had been observed that FDI contributed considerably to the development of the economy.

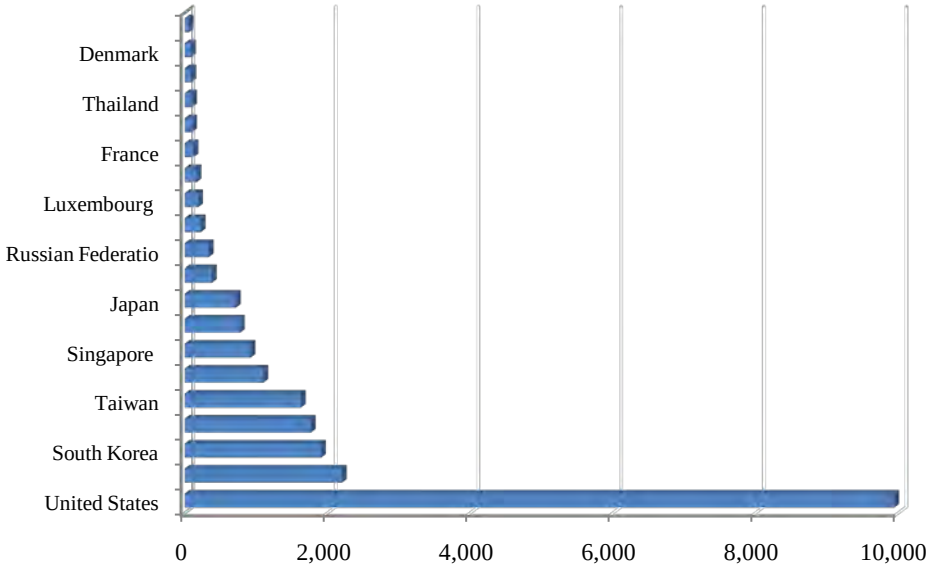
Therefore, Vietnam government has continued to encourage foreign investors to invest in Vietnam. Given the relatively poor infrastructure, the country strongly needs foreign investment to fund economic growth. As with other developing countries, Vietnam's FDI policy tries to attract capital, advanced technology and management skills so as to increase savings and improve the population's living standards. In 2010, Southeast Asian countries saw a significant rebound in FDI inflows in 2010. Similarly to Indonesia, this has been due to favourable demographic and robust domestic demand. Indonesia and Vietnam are expected to be the most attractive to foreign investors.

Figure 4.14: Cumulative FDI Inflow (registered capital) to Vietnam, by Top-Twenty Source Country, 1988-2009, US$ Million



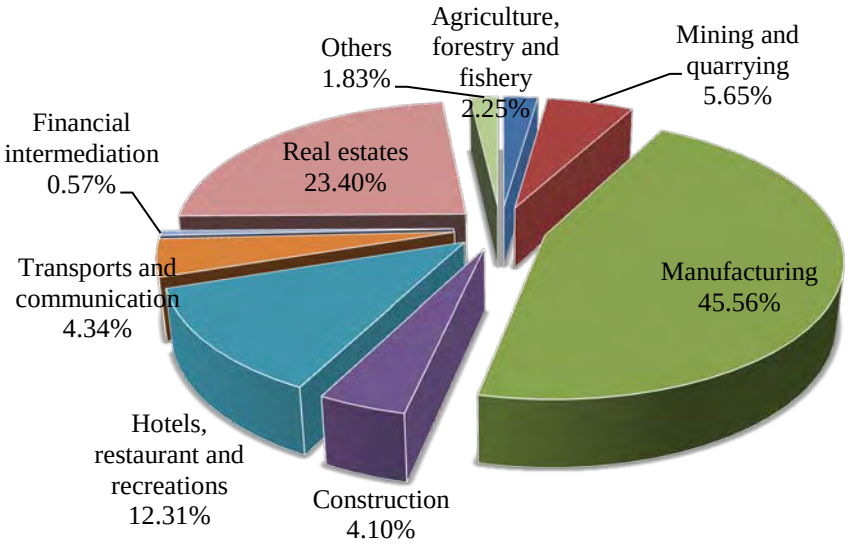
Source: General Statistics Office of Vietnam

Figure 4.15: FDI Inflow (registered capital) to Vietnam by Country by Top-Twenty Source Country, 2009, US$ Million



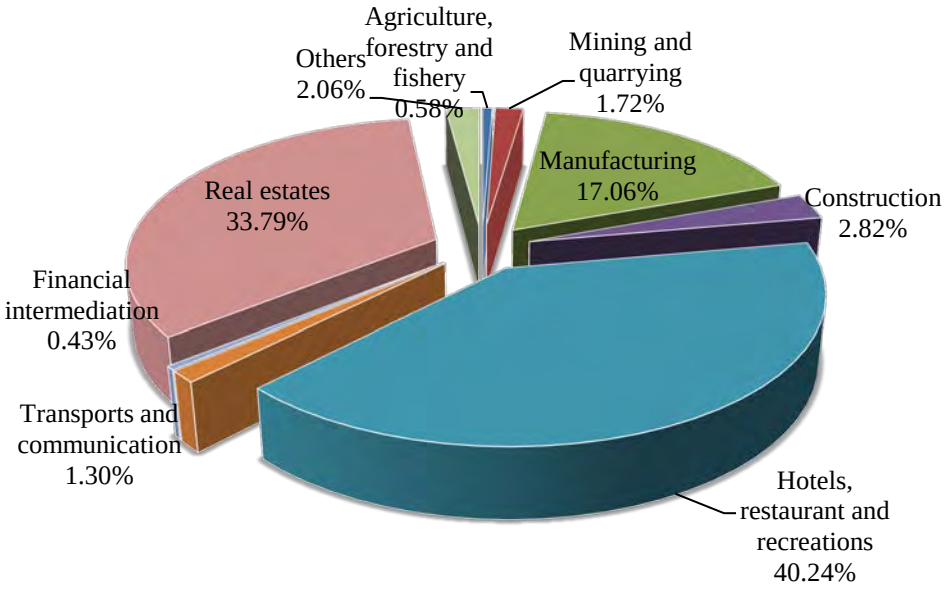
Source: General Statistics Office of Vietnam

Figure 4.16: Cumulative Share of FDI Inflow to Vietnam by Sector, 1988-2009



Source: General Statistics Office of Vietnam

Figure 4.17: Share of FDI Inflow to Vietnam by Sector, 200



Source: General Statistics Office of Vietnam

As for the sources of FDI to Vietnam during 1988-2009, Thailand has been among the top-twenty countries investing in Vietnam, constituting 3.19 percent of total FDI inflows (Figures 4.15 and 4.16). Figure 4.17 portrays the cumulative share of FDI by sector during 1988-2009. Manufacturing comprises 46 percent of total FDI, while real estate comprises of 23 percent of total. By 2009, however, the share of manufacturing has reduced to 17 percent. Manufacturing was overtaken by hotels, restaurant and recreations, and real estates, which made up 40 percent and 34 percent, respectively.

Chapter V
Theoretical Foundation

V. 1: Background and Practical Issues of Cross-country Corporate Taxation

Measures to alleviate double taxation in the economic area

When two countries try to impose a domestic corporate income tax on the same income, "double taxation" occurs. For example, Company X, a resident of Country A, may be subject to double taxation when it sells commodities in Country B and, upon realising profits, both Countries A and B try to impose tax on the Company X's income at the same time. This scenario calls for a formalisation of a 'treaty' on inter-jurisdictional taxation rules. In fact, there had been theoretical principles and methods for inter-jurisdictional taxation dating back to 1920 when the League of Nations was formed. However, the tax treaties had never been formed during the inter-war political transition period. In the League of Nations' 1928 draft convention, the "Permanent Establishment (PE)" approach was proposed and, in its 1933 report, favoured the "Separate Accounts Principles" (currently known as the "Arm's Length Principle"). These two methods were the bases forming the groundwork of today's international tax principles.

The PE approach secures each country's independent taxation rights on the incomes of the permanent residence. The description of the Arm's Length Principle given by the UK Inland Revenue (Chapter 8) explains as follows:

"This [the arm's length principle] means that the terms and pricing of such transactions undertaken in the course of conducting business (such as the sale and purchase of goods and services) and in the provision of finance (both borrowing and lending) should be the same if the transactions had been between completely different parties."

A more theoretical approach on the Arm's Length Principle can be obtained from (Hirshleifer, 1956, p. 183). This Arm's Length Principle has been promoted and developed after the discussions by the Fiscal Committee of the League of Nations (now the Committee on Fiscal Affairs in the Organisation for Economic Co-operation and Development (OECD)). An example of its application can be referred to the widely-spoken Section 482 of the US Internal Revenue code which provides guidelines on measurement of the standard arm's length price.

In general, a country may choose to avoid inter-jurisdictional double taxation by means of either unilateral relief by domestic law or bilateral relief by tax treaties. By employing domestic law, a country of taxpayer's residence has the following options: (i) allowing for a deduction of foreign taxes in calculating taxable income, (ii) imposing foreign tax credit and (iii) exempting foreign income. Of these, most developed economies such as Japan and the United States adopted foreign tax credit after World War II on the basis of the theory of "capital export neutrality of taxation". The rationale of this theory indicates that taxation does not affect the decisions by domestic businesses on whether to invest at home or abroad. In most cases of foreign tax credit in the unilateral measure, however, the country of residence sets the upper bound as maximum limit of credit in the foreign tax credit system. Therefore, inter-jurisdictional double taxation is not necessarily avoided only by relying on the foreign tax credit. Hence, bilateral or multilateral tax treaties are strongly required to stimulate the economic activities of the economies in the Asia and the Pacific economic integration. This necessity is evidenced in various treaties between most developed nations in their past experiences such as the US-France tax treaty in 1945, the US-UK tax treaty in 1946 and the US-Japan tax treaty in 1954.

Tax avoidance and securing of taxation rights amongst jurisdictions

As business enterprises become more multinational, they have more incentive to take advantage from the increasingly borderless nature of the economy. For instance, non-EU companies circumvented a common external tariff barrier in the European Union. Many Japanese corporations located their vehicle assembly plants in the US to bypass the Voluntary Export Restraints[3] (VERs). Some more interesting stylised facts based on a detailed survey on the MNEs' characteristics and motives are reported in Markusen (1995, 1998a, 1998b). Other incentives for multinationals would also be to lessen their tax burden by transferring income to low tax countries. Some common examples of the reactions by most developed economies to such multinationals behaviours have been the employment of Controlled Foreign Corporation (CFC) taxation, transfer pricing taxation and thin capitalisation.

Based on the perspective of principle of 'fair' corporate taxation, the CFC taxation system levies domestic companies on their world-wide income and foreign companies on their domestic-source income. The transfer pricing taxation system levies tax on the "adjusted difference" between the higher price that a domestic firm pays to its foreign-based subsidiary in a low-tax country and the Arm's Length Price. This way, the system aims to prevent the transfer of income to low tax countries through transactions between multinationals units. The last example of the reactions of tax authorities, the thin capitalisation, denies the deduction for excessive payment of interest by a local subsidiary to the foreign-owned multinationals' parent firm located abroad. It is important to note that the interest on loans is deductible from taxable income whilst dividends are non-deductible. Hence, there are often incentives to lower tax burden by increasing interest payments and reducing dividends by the multinationals.

[3] A Voluntary Export Restraint (VER) is a restriction imposed by the government, which limits the amount of good to be exported from a country during a specified period of time.

V.2: Theoretical Foundation of Corporate Taxation and Economic Integration

General Framework

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 appropriate share of domestic tax revenue from the multinational enterprises. Making decision by the governments became more difficult at the more advanced level of economic integration. It is, therefore, important to conduct a theoretical and empirical assessment of different tax schemes within economic integration, like FTA, and their impacts on the domestic corporate tax revenue. However, not much analysis had been conducted due to several difficulties. First, it is difficult to factor in the tax strategy decision of multinational enterprises. Second, in reality, there is no uniform pattern of business response by the multinationals. Third, it is difficult to construct a model that simultaneously secures the tax revenue without imposing excessive business cost on the multinationals.

The theoretical foundation employed in this research is based on 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). The mechanism of the model will be reviewed and explained here. The objective of the model is to solve for equilibriums in three assumed stages. In the first stage, the governments choose tax rates. In choosing their tax rates, the major aim of the governments in the two countries is to maximise their tax revenue functions. The tax rates are set to be $0 < t_A, t_B, \tau_A, \tau_B < 1$. In the competitive regime, each country's government

maximises its own fiscal revenue function. In the co-operative regime, they jointly maximise tax revenue which is a combination of the tax revenue functions in the two countries. In the second stage, the multinationals chooses its transfer price by maximising its overall profit function. The profits of all firms in the models are assumed to be non-zero and non-negative. It is assumed that transfer price is derived from marginal cost and a mark-up value, *m*, in all the regimes. It is, then, to be determined how different tax regimes would affect this mark-up value on the transfer price. In the third stage, the downstream firms choose the quantity of the intermediate good required by maximising their profit functions.

The model comprises of three firms, two of which constitute the multinationals' internal linkage. Firm 1, the headquarters, is located in country A, the home country. Firms 2 and 3 are situated in host country B. Both countries are members of a free trade area (FTA) and, hence, no tariffs within the area are levied. Firm 2 is a part of the multinationals whereas firm 3 is a local firm in the host country. The internal and external trades amongst the firms in the model are patterned as downward vertical integration. It is assumed that firms 2 and 3 are symmetric and are oligopolistic buyers of input x produced by firm 1 and produce the final output, Y, where $Y_i = f_i(x_i)$ represents the production of output Y_i from input x_i, where $f_2' > 0$ and $f_3' > 0$. Firm 1 sells the intermediate good x to firms 2 and 3 at a transfer price denoted by θ. This differs from Eden's (1985) model in that firm 3 does not belong to the multinationals nor sell its final output to firm 2, which resides in the same country. The transfer price of good x is observed by the government in country B. The inclusion of firm 3 is also an added feature to Elitzur and Mintz's (1996) model in which a "fictitious" transfer price is employed. This ensures, to a higher degree, that transfer price is closer to the idealised arm's-length standard in the open market as applying the same transfer price to firms 2 and 3 makes it easier for the host country's government to observe. Despite this, it is to note that in reality, it is still possible that the multinationals give a

false report to the tax authorities by keeping two accounting books and this would lead to further complexities in the analysis. Thus, the model assumes that the governments have complete knowledge of the multinationals' accounting book. This pattern portrays an oligopolistic market structure of an industry comprising of a local firm (firm 3), possibly a public enterprise, and a foreign firm (firm 2). In order to protect its own industry, the host country government may impose a restriction on the multinationals that the price of the intermediate goods sold to its subsidiary must equal the price sold to the local firm. Again, this is effective as the model assumes that the governments have complete knowledge of all the firms' account balance.

Throughout the model, the following symbols are employed: Π = total profit of the multinationals, π_i = firm i's profit, Y_i = final output of firm i, x_i = quantity of intermediate good required by firm i, P = price of good Y, θ = transfer price of good x, c = cost of producing a unit of x and t_j = corporate tax rate in country j, where i = 1, 2, 3; and j = A, B.

Optimisation of Firm

There are different levels of taxation in countries A and B. Subject to corporate taxes, the profit functions of firms 1 in home country, and firms 2 and 3 in the host countries B are shown in (1), (2) and (3).

$$\pi_1 = (1-t_A)(\theta - c)[x_2(\theta) + x_3(\theta)]. \quad (1)$$

$$\pi_2 = (1-t_B)[P(f_2(x_2) + f_3(x_3))f_2(x_2) - \theta x_2] \quad (2)$$

$$\pi_3 = (1-t_B)[P(f_2(x_2) + f_3(x_3))f_3(x_3) - \theta x_3] \quad (3)$$

Maximising (2) and (3) with respect to x_2 and x_3, respectively, the optimal x_2 and x_3 can be obtained from the first order conditions in (4) and (5).

$$x_2^* = x_2(\theta^*) \quad (4)$$

$$x_3^* = x_3(\theta^*). \quad (5)$$

Thus, with corporate taxation in the host country, the quantity of intermediate goods required in the downstream firms remain unaffected by t_B. x_2 and x_3 are dependent on the value of θ.

The multinationals' profit function is shown in (6).

$$\Pi = (1-t_A)(\theta - c)\left[x_2(\theta) + x_3(\theta)\right] + (1-t_B)\left[P\left(f_2(x_2) + f_3(x_3)\right)f_2(x_2) - \theta x_2\right] \qquad (6)$$

In this case, the home country, country A, employs a tax system in which the foreign tax paid by the subsidiary abroad is not subject to further tax in the home country. This is the case of tax exemption, but no country enters into such agreement. In most cases, if there is double taxation, countries enter into a double tax agreement (DTA) and mostly assume ordinary tax credit. By differentiating (6) with respect to θ, through simplification and using Envelope Theorem, the first order condition is given in (7).

$$\frac{d\Pi}{d\theta} = (1-t_A)\left[x_2 + x_3 + (\theta - c)(x_2' + x_3')\right] + (1-t_B)\left[P' f_3' x_3' f_2(x_2) - x_2\right] = 0 \qquad (7)$$

From (7), the optimal transfer price is solved in (8).

$$\theta = c + m \qquad (8)$$

where the mark-up on cost, *m*, is

$$m = \frac{\dfrac{(1-t_B)}{(1-t_A)}\left[-P' f_3' x_3' f_2(x_2)\right] + x_2\left[\dfrac{1-t_B}{1-t_A} - 1\right] - x_3}{(x_2' + x_3')}. \qquad (9)$$

From (8), the effect on transfer price with respect to the change in the tax rates in country A and country B are shown in (10) and (11), respectively.

$$\frac{d\theta}{dt_A} = \frac{(1-t_B)}{(1-t_A)^2}\frac{(x_2 - P' f_3' x_3' f_2(x_2))}{(x_2' + x_3')} \qquad (10)$$

and

$$\frac{d\theta}{dt_B} = \frac{-(x_2 - P' f_3' x_3' f_2(x_2))}{(1-t_A)(x_2'+x_3')} = \frac{-(1-t_A)}{(1-t_B)} \frac{d\theta}{dt_A} \tag{11}$$

It can be observed from these two equations that the relative tax rates in countries A and B influence transfer price in negative correlation manner. The generality of these solutions is that the effect of the tax rates on transfer price would depend, first on how the two governments would determine tax rates relative to each other and second, the nature of the demand and production functions of the downstream firms. The theoretical exercise in this paper aims at providing a generalised outcome and, hence, do not specify any of these functions.

Government Decisions in Competitive Tax Regime

The tax revenue in the home country A is represented by equation (12).

$$\begin{aligned} T_A &= t_A(\theta - c)(x_2 + x_3) \\ T_A &= t_A\big(\theta(t_A, t_B) - c\big)\big[x_2\big(\theta(t_A, t_B)\big) + x_3\big(\theta(t_A, t_B)\big)\big]. \end{aligned} \tag{12}$$

By maximising tax revenue equation in (12) with respect to t_A, the first order condition is expressed in (13).

$$\frac{dT_A}{dt_A} = (\theta - c)(x_2 + x_3) + \theta_{tA} t_A (x_2 + x_3) + t_A(\theta - c)(x_2'\theta_{tA} + x_3'\theta_{tA}) = 0 \tag{13}$$

Solving (13) gives the optimal tax rate in country A as expressed in (14).

$$t_A = \frac{-(\theta - c)(x_2 + x_3)}{\theta_{tA}\big[x_2 + x_3 + (\theta - c)(x_2'+x_3')\big]} \tag{14}$$

The tax revenue in country B is expressed in (15).

$$T_B = t_B\big[P\big((f_2(x_2) + f_3(x_3)\big) f_2(x_2) - \theta x_2 + P\big((f_2(x_2) + f_3(x_3)\big) f_3(x_3) - \theta x_3\big] \tag{15}$$

Through maximisation of (15) with respect to t_B, and simplification, the first order condition is obtained in (16).

$$\frac{dT_B}{dt_B} = Pf_2(x_2) + Pf_3(x_3) - \theta(x_2 + x_3) + t_B\left[P'\, f_3'\, x_3'\, \theta_{tB}\, f_2(x_2) - \theta_{tB} x_2 + P'\, f_2'\, x_2'\, \theta_{tB}\, f_3(x_3) - \theta_{tB} x_3\right] = 0$$

$$t_B = \frac{\theta(x_2 + x_3) - Pf_2(x_2) - Pf_3(x_3)}{\theta_{tB}\left[P'\, f_3'\, x_3'\, f_2(x_2) - x_2 + P'\, f_2'\, x_2'\, f_3(x_3) - x_3\right]} \qquad (17)$$

Government Decisions in Co-operative Tax Regime

When Countries A and B in a free trade area agree on a tax treaty and operate a co-operative (harmonised) tax regime, the values of t_A and t_B that maximise the sum of the two countries' tax revenue, T_A and T_B, are solved for. Both countries jointly maximise a common tax revenue equation in (18).

$$T = T_A + T_B$$
$$T = t_A(\theta - c)(x_2 + x_3) + t_B\left[P\left(f_2(x_2) + f_3(x_3)\right)f_2(x_2) - \theta x_2 + P\left(f_2(x_2) + f_3(x_3)\right)f_3(x_3) - \theta x_3\right] \qquad (18)$$

Maximising equation (18) with respect to t_A solves for the first order condition in (19).

$$\frac{dT}{dt_A} = \frac{\partial T_A}{\partial t_A} + \frac{\partial T_B}{\partial t_A} = 0 \qquad (19)$$

where $\partial T_A/\partial t_A$ is solved in (13) and,

$$\frac{\partial T_B}{\partial t_A} = \theta_{tA} t_B\left[P'\, f_3'\, x_3'\, f_2(x_2) - x_2 + P'\, f_2'\, x_2'\, f_3(x_3) - x_3\right] > 0 \qquad (20)$$

Proof of $\partial T_B/\partial t_A > 0$: If $[P'f_3'x_3'f_2(x_2)-x_2+P'f_2'x_2'f_3(x_3)-x_3] < 0$, then $\theta_{tA} < 0$ in (10). Congruently, if $[P'f_3'x_3'f_2(x_2)-x_2+P'f_2'x_2'f_3(x_3)-x_3] > 0$, then $\theta_{tA} > 0$ in (10).

As for country B, maximising equation (18) with respect to t_B solves for the first order condition in (21).

$$\frac{dT}{dt_B} = \frac{\partial T_B}{\partial t_B} + \frac{\partial T_A}{\partial t_B} = 0 \qquad (21)$$

where $\partial T_B/\partial t_B$ is solved in (16), and

$$\frac{\partial T_A}{\partial t_B} = \theta_{tB} t_A \left[x_2 + x_3 + (\theta - c)(x_2' + x_3') \right] > 0 . \qquad (22)$$

Proof of $\partial T_A/\partial t_B > 0$: Referring to equation (8) and by substitution, if $(x_2 - P' f_3' x_3' f_2(x_2)) > 0$, then $\theta_{tB} > 0$ in (11). If $(x_2 - P' f_3' x_3' f_2(x_2)) < 0$, then $\theta_{tB} < 0$ in (11).

From (20), since $\partial T_B/\partial t_A > 0$, it follows that $\partial T_A/\partial t_A < 0$ so that the first order partial derivative of T with respect to t_A, $\partial T/\partial t_A = 0$ for co-operative tax revenue maximisation. Congruently, from (22), since $\partial T_A/\partial t_B > 0$, it follows that $\partial T_B/\partial t_B < 0$ so that $\partial T/\partial t_B = 0$.

The second-order cross derivatives with respect to t_A and t_B are then examined in (23) and (24), respectively.

$$\frac{\partial^2 T_A}{\partial t_B \partial t_A} = \theta_{tB} \left[x_2 + x_3 + (\theta - c)\left(x_2' + x_3'\right) + 2 t_A \theta_{tA} \left(x_2' + x_3'\right) \right] > 0. \qquad (23)$$

Proof of $\partial^2 T_A/\partial t_B \partial t_A > 0$: If $\theta_{tB} > 0$, then the term in the bracket is positive based on earlier proofs in (22). If $\theta_{tB} < 0$, then the term in the bracket is negative.

Under the assumption that the multiplier effect of transfer price and corresponding production decision of one firm on the other firm's production decision must be greater than unity, (24) must also be true. This is reasonable an assumption under the model's setting, given the evidence of the competing downstream firms shown in equation (8).

$$\frac{\partial^2 T_B}{\partial t_A \partial t_B} = \theta_{tA} \left[P' f_3' x_3' f_2(x_2) - x_2 + P' f_2' x_2' f_3(x_3) - x_3 \right.$$
$$\left. + \theta_{tB} t_B \left[x_2' \left(P' f_3' x_3' f_2' - 1 \right) + x_3' \left(P' f_2' x_2' f_3' - 1 \right) \right] \right] > 0 \qquad (24)$$

From (23) and (24), it can be observed that $\partial^2 T_A/\partial t_A \partial t_B$ and $\partial^2 T_B/\partial t_B \partial t_A$ are greater than zero in the model.

According to Young's (or Schwarz's) Theorem,

$\frac{\partial^2 T_A}{\partial t_A \partial t_B} = \frac{\partial^2 T_A}{\partial t_B \partial t_A}, \frac{\partial^2 T_B}{\partial t_B \partial t_A} = \frac{\partial^2 T_B}{\partial t_A \partial t_B}$ for continuous variables (Berck and Sydsaeter, 1991). Hence, this implies (25).

$$\frac{\partial^2 T_A}{\partial t_A \partial t_B}, \frac{\partial^2 T_B}{\partial t_B \partial t_A} > 0 \qquad (25)$$

The first-order partial derivatives of the tax revenue in each country with respect to its own tax rate are negative, $\partial T_A/\partial t_A < 0$, *and* $\partial T_B/\partial t_B < 0$. This implies that increasing the tax rate from the point of the co-operative tax rate would lower the tax revenue. The condition in (25) indicates that the cross (or mixed) partial derivatives for both T_A and T_B, are positive. Considering the influence of the reaction functions of both countries, the tax rates in the co-operative regime lie between the individual country's optimised competitive tax level and the downward sloping end of the its revenue curve. Thus, when considering cross-country joint tax revenue of the two countries, (23) and (24) (25) suggest that the competitive tax rates in countries A and B are relatively low and can still be raised to the co-operative tax regime level for higher revenue.

When the two countries jointly optimise a common revenue function, it is found that the resulting tax rates in both countries are above the competitive regime level. The result is congruent with the models with different settings in Wildasin (1986), Mieszkowski and Zodrow (1989) and Bloch and Lefbvre (1999). This implies that the equilibrium competitive tax rates are relatively low and can be raised to contribute to higher tax revenue. The effect of corporate tax regime on the transfer price would depend on the solution obtained from the reaction functions of the two countries' tax revenue

maximisation. This would depend on the relative tax rates of the two countries and the demand and production functions of the two downstream firms. Due to the generality of the analysis, it is only possible to indicate the signs of the variables. However, the results clearly show in (11) that the tax rates in the two countries affect the transfer price in the opposite directions.

Chapter VI

Effective Tax Rates and Foreign Direct Investment Quantity & Quality

VI.1: 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 chapter solves for 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 Center 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 in Chapter VII.

The ETRs are calculated from 240 companies listed in the Stock Exchange of Thailand (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. This figure also reflects 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 contribution to corporate tax revenue among all the companies considered.

VI.2: Estimation Results and Implications

The calculated average ETRs by sector categories and their rates of change during 2005-2008 for Thailand and Vietnam are shown in Table 6.1. The average ETRs of all the sectors are 17.09 percent and 15.09 percent for Thailand and Vietnam, respectively. The calculated rates for Thailand during this period is close to Rochananonda's (2006) calculation in the period 2002-2004 except for some variation of the rates across sectors. Generally, it is evident that many tax incentives have been introduced to corporations in Thailand and Vietnam. However, these incentives are unevenly distributed across industries. It can be observed that both the Thai government and the Vietnamese government focus the tax incentives on the export-oriented sectors, particularly the capital-intensive industries whose rates are 15.03 percent and 12.80 percent, respectively. Also for both countries, the ETRs in the domestic specific sectors are 18.95 and 17.92 percent, respectively, the

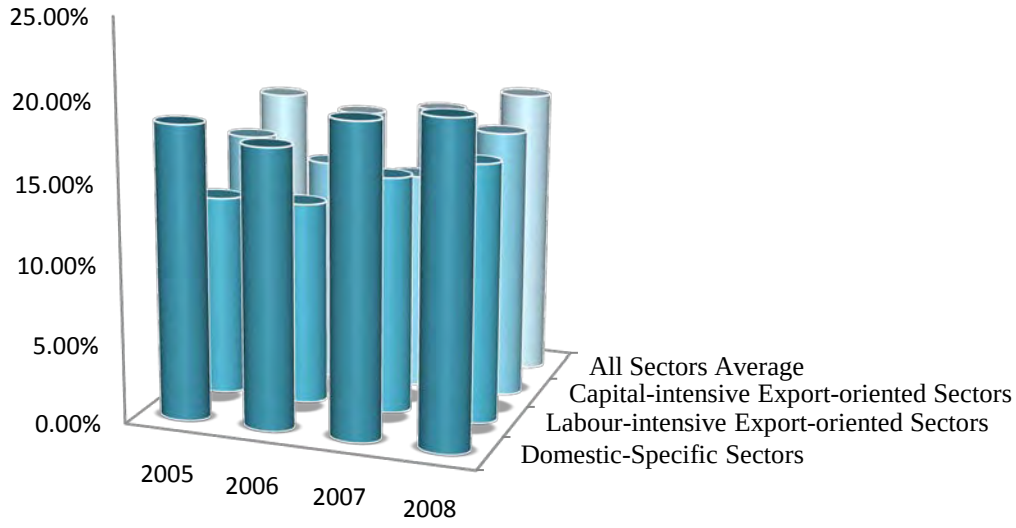
highest rates of all the sectors. Overall, both countries experience a positive average change in ETRs in all sectors during the period (Figures 6.1 and 6.2).

Table 6.1: Average ETRs and Average Change in ETRs by Category 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%

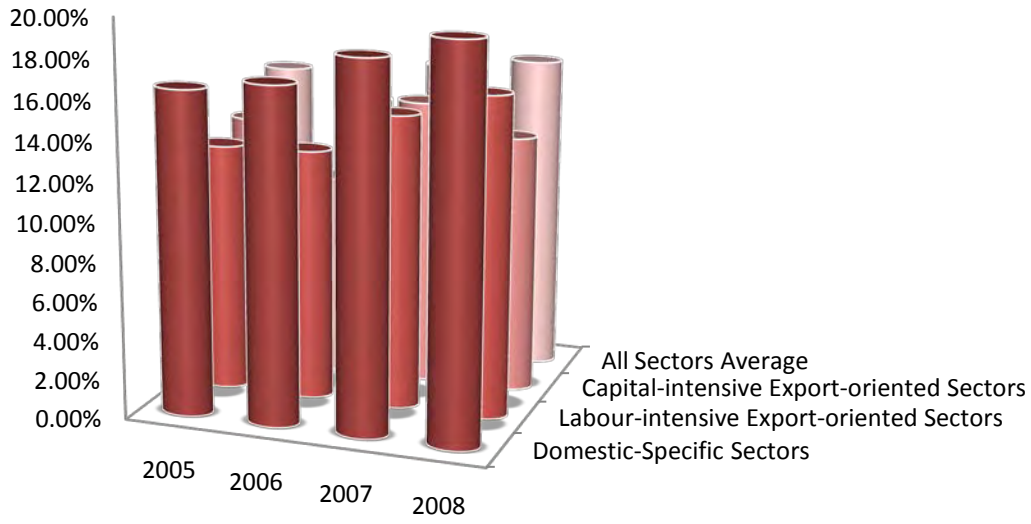
Source: Author's calculation based on financial statements of firms in SET and HOSE

Figure 6.1: ETRs by Sector in Thailand, 2005-2008



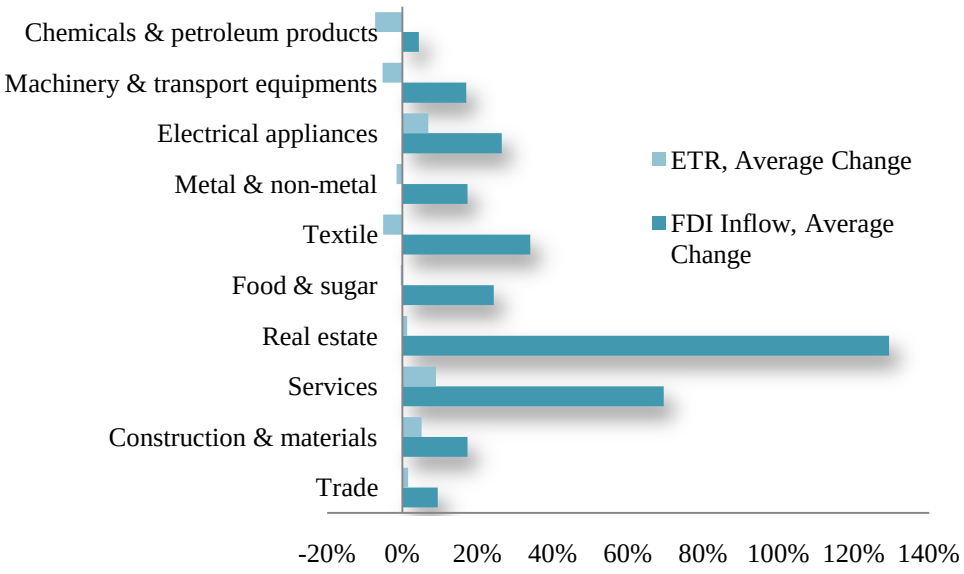
Source: Author's calculation based on financial statements of firms in SET

Figure 6.2: ETRs by Sector in Vietnam, 2005-2008



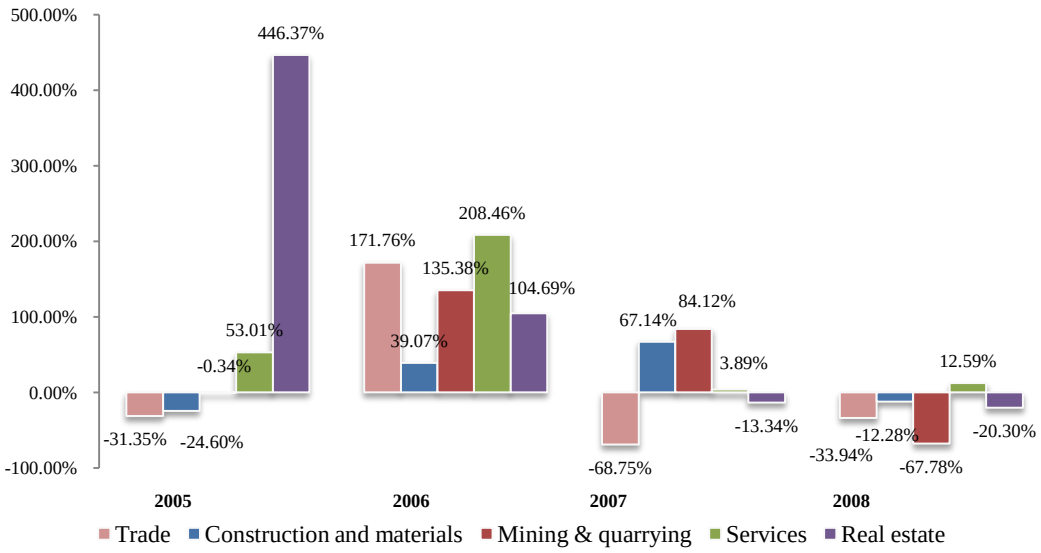
Source: Author's calculation based on financial statements of firms in HOSE

Figure 6.3: Average Changes in ETRs and FDI Inflow to Thailand by Sector, 2005-2008



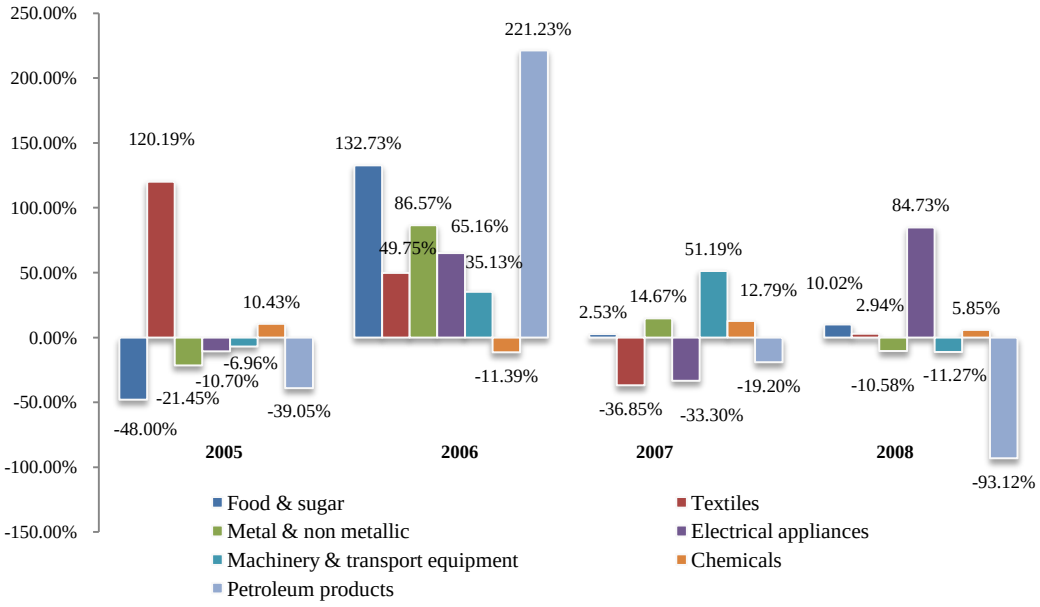
Source: Author's calculation based on data from SET and Bank of Thailand

Figure 6.4: Rate of Change of FDI Inflow in Domestic-Oriented Sectors in Thailand, 2005-2008



Source: Author's calculation based on data from Bank of Thailand

Figure 6.5: Rate of Change of FDI Inflow in Export-Oriented Sectors in Thailand, 2005-2008



Source: Author's calculation based on data from Bank of Thailand

Table 6.2: 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

Figures 6.3-6.5 show the rate of changes of FDI inflow by sector to Thailand during 2005-2008. Table 6.2 shows the sector average ETRs, profit and fiscal revenue contribution in Thailand. The FDI inflow in real estate shifted sharply during 2004-2005 and began to decline sharply later on during the period of analysis. Trade, another domestic-specific sector, experienced increase in FDI but on average has negative change in profit and tax contribution. Construction and materials has relatively the lowest ETR among the domestic-specific sectors. This sector experience positive FDI change. Overall, the domestic-specific sectors contributed highest share to the fiscal

revenue, despite higher ETRs. For the export-oriented sectors, textiles, electrical appliances, chemical and petroleum products are recovering in FDI inflows. Only services and food and sugar sectors experience annual positive change of FDI throughout the period. FDI inflow in machinery and transport equipment increase and decline slightly in 2008. It can be observed that electrical appliances experience the lowest rate of ETR but received the lowest profit rate among capital-intensive sectors and contributed lowest to the fiscal revenue. On the other hand, domestic-specific sector such as services experience highest ETRs, but also contributed higher profit rate and contributed more on fiscal revenue.

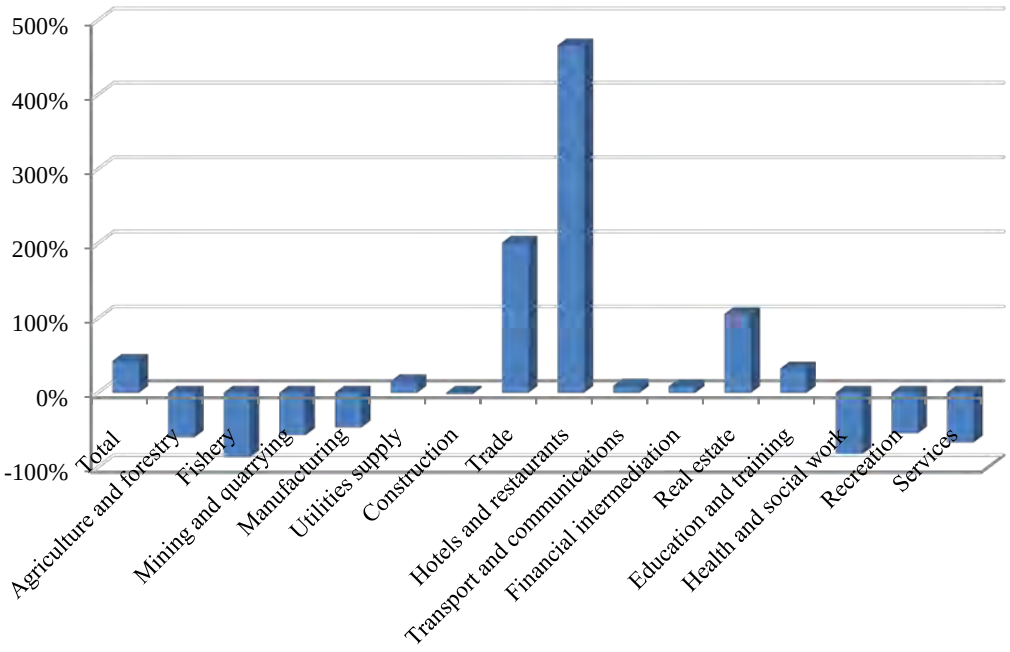
Table 6.3 shows the sector average ETRs, profit and fiscal revenue contribution in Vietnam. Figure 6.6 shows the average rate of change in FDI inflow to Vietnam during 1998-2009. Similar to the case of Thailand, the domestic-specific sectors contributed highest share to the fiscal revenue, despite higher ETR. For the export-oriented sectors, chemicals and pharmaceutical, and electrical appliances experience lowest ETRs among all the sectors. Electrical appliances and transportation experience negative change in ETRs rates. However, unlike the case of Thailand, these two sectors yield high profit rates. This is probably it is at the beginning stage of market exploration as FDI inflow began to increase significantly during 2005 (Figure 4.10). FDI inflow rate of change in domestic-oriented sectors such as trade, hotel and restaurants and recreation are seen to have a dominant increase during the period.

Table 6.3: 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%**

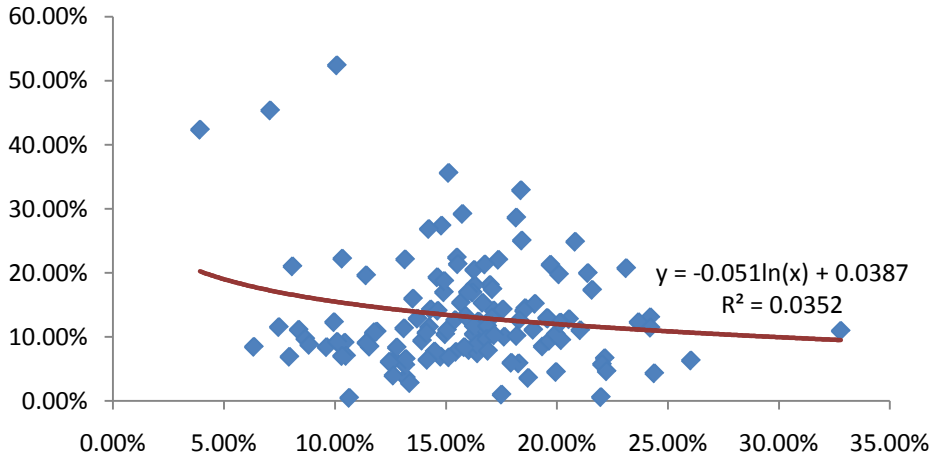
Source: Author's calculation based on data from HOSE, General Statistics Office of Vietnam and Ministry of Finance

Figure 6.6: Average Rate of Change FDI Inflow in Vietnam, 1998-2009



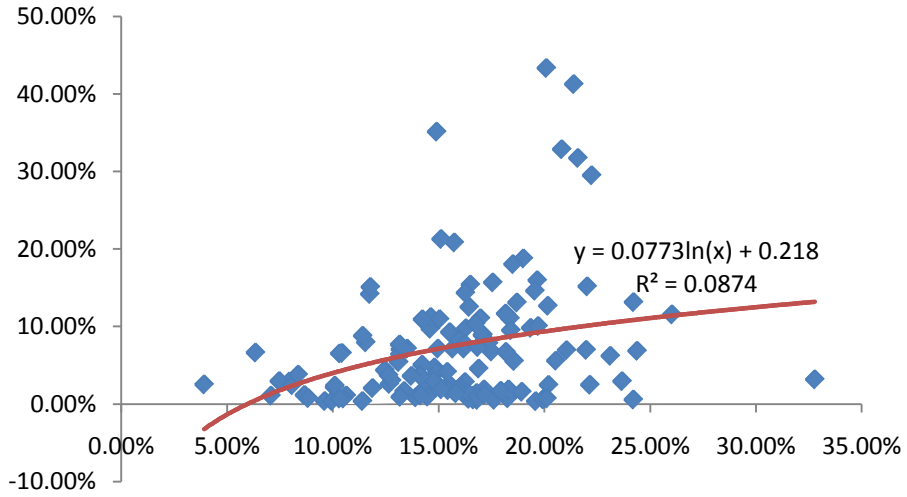
Source: Author's calculation based on data from General Statistics Office of Vietnam

Figure 6.7: Scatter Plot of Sector ETR and Profit in Thailand and Vietnam, 2005-2008



Source: Author's calculation based on data from SET and HOSE

Figure 6.8: Scatter Plot of Sector ETR and Fiscal Revenue Contribution in Thailand and Vietnam, 2005-2008



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

Figures 6.7 and 6.8 show the scatter plots of the sector average ETR, profit levels and fiscal revenue contribution in Thailand and Vietnam during 2005-2008. As expected, the ETR is generally negatively correlated to the profit rate and positively correlated to fiscal revenue contribution. However, it is more positively correlated to the fiscal revenue contribution. Both governments place more focus on export-oriented sectors, particularly the capital-intensive sectors such as electrical appliances and machinery. Therefore, most capital-intensive industries relies more on tax incentives, for example, they prefers to depreciate assets due to their possession of fixed asset. On the contrary, tax incentives on domestic-specific sector might not be the key factor on investment decisions. The location-specific advantage and legal regulations, for example, seems more influential. For both countries, it can be observed that tax incentives do not have a crucial impact on investment decisions in the domestic-specific sector. This means that the domestic market and the location seem to be a crucial factor on investment decisions in this sector. It is observed that during the same period, the average profit of most

sectors in Vietnam remain high compared to Thailand. Currently, Vietnam seems to have very high prospects to attracting more FDI as it is the beginning and, unlike Thailand, the market for FDI remain unsaturated. However, the same that Thailand experienced 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. Other developing and emerging countries can compete lowering their tax rates and provide investment promotion incentives. This could turn out to be a zero-sum game competition. The more important condition is that of the economic structure, accommodating infrastructure, human resource, return to R&D Investment, a more stable political condition, improvement in protective intellectual rights, and other legal framework.

Chapter VII
Panel Data Analysis on Effective Tax Rate, FDI and Tax Revenue Contribution

VII. Data and Description of the Methods

The application empirically investigates Thailand's corporate effective corporate tax rates (ETRs) calculated from publicly available financial information of 240 companies listed in the Stock Exchange of Thailand (SET) during 2005- 2008 and their contribution to the country's corporate tax revenue as conducted in Chapter VI. These exclude firms which are financial institutions, firms under rehabilitation and firms that are listed in the Market for Alternative Investment (MAI). According to Rochananonda (2006), most of the corporation incomes, approximately 60%, are from companies listed in the SET. The ETRs are calculated from the firm's corporate income tax expenses out of the profit. This figure also reflects the outcome of the multinational firms' decisions in allocating their resources across jurisdictions. The calculated average ETRs and their rates of change in Thailand and Vietnam during 2005-2008 have been illustrated in Table 6.1.

Table 6.1 shows that, while the national statutory tax rates on corporation is 30 percent and 28 percent, respectively, the average ETRs are approximately 17 percent and 15 percent, respectively. This portrays that corporations have received various tax-related incentives introduced by the authorities of both countries. However, these incentives are not evenly distributed across different sectors as the ETRs vary from 10 percent to 25 percent in the two countries. 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 sector might not be the key factor on investment decisions. The location-specific advantage, for example seems more influential. The average ETRs of firms which are domestic-specific sectors in both countries are about 18-19 percent, which is higher than that of the export-oriented sector.

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-colinearity 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 Hochiminh Stock Exchange 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 rate (ETR) and profit (PROF) by sector.

The firms' data in the financial reports are obtained from SET Smart Database and HOSE electronic database, 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 for Thailand's data are shown in Table 7.1. The estimation results using data from Thailand and Vietnam are shown in Table 7.2.

VII.2: Estimation Results and Implications

Table 7.1: Estimation Results for OLS Panel Data Regression using Thailand Data

Dependent variable: LCT

Variable	Coefficient Estimates	Standard Error	t-value
LETR	1.0382	0.3721	2.79**
LFDI	-0.2034	0.1840	-1.11
LPROF	0.2550	0.0380	6.71***
DUM	0.1210	0.0637	1.90*
CONS	-1.4525	0.5088	-2.85
Wald (joint): Chi^2 = 8070 [0.000] **			
Wald (dummy): Chi^2 = 8.150 [0.004] **			
AR (1) test: N (0,1) = -1.440 [0.150]			
AR (2) test: N (0,1) = -4.349 [0.664]			

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

Table 7.2: 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.

The coefficients for tax and profit elasticities show positive sign and are significant at the confidence interval of 99 percent and 95 percent, respectively. FDI, on the other hand, is insignificant to tax revenue

contribution. In these equations, show that when ETR increase by 1 percent, there will be reduction of 0.15-0.20 percent of FDI. This is in line with most studies finding that as ETR increases by 1 percent this decreases FDI in the range of 0 percent to 5 percent. This variation partly reflects differences between the industries and countries being examined, or the time periods concerned (OECD, 2008).

For the regression in Table 7.1, the dummy variable indicates that investments that are ASEAN sources contribute significantly to the fiscal revenue in Thailand. This further emphasises the significance of the fiscal influence of the member countries' government behaviour and firms' strategic planning within economic integration. However, when Vietnam data is considered, the dummy becomes insignificant. This is also reflected in the Wald test for joint significance. It may be that ASEAN firms were still at their earlier stages of investment during the period.

The panel regression across industries in Thailand and Vietnam suggests that, considering potential tax treaties within ASEAN Free Trade Area, the overall current competitive effective tax rates can still be raised to increase the joint tax revenue. That is, the regression suggests that a 1 percent increase in ETRs would increase the sectors' tax revenue contribution by approximately 1.04 percent for Thailand's data and 0.68 percent when combining the data from Thailand and Vietnam. 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 been base-broadening measures by the government which vary quite significantly across industries.

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 taxes in their decision making in terms of investment and tax policies. However, from the results in Chapter VI, it should be noted that economic structure, accommodating infrastructure, human resource, return to R&D Investment, a more stable political condition, improvement in protective intellectual rights, and other legal framework are a more important conditions in the long-run. These conditions cannot be simply compensated by low tax and investment incentives holidays alone.

Chapter VIII
Conclusion and Implications

VIII.1: Conclusion

The effective tax rates (ETRs) of the firms in Thailand and Vietnam and their effects on the quantity and quality of FDI movement are calculated and analysed. In the first part of the analysis in Chapter VI, the ETRs are calculated from the available financial statement of 240 firms in the Stock Exchange of Thailand (SET) and 121 firms in the Hochiminh Stock Exchange (HOSE) of Vietnam during 2005-2008. Previous analysis for Thailand by Rochanonda (2006) solved for the ETRs during 2001-2004 using a relatively similar approach. This research 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 in Chapter VII. The ETRs are calculated from the firm's corporate income tax expenses out of the profit. This figure also reflects the outcome of the multinational firms' decisions in allocating their resources across jurisdictions.

While the national statutory tax rates on corporation is 30 percent and 28 percent, respectively, the average ETRs are approximately 17 percent and 15 percent, respectively. This portrays that corporations have received various tax-related incentives introduced by the authorities of both countries. However, these incentives are not evenly distributed across different sectors as the ETRs vary from 10 percent to 25 percent in the two countries. 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 sector might not be the key factor on investment decisions. The location-specific advantage, for example seems more influential. The average ETRs of firms which are domestic-specific sectors in both countries are about 18-19 percent, which is higher than that of the export-oriented sector.

Both governments place more focus on export-oriented sector, particularly the capital-intensive sectors such as electrical appliances and machinery. For both countries, it can be observed that tax incentives do not have a crucial impact on investment decisions in the domestic-specific sector. This means that the domestic market and the location seem to be a crucial factor on investment decisions in this sector. It is observed that during the same period, the average profit of most sectors in Vietnam remain high compared to Thailand. Currently, Vietnam seems to have very high prospects to attracting more FDI as it is the beginning and, unlike Thailand, the market for FDI remains unsaturated. However, the same that Thailand experienced 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. Other developing and emerging countries can compete lowering their tax rates and provide investment promotion incentives. This could turn out to be a zero-sum game competition.

The panel regression across industries in Thailand and Vietnam suggests that, considering potential tax treaties within ASEAN Free Trade Area, the overall current competitive effective tax rates can still be raised to increase the joint tax revenue. That is, the regression suggests that a 1 percent increase in ETRs would increase the sectors' tax revenue contribution by approximately 1.04 percent for Thailand's data and 0.68 percent when combining the data from Thailand and Vietnam. 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 been base-broadening measures by the government which vary quite significantly across industries.

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 taxes in their decision making in terms of investment and tax policies. However, it should be noted that economic structure, accommodating infrastructure, human resource, returns to research and development investment, a more stable political condition, improvement in protective intellectual rights, and other legal framework are a more important conditions in the long-run. These conditions cannot be compensated by simply lowering taxes and providing investment privileges alone.

VIII.2: Prospects on Regional Tax System Synchronisation in AFTA

As cross-border transactions by business enterprises become complex and sophisticated along with fierce tax competition between jurisdictions, traditional efforts to secure or allocate taxation rights by means of domestic law or tax treaty may no longer suffice. A more integrated procedure must, therefore, be considered. One ideal possibility for countries in the region to pursue is switching from independent taxation to unitary taxation. The unitary taxation system levies tax on world-wide income and, through simplified administration and formula, distribute the revenue amongst the member countries. Another possibility is the harmonisation of taxation system can be done through levelling off corporate and income taxation in countries within the region. This system would prevent incentives to transfer income from high tax countries to low tax countries.

This research reflects only some areas on the part of inter-jurisdictional corporate and income taxation. The other part of the story not discussed in this article relates to inter-jurisdictional consumption taxation, namely ad valorem (eg., the value-added tax) and specific or lump-sum taxes. This relates to the principles in international taxation on consumption, comprising of "destination principle" and "origin principle". A detailed and theoretical study can be found in Lockwood (2000), Lockwood, de Meza and Myles (1994a, 1994b) and Lopez-Garcia (1996). In short, the destination tax system does not levy taxes on exported goods; whereby the origin tax system levies taxes on goods whether they are exported or domestically consumed. In the European Union, where harmonisation of tax system has been reached to some extent, there is a high potential to switch to the origin principle (Keen, 1989, 1993, Lockwood, de Meza and Myles, 1995). However, in the case of Asia and the Pacific, it may require more comprehensive studies of the consequences along the long integration process.

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 so much 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.

VIII.3: Further Research Implications

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 here. First, by the next few years, when the effects of economic integration become more fully realised, 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, energy taxes, payroll taxes and non-profit-related activities taxes are receiving increasing interests among investors and policy makers which may eventually create possible loopholes. Third, there had been much discussion about taxing FDI inflows and very little over FDI outflows and the comparison of the tax burden with FDI inflows and other domestic investment.

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Appendix

Appendix I

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Salient Issues of Inter-jurisdictional Taxation in the Asia Pacific Economic Integration[1]

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Introduction

In 2003, Thailand hosted the Asia Pacific Economic Co-operation (APEC) Ministerial Meeting. As a matter of background, APEC comprises of 21 economic jurisdictions, namely Australia, Brunei Darussalam, Canada, Chile, People's Republic of China, Hong Kong China, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Chinese Taipei, Thailand, United States and Vietnam. The APEC population is over 2.5 billion people. The combined GDP of all the jurisdictions accounts for 19 trillion US dollars, making up 47 percent of the total world trade. The APEC Fact Sheet issued by its Secretariat states that the institution's main objective is to achieve the 'Bogor Goals' of free and open trade and investment in the Asia-Pacific by the year 2010 for developed economies and 2020 for developing economies. Since its inception in 1989, the revealed mechanisms towards the Bogor Goals include: trade and investment liberalisation with less barriers to the movement of goods, services and people across the borders in the region, business facilitation and economic and technical co-operation.

Some positive side-effects brought about by the advancement of economic integration are the heightening productivity, the accelerated potential economic growth and the 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 Currency Crisis, the increasing trend of trade and investment has regained its direction in recent years. 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. For instance, in May 2000, known as the 'Chiang Mai Initiative', the ASEAN+3 (ASEAN members + China, Japan and Korea) Finance Ministers Meeting, held in Chiang Mai, agreed to form a network of bilateral swap agreements and repurchase agreements amongst ASEAN+3 members.

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Despite the positive outcomes, there are 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 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. Hence, as a look- ahead for the near-future challenges, some aspects of inter-jurisdictional taxation amongst the APEC countries can be worth considering.

Measures to alleviate double taxation in the economic area

When two countries try to impose a tax on the same income, "double taxation" occurs. For example, Company X, a resident of Country A, may be subject to double taxation when it sells commodities in Country B and, upon realising profits, both Countries A and B try to impose tax on the Company X's income at the same time. This scenario calls for a formalisation of a 'treaty' on inter-jurisdictional taxation rules. In fact, there had been theoretical principles and methods for inter-jurisdictional taxation dating back to 1920 when the League of Nations was formed. However, the tax treaties had never been formed during the inter-war political transition period. In the League of Nations' 1928 draft convention, the "Permanent Establishment (PE)" approach was proposed and, in its 1933 report, favoured the "Separate Accounts Principles" (currently known as the "Arm's Length Principle"). These two methods were the bases forming the groundwork of today's international tax principles.

The PE approach secures each country's independent taxation rights on the incomes of the permanent residence. The description of the Arm's Length Principle given by the UK Inland Revenue (Chapter 8) explains as follows:

"This [the arm's length principle] means that the terms and pricing of such transactions undertaken in the course of conducting business (such as the sale and purchase of goods and services) and in the provision of finance (both borrowing and lending) should be the same if the transactions had been between completely different parties."

A more theoretical approach on the Arm's Length Principle can be obtained from (Hirshleifer, 1956, p. 183). This Arm's Length Principle has been promoted and developed after the discussions by the Fiscal Committee of the League of Nations (now the Committee on Fiscal Affairs in the Organisation for Economic Co-operation and Development (OECD)). An example of its application can be referred to the widely-spoken Section 482 of the US Internal Revenue code which provides guidelines on measurement of the standard arm's length price.

In general, a country may choose to avoid inter-jurisdictional double taxation by means of either unilateral relief by domestic law or bilateral relief by tax treaties. By employing domestic law, a country of taxpayer's residence has the following options: (i) allowing for a deduction of foreign taxes in calculating taxable income, (ii) imposing foreign tax credit and (iii) exempting foreign income. Of these, most developed economies such as Japan and the United States adopted foreign tax credit after World War II on the basis of the theory of "capital export neutrality of taxation". The rationale of this theory indicates that taxation does not affect the decisions by domestic businesses on whether to invest at home or abroad. In most cases of foreign tax credit in the unilateral measure, however, the country of residence sets the upper bound as a maximum limit of credit in the foreign tax credit system. Therefore, inter-jurisdictional double taxation is not necessarily avoided only by relying on the foreign tax credit. Hence, bilateral or multilateral tax treaties are strongly required to stimulate the economic activities of the economies in the Asia and the Pacific economic integration. This necessity is evidenced in various treaties between most developed nations in their past experiences such as the US-France tax treaty in 1945, the US-UK tax treaty in 1946 and the US-Japan tax treaty in 1954.

Tax avoidance and securing of taxation rights amongst jurisdictions

As business enterprises become more multinational, they have more incentive to take advantage from the increasingly borderless nature of the economy. For instance, non-EU companies circumvented a common external tariff barrier in the European Union. Many Japanese corporations located their vehicle assembly plants in the US to bypass the Voluntary Export Restraints[2] (VERs). Some more interesting stylised facts based on a

[2] A Voluntary Export Restraint (VER) is a restriction imposed by the government, which limits the amount of good to be exported from a country during a specified period of time.

detailed survey on the MNEs' characteristics and motives are reported in Markusen (1995, 1998a, 1998b). Other incentives for multinationals would also be to lessen their tax burden by transferring income to low tax countries. Some common examples of the reactions by most developed economies to such multinationals behaviours have been the employment of Controlled Foreign Corporation (CFC) taxation, transfer pricing taxation and thin capitalisation.

Based on the perspective of principle of 'fair' corporate taxation, the CFC taxation system levies domestic companies on their world-wide income and foreign companies on their domestic-source income. The transfer pricing taxation system levies tax on the "adjusted difference" between the higher price that a domestic firm pays to its foreign-based subsidiary in a low-tax country and the Arm's Length Price. This way, the system aims to prevent the transfer of income to low tax countries through transactions between multinationals units. The last example of the reactions of tax authorities, the thin capitalisation, denies the deduction for excessive payment of interest by a local subsidiary to the foreign-owned multinationals' parent firm located abroad. It is important to note that the interest on loans are deductible from taxable income whilst dividends are non-deductible. Hence, there are often incentives to lower tax burden by increasing interest payments and reducing dividends by the multinationals.

Prospects on regional tax system synchronisation

As cross-border transactions by business enterprises become complex and sophisticated along with fierce tax competition between jurisdictions, traditional efforts to secure or allocate taxation rights by means of domestic law or tax treaty may no longer suffice. A more integrated procedure must, therefore, be considered. One ideal possibility for countries in the region to pursue is switching from independent taxation to unitary taxation. The unitary taxation system levies tax on world-wide income and, through simplified administration and formula, distribute the revenue amongst the member countries. Another possibility is the harmonisation of taxation system can be done through levelling off corporate and income taxation in countries within the region. This system would prevent incentives to transfer income from high tax countries to low tax countries.

Comments and concluding remarks

This article reflects only some areas on the part of inter-jurisdictional corporate and income taxation. The other part of the story not discussed in this article relates to inter-jurisdictional consumption taxation, namely ad valorem (eg., the value-added tax) and specific or lump-sum taxes. This relates to the principles in international taxation on consumption, comprising of "destination principle" and "origin principle". A detailed and theoretical study can be found in Lockwood (2000), Lockwood, de Meza and Myles (1994a, 1994b) and Lopez-Garcia (1996). In short, the destination tax system does not levy taxes on exported goods; whereby the origin tax system levies taxes on goods whether they are exported or domestically consumed. In the European Union, where harmonisation of tax system has been reached to some extent, there is a high potential to switch to the origin principle (Keen, 1989, 1993, Lockwood, de Meza and Myles, 1995). However, in the case of Asia and the Pacific, it may require more comprehensive studies of the consequences along the long integration process.

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 so much 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.

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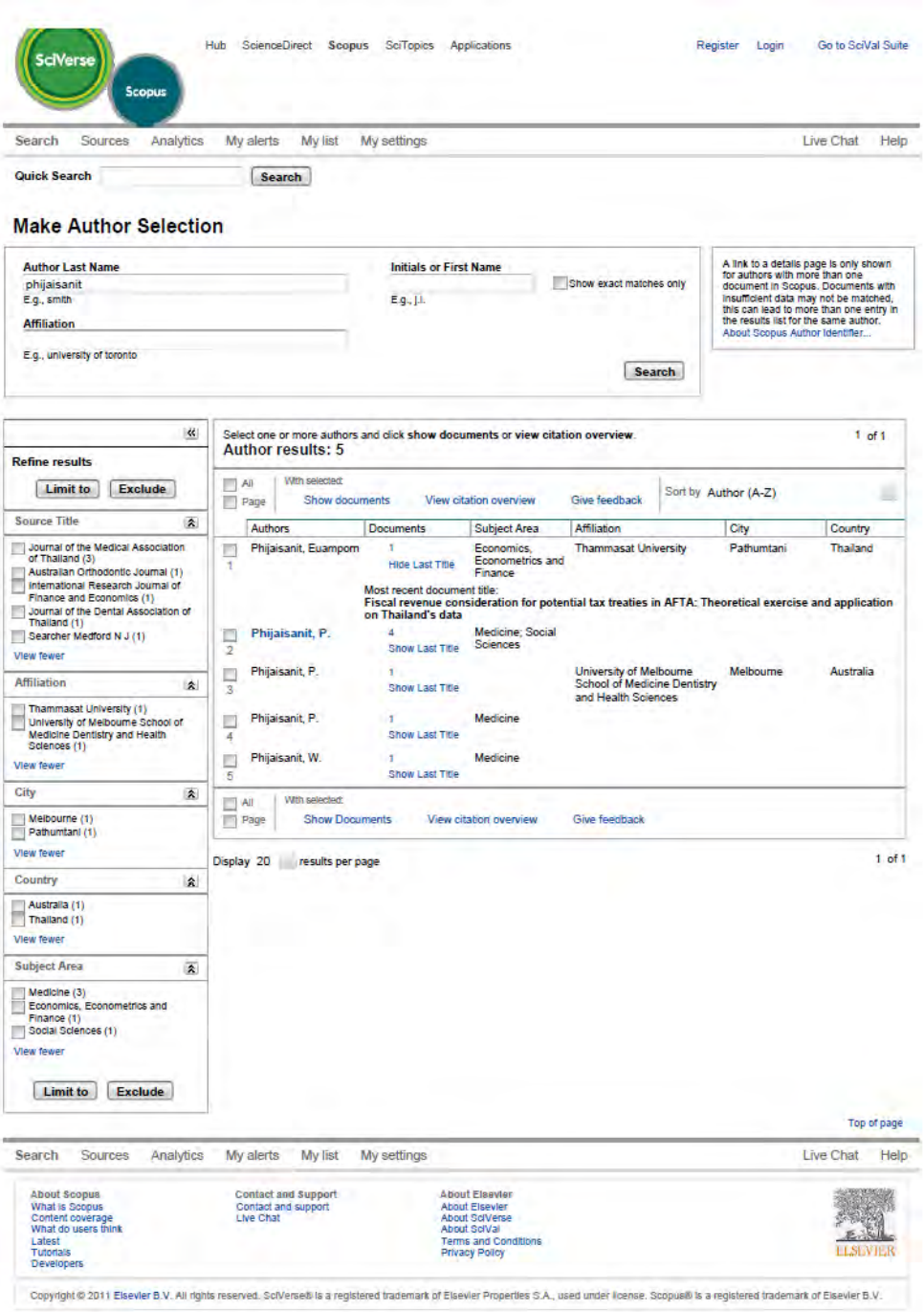
Appendix II: Published journal article in Scopus



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Fiscal Revenue Consideration for Potential Tax Treaties in AFTA: Theoretical Exercise and Application on Thailand's Data

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Abstract

Along with various initiatives to intensify ASEAN integration and ASEAN Free Trade Area, the long term trend of intra-ASEAN FDI inflows during the past two decades has shown a positive projection. Amidst this scenario, member countries compete in offering tax and tax-related incentives to attract investing multinational corporations. Despite the statutory tax rates announced by jurisdictions, the realised corporate tax expenses are revealed by their effective tax rates. Theoretical exercise addresses the non-optimality of the current competitive tax policy packages offered by most developing countries. The model considers governments' tax policy designs and investment decisions of multinationals in terms of transfer pricing decision within a free trade area. The equilibrium tax rates in competing and co-operative regimes are illustrated. The application empirically investigates Thailand's effective corporate tax rates calculated from publicly available financial information of 240 companies listed in the Stock Exchange of Thailand during 2005- 2008 and their contribution to the country's corporate fiscal revenue. Panel regression across industries suggests that, considering potential tax treaties within ASEAN Free Trade Area, the overall current competitive effective tax rates can still be raised to increase the joint fiscal revenue. Interestingly, the effective tax rates calculated have gradually increased over the last few years.

Keywords: Tax Treaties, Fiscal Revenue, Corporate Taxes
JEL Classification Codes: H21, H73, H87

1. Rationale

Along with various initiatives to intensify the Association of Southeast Asian Nations (ASEAN) integration and ASEAN Free Trade Area (AFTA), the long term trend of intra-ASEAN foreign direct investment (FDI) inflows during the past two decades has shown a positive projection (Figure 1). According to ASEAN Foreign Direct Investment Statistics Database, the cumulative share of FDI inflow during 2006-2008 was 15% of total FDI inflows to ASEAN which ranked second after EU whose share was 22.3%. Amidst this scenario, member countries compete in offering tax and tax-

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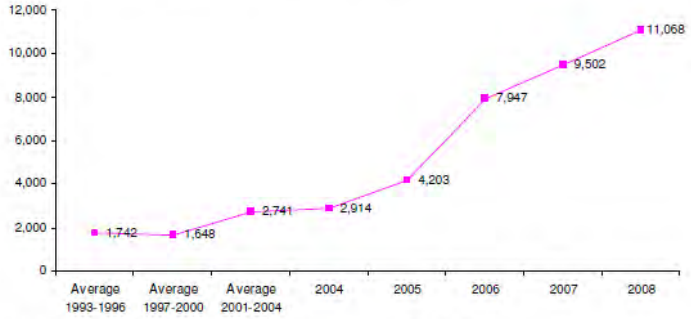
related incentives as a package to attract investing multinational corporates from within and outside ASEAN. Pertaining to their motives, these multinationals cautiously plan so as to enhance investment flows from regions of low anticipated profits to those of high returns. In terms of internal efficiency, production costs can be reduced as factor prices tend to differ across nationals. Moreover, through FDI within economic integration, it can bypass protective instruments and some restrictions in the importing member country (for the case of export-oriented investments). For instance, both EU and non-EU multinationals investing in the European Union circumvented a common external tariff barrier and benefitted from location-specific advantages. Taking into account the behaviour of multinationals, member countries in the EU have been jointly considering about optimising tax policy designs through tax treaties. The same holds true for the future of ASEAN as the degree of integration becomes more intense.

Figure 1: Intra-ASEAN FDI Inflows (US$ Million)



Source: UNCTAD FDI/TNC Database and ASEAN FDI Database; ASEAN Secretariat

This paper theoretically addresses the non-optimality of the current competitive tax policy packages offered by most developing countries in relation to the behaviour of multinationals. The theoretical exercise models governments' corporate tax policy designs and investment decisions of multinationals within an economic integration. In particular, the model endogenises corporate income tax by considering the joint setting of tax rates by the government in each country and the transfer price by the multinationals. The setting assumes that the multinationals' headquarters has full control over the subsidiary's operation. The model seeks a three-stage sub-game perfection equilibrium, in the presence of the transfer pricing practices and tax authorities' decisions. In a generalised form, the competitive equilibrium is then examined in comparison with the co-operative equilibrium, the case when public authorities involved jointly maximise a common fiscal revenue function.

The application of the model extends to consider Thailand's effective corporate tax rates calculated from publicly available financial information of 240 companies listed in the Stock Exchange of Thailand during 2005- 2008, and their contribution to the country's corporate tax revenue. Generally, the statutory tax rates contribute to the incentive for shifting income between one jurisdiction to another. The corporate income tax of a company carrying on business in Thailand is calculated from the company's net profit on the accrual basis. A company shall take into account all revenue arising from or in consequence of the business carried on in an accounting period. All expenses are deducted in accordance with the condition prescribed by the Revenue Code. The standard statutory rate on corporation in Thailand is currently 30 percent of net profits. However, Thailand offers a number of incentives to investment by the Board of Investment (BOI) such as depreciation schedule, inventory allowance system, inflation adjustment, deductibility of business expenses, tax credits and holidays. Therefore, in spite of the statutory tax rates announced by jurisdictions, the actual

realised corporate tax expenses can be revealed by their effective tax rates. Hence, this paper employs effective tax rates to infer economic incentives in Thailand and examine the impact of taxes on fiscal revenue consequences. With this consideration, it will enable governments to see whether tax policy package is efficiently managed.

2. Past Literature

The general concept of corporate taxation is that a corporation, as an independently separated entity from individual shareholders, is entitled to tax liabilities on the profit reported to the authority. These profits may arise from its innovation, organisation and monopoly power. One of the justifications for levying taxes on corporate profits is that corporations are said to enjoy certain privileges that individuals do not, for instance, their limited liabilities in the event of bankruptcy.

The cross-national activities of multinationals involve internal transfers of goods, which requires internal sales of such goods amongst divisions. This necessitates the setting up of intra-firm prices so as to specify the value of the exchanged goods. In fact, the concept of transfer pricing can be traced back to as early as 1883 when Harry Sidgwick (1901) recognised that producers themselves can consume their own outputs (Eccles, 1986). Originally, known as 'accounting', 'internal' or 'administered' price, the definition of transfer price expands as the structure of firms complicates into separate different divisions (Hoogvelt et al., 1987). Strikingly evidenced in the late 19th and early 20th century, vertical integration and diversification in production and units lead to decentralisation of management structure. As a consequence, the issue of transfer pricing became prominent in the discussion of multinationals (Chandler, 1962).

The consequential issue is the debate over the appropriate transfer price reasonably set according to the internal efficiency and whether there is any abuse or manipulation of intra-firm trade within multinationals in response to government regulations. As a result of these different views, a benchmark for transfer pricing, called the "arm's length standard" transfer price is implemented in most industrialised countries. Hirshleifer (1956) provides the first formal treatment of transfer pricing and arm's-length standard based on economic theory. The description given by the UK Inland revenue is as follows:

> "This [the arm's length standard] means that the terms and pricing of such transactions undertaken in the course of conducting business (such as the sale and purchase of goods and services) and in the provision of finance (both borrowing and lending) should be the same if the transactions had been between completely different parties."

This standard, promoted and developed by the Organisation for Economic Co-operation and Development (OECD), is internationally recognised and employed by taxation authorities around the world. An example of the standard can be referred to the widely-spoken Section 482 of the US Internal Revenue code which provides guidelines on measurement of the standard arm's length price.

Despite the setting up of the accepted standard transfer price, there are constraints and problems, which can be internal and external, in its implementation. Internal factors relate to organisational and managerial limitations within the enterprise which inhibit the successful execution of transfer pricing techniques in the pursuits of fiscal, financial and strategic objectives. Furthermore, there are difficulties in determining the transfer price of some traded goods such as knowledge, technology and those carried out via e-commerce. This is further exacerbated by natural and government-induced external factors. Due to natural market imperfection, external market efficiency may have never existed. In some circumstances, external sales bureaucracy may make it more cost-efficient to trade internally. Nevertheless, governments tend to impose some other regulations which can create more complexity to transfer pricing problems which, if improperly implemented, may lead to economic inefficiency and welfare diminution.

The two widely known theoretical models of multinationals' transfer pricing and government regulations are those of Horst (1971) and Copithorne (1971). Horst's model, which considers a horizontally integrated intra-firm trade, shows that the multinationals chooses the lowest possible

transfer price (eg., its marginal cost of production) so as to minimise tariff payments unless the proportional excess of the tax on foreign-oriented profits over home-oriented profits exceeds the tariff rates. It is also noted that the optimal transfer price of intra-firm transactions are valued within certain limits, not based on the open market. Copithorne concludes similarly through the use of a model comprising of a vertically-integrated intra-firm trade within a three-firm multinationals. As he expresses, "a multinational corporation lacks strong central decision-making and faces a problem of internal monopoly, which yields an intermediate solution and which is unlikely to be a global profit maximum".

Horst's and Copithorne's models turn out to become the basic foundation of the sequential findings which support the view that multinationals manipulate transfer price to minimise taxes payments. Casson (1979) suggests that transfer pricing manoeuvers aiming at diverting tax revenues away from the government cause an over-expansion of foreign investment. Bond (1980) mentions that transfer pricing adversely affect resource allocation as the gains from tax evasion is offset by the loss resulting from resource misallocation when transfer pricing is used in response to tax differentials. Hence, most developed countries impose regulations over transfer pricing to enforce arm's length price on efficiency and welfare bases (Shoup, 1985).

Eden (1985) builds a model of horizontally and vertically integrated multinationals, which is a combination of Copithorne's and Horst's models. Comparative statistics is conducted to study the effects of changes in corporate tax, tariff and exchange rates. The paper shows that transfer pricing in response to tariff barriers increases welfare, whereas it reduces welfare in response to corporate tax differentials.

In contrast to the above-mentioned notions, Rugman's (1981) and Aliber's (1985) view transfer pricing differently. Rugman's paper treats transfer pricing as an efficient response to imperfections, such as corporate tax differentials and tariffs in the external market. The main idea is that arm's length standard do not exist and the chosen internal price is the appropriate price. This, hence, reduces global inefficiency caused by government interventions which cause market segmentation. According to Aliber, transfer pricing used to arbitrage these market imperfections can improve efficiency and raise welfare. It is reasoned that when the tax rate is raised or lowered in one country of the world, there is a wedge and this wedge causes capital flows towards the country with lower tax rate. The consequence is that economic welfare declines on both global basis and in the high tax country. The multinationals' transfer price shifts income from high tax jurisdiction to the lower one to counter-affect the impact of the tax rate increase.

3. The Model

The general framework of the models represents a three-stage game, solving for equilibria of the sub-game perfection. In the first stage, the governments choose tax rates. In choosing their tax rates, the major aim of the governments in the two countries is to maximise their tax revenue functions. The tax rates are set to be $0 < t_A, t_B, \tau_A, \tau_B < 1$. In the competitive regime, each country's government maximises its own fiscal revenue function. In the co-operative regime, they jointly maximise tax revenue which is a combination of the tax revenue functions in the two countries. In the second stage, the multinationals chooses its transfer price by maximising its overall profit function. The profits of all firms in the models are assumed to be non-zero and non-negative. It is assumed that transfer price is derived from marginal cost and a mark-up value, m, in all the regimes. It is, then, to be determined how different tax regimes would affect this mark-up value on the transfer price. In the third stage, the downstream firms choose the quantity of the intermediate good required by maximising their profit functions.

The model comprises of three firms, two of which constitute the multinationals' internal linkage. Firm 1, the headquarters, is located in country A, the home country. Firms 2 and 3 are situated in host country B. Both countries are members of a free trade area (FTA) and, hence, no tariffs within the area are levied. Firm 2 is a part of the multinationals whereas firm 3 is a local firm in the host

country. The internal and external trades amongst the firms in the model are patterned as downward vertical integration. It is assumed that firms 2 and 3 are symmetric and are oligopolistic buyers of input x produced by firm 1 and produce the final output, Y, where $Y_i = f_i(x_i)$ represents the production of output Y_i from input x_i, where $f_2' > 0$ and $f_3' > 0$. Firm 1 sells the intermediate good x to firms 2 and 3 at a transfer price denoted by θ. This differs from Eden's (1985) model in that firm 3 does not belong to the multinationals nor sell its final output to firm 2, which resides in the same country. The transfer price of good x is observed by the government in country B. The inclusion of firm 3 is also an added feature to Elitzur and Mintz's (1996) model in which a "fictitious" transfer price is employed. This ensures, to a higher degree, that transfer price is closer to the idealised arm's-length standard in the open market as applying the same transfer price to firms 2 and 3 makes it easier for the host country's government to observe. Despite this, it is to note that in reality, it is still possible that the multinationals give a false report to the tax authorities by keeping two accounting books and this would lead to further complexities in the analysis. Thus, the model assumes that the governments have complete knowledge of the multinationals' accounting book. This pattern portrays an oligopolistic market structure of an industry comprising of a local firm (firm 3), possibly a public enterprise, and a foreign firm (firm 2). In order to protect its own industry, the host country government may impose a restriction on the multinationals that the price of the intermediate good sold to its subsidiary must equal the price sold to the local firm. Again, this is effective as the model assumes that the governments have complete knowledge of all the firms' account balance.

Throughout the paper, the following symbols are employed: Π = total profit of the multinationals, π_i = firm i's profit, Y_i = final output of firm i, x_i = quantity of intermediate good required by firm i, P = price of good Y, θ = transfer price of good x, c = cost of producing a unit of x and t_j = corporate tax rate in country j, where $i = 1, 2, 3$; and $j = A, B$.

Optimisation of Firm

There are different levels of taxation in countries A and B. Subject to corporate taxes, the profit functions of firms 1 in home country, and firms 2 and 3 in the host countries B are shown in (1), (2) and (3).

$$\pi_1 = (1 - t_A)(\theta - c)[x_2(\theta) + x_3(\theta)] \quad (1)$$

$$\pi_2 = (1 - t_B)[P(f_2(x_2) + f_3(x_3))f_2(x_2) - \theta x_2] \quad (2)$$

$$\pi_3 = (1 - t_B)[P(f_2(x_2) + f_3(x_3))f_3(x_3) - \theta x_3] \quad (3)$$

Maximising (2) and (3) with respect to x_2 and x_3, respectively, the optimal x_2 and x_3 can be obtained from the first order conditions in (4) and (5).

$$x_2^* = x_2(\theta^*) \quad (4)$$

$$x_3^* = x_3(\theta^*). \quad (5)$$

Thus, with corporate taxation in the host country, the quantity of intermediate goods required in the downstream firms remain unaffected by t_B. x_2 and x_3 are dependent on the value of θ.

The multinationals' profit function is shown in (6).

$$\Pi = (1-t_A)(\theta-c)[x_2(\theta)+x_3(\theta)]+(1-t_B)[P(f_2(x_2)+f_3(x_3))f_2(x_2)-\theta x_2] \quad (6)$$

In this case, the home country, country A, employs a tax system in which the foreign tax paid by the subsidiary abroad is not subject to further tax in the home country. This is the case of tax exemption, but no country enters into such agreement. In most cases, if there is double taxation, countries enter into a double tax agreement (DTA) and mostly assume ordinary tax credit. By differentiating (6) with respect to θ, through simplification and using Envelope Theorem, the first order condition is given in (7).

$$\frac{d\Pi}{d\theta} = (1 - t_A)[x_2 + x_3 + (\theta - c)(x_2' + x_3')] + (1 - t_B)[P' f_3' x_3' f_2(x_2) - x_2] = 0 \quad (7)$$

From (7), the optimal transfer price is solved in (8).

$$\theta = c + m \tag{8}$$

where the mark-up on cost, m, is

$$m = \frac{\frac{(1-t_B)}{(1-t_A)}\left[-P' f_3' x_3' f_2(x_2)\right] + x_2\left[\frac{1-t_B}{1-t_A} - 1\right] - x_3}{(x_2' + x_3')}. \tag{9}$$

From (8), the effect on transfer price with respect to the change in the tax rates in country A and country B are shown in (10) and (11), respectively.

$$\frac{d\theta}{dt_A} = \frac{(1-t_B)}{(1-t_A)^2}\frac{(x_2 - P' f_3' x_3' f_2(x_2))}{(x_2' + x_3')} \tag{10}$$

and

$$\frac{d\theta}{dt_B} = \frac{-(x_2 - P' f_3' x_3' f_2(x_2))}{(1-t_A)(x_2' + x_3')} = \frac{-(1-t_A)}{(1-t_B)}\frac{d\theta}{dt_A} \tag{11}$$

It can be observed from these two equations that the relative tax rates in countries A and B influence transfer price in negative correlation manner. The generality of these solutions is that the effect of the tax rates on transfer price would depend, first on how the two governments would determine tax rates relative to each other and second, the nature of the demand and production functions of the downstream firms. The theoretical exercise in this paper aims at providing a generalised outcome and, hence, do not specify any of these functions.

Government Decisions in Competitive Tax Regime

The tax revenue in the home country A is represented by equation (12).

$$T_A = t_A(\theta - c)(x_2 + x_3)$$
$$T_A = t_A(\theta(t_A, t_B) - c)[x_2(\theta(t_A, t_B)) + x_3(\theta(t_A, t_B))] \tag{12}$$

By maximising tax revenue equation in (12) with respect to t_A, the first order condition is expressed in (13).

$$\frac{dT_A}{dt_A} = (\theta - c)(x_2 + x_3) + \theta_{tA} t_A(x_2 + x_3) + t_A(\theta - c)(x_2'\theta_{tA} + x_3'\theta_{tA}) = 0 \tag{13}$$

Solving (13) gives the optimal tax rate in country A as expressed in (14).

$$t_A = \frac{-(\theta - c)(x_2 + x_3)}{\theta_{tA}\left[x_2 + x_3 + (\theta - c)(x_2' + x_3')\right]} \tag{14}$$

The tax revenue in country B is expressed in (15).

$$T_B = t_B\left[P\left((f_2(x_2) + f_3(x_3))f_2(x_2) - \theta x_2 + P\left((f_2(x_2) + f_3(x_3))f_3(x_3) - \theta x_3\right)\right] \tag{15}$$

Through maximisation of (15) with respect to t_B, and simplification, the first order condition is obtained in (16).

$$\frac{dT_B}{dt_B} = Pf_2(x_2) + Pf_3(x_3) - \theta(x_2 + x_3) + t_B\left[P' f_3' x_3' \theta_{tB} f_2(x_2) - \theta_{tB} x_2 + P' f_2' x_2' \theta_{tB} f_3(x_3) - \theta_{tB} x_3\right] = 0 \tag{16}$$

Solving for t_B in (16) leads to the solution in (17).

$$t_B = \frac{\theta(x_2 + x_3) - Pf_2(x_2) - Pf_3(x_3)}{\theta_{tB}\left[P' f_3' x_3' f_2(x_2) - x_2 + P' f_2' x_2' f_3(x_3) - x_3\right]} \tag{17}$$

Government Decisions in Co-operative Tax Regime

When Countries A and B in a free trade area agree on a tax treaty and operate a co-operative (harmonised) tax regime, the values of t_A and t_B that maximise the sum of the two countries' tax revenue, T_A and T_B, are solved for. Both countries jointly maximise a common tax revenue equation in (18).

$$T = T_A + T_B$$
$$T = t_A(\theta - c)(x_2 + x_3) + t_B\left[P\left(f_2(x_2) + f_3(x_3)\right)f_2(x_2) - \theta x_2 + P\left(f_2(x_2) + f_3(x_3)\right)f_3(x_3) - \theta x_3\right] \tag{18}$$

Maximising equation (18) with respect to t_A solves for the first order condition in (19).

$$\frac{dT}{dt_A} = \frac{\partial T_A}{\partial t_A} + \frac{\partial T_B}{\partial t_A} = 0 \tag{19}$$

where $\partial T_A/\partial t_A$ is solved in (13) and,

$$\frac{\partial T_B}{\partial t_A} = \theta_{tA} t_B \left[P' f_3' x_3' f_2(x_2) - x_2 + P' f_2' x_2' f_3(x_3) - x_3\right] > 0 \tag{20}$$

Proof of $\partial T_B/\partial t_A > 0$: If $[P'f_3'x_3'f_2(x_2)\text{-}x_2+P'f_2'x_2'f_3(x_3)\text{-}x_3] < 0$, then $\theta_{tA} < 0$ in (10). Congruently, if $[P'f_3'x_3'f_2(x_2)\text{-}x_2+P'f_2'x_2'f_3(x_3)\text{-}x_3] > 0$, then $\theta_{tA} > 0$ in (10).

As for country B, maximising equation (18) with respect to t_B solves for the first order condition in (21).

$$\frac{dT}{dt_B} = \frac{\partial T_B}{\partial t_B} + \frac{\partial T_A}{\partial t_B} = 0 \tag{21}$$

where $\partial T_B/\partial t_B$ is solved in (16), and

$$\frac{\partial T_A}{\partial t_B} = \theta_{tB} t_A \left[x_2 + x_3 + (\theta - c)(x_2' + x_3')\right] > 0 \tag{22}$$

Proof of $\partial T_A/\partial t_B > 0$: Referring to equation (8) and by substitution, if $(x_2 - P'f_3'x_3'f_2(x_2)) > 0$, then $\theta_{tB} > 0$ in (11). If $(x_2 - P'f_3'x_3'f_2(x_2)) < 0$, then $\theta_{tB} < 0$ in (11).

From (20), since $\partial T_B/\partial t_A > 0$, it follows that $\partial T_A/\partial t_A < 0$ so that the first order partial derivative of T with respect to t_A, $\partial T/\partial t_A = 0$ for co-operative tax revenue maximisation. Congruently, from (22), since $\partial T_A/\partial t_B > 0$, it follows that $\partial T_B/\partial t_B < 0$ so that $\partial T/\partial t_B = 0$.

The second-order cross derivatives with respect to t_A and t_B are then examined in (23) and (24), respectively.

$$\frac{\partial^2 T_A}{\partial t_B \partial t_A} = \theta_{tB}\left[x_2 + x_3 + (\theta - c)(x_2' + x_3') + 2t_A\theta_{tA}(x_2' + x_3')\right] > 0. \tag{23}$$

Proof of $\partial^2 T_A/\partial t_B \partial t_A > 0$: If $\theta_{tB} > 0$, then the term in the bracket is positive based on earlier proofs in (22). If $\theta_{tB} < 0$, then the term in the bracket is negative.

Under the assumption that the multiplier effect of transfer price and corresponding production decision of one firm on the other firm's production decision must be greater than unity, (24) must also be true. This is reasonable an assumption under the model's setting, given the evidence of the competing downstream firms shown in equation (8).

$$\frac{\partial^2 T_B}{\partial t_A \partial t_B} = \theta_{tA}\left[P' f_3' x_3' f_2(x_2) - x_2 + P' f_2' x_2' f_3(x_3) - x_3\right. \tag{24}$$

$$\left. + \theta_{tB} t_B \left[x_2'(P' f_3' x_3' f_2' - 1) + x_3'(P' f_2' x_2' f_3' - 1)\right]\right] > 0$$

From (23) and (24), it can be observed that $\partial^2 T_A/\partial t_A \partial t_B$ and $\partial^2 T_B/\partial t_B \partial t_A$ are greater than zero in the model.

According to Young's (or Schwarz's) Theorem, $\frac{\partial^2 T_A}{\partial t_A \partial t_B} = \frac{\partial^2 T_A}{\partial t_B \partial t_A}$; $\frac{\partial^2 T_B}{\partial t_B \partial t_A} = \frac{\partial^2 T_B}{\partial t_A \partial t_B}$ for continuous variables (Berck and Sydsaeter, 1991). Hence, this implies (25).

$$\frac{\partial^2 T_A}{\partial t_A \partial t_B} \cdot \frac{\partial^2 T_B}{\partial t_B \partial t_A} > 0 \tag{25}$$

The first-order partial derivatives of the tax revenue in each country with respect to its own tax rate are negative, $\partial T_A/\partial t_A < 0$, *and* $\partial T_B/\partial t_B < 0$. This implies that increasing the tax rate from the point of the co-operative tax rate would lower the tax revenue. The condition in (25) indicates that the cross (or mixed) partial derivatives for both T_A and T_B, are positive. Considering the influence of the reaction functions of both countries, the tax rates in the co-operative regime lie between the individual country's optimised competitive tax level and the downward sloping end of the its revenue curve. Thus, when considering cross-country joint tax revenue of the two countries, (23) and (24) (25) suggest that the competitive tax rates in countries A and B are relatively low and can still be raised to the co-operative tax regime level for higher revenue.

When the two countries jointly optimise a common revenue function, it is found that the resulting tax rates in both countries are above the competitive regime level. The result is congruent with the models with different settings in Wildasin (1986), Mieszkowski and Zodrow (1989) and Bloch and Lefbvre (1999). This implies that the equilibrium competitive tax rates are relatively low and can be raised to contribute to higher tax revenue. The effect of corporate tax regime on the transfer price would depend on the solution obtained from the reaction functions of the two countries' tax revenue maximisation. This would depend on the relative tax rates of the two countries and the demand and production functions of the two downstream firms. Due to the generality of the analysis, it is only possible to indicate the signs of the variables. However, the results clearly show in (11) that the tax rates in the two countries affect the transfer price in the opposite directions.

5. Application: Effective Corporate Taxes in Thailand and their Fiscal Revenue Contribution

The application empirically investigates Thailand's corporate effective corporate tax rates (ETR) calculated from publicly available financial information of 240 companies listed in the Stock Exchange of Thailand (SET) during 2005- 2008 and their contribution to the country's corporate tax revenue. These exclude firms which are financial institutions, firms under rehabilitation and firms that are listed in the Market for Alternative Investment (MAI). According to Rochananonda (2006), most of the corporation incomes, approximately 60%, are from companies listed in the SET. The ETR is calculated from the firm's corporate income tax expenses out of the profit. This figure also reflects the outcome of the multinational firms' decisions in allocating their resources across jurisdictions. The calculated average ETR and their rates of change during 2005-2008 are shown in Table 1.

Table 1: Average ETR and Average Change in ETR by Sector, 2005-2008

Sector	Average ETR	ETR, Average Change
Domestic-Specific Sectors		
Trade	21.52%	5.08%
Construction & materials	15.69%	8.90%
Services	20.97%	1.29%
Real estate	17.61%	-0.47%
Labour-Intensive Export-Oriented Sectors		
Food & sugar	14.04%	-5.10%
Textile	17.57%	-1.52%
Metal & non-metal	18.38%	6.83%
Capital-Intensive Export-Oriented Sectors		
Electrical appliances	9.58%	-5.25%
Machinery & transport equipments	16.80%	-7.23%
Chemicals & petroleum products	18.72%	20.49%
All Sectors		
Average	17.49%	2.18%
weighted average	17.92%	2.10%

Source: Author's calculation. Data sources from SET Smart Database

Table 1 shows that, while the national statutory tax rate on corporation is 30%, the average ETR is 17.49%. This portrays that corporates have received various tax-related incentives introduced by the authorities. However, these incentives are not evenly distributed across different sectors as the ETRs vary from 9.58% to 21.52%. Since the Thai government places its focus on export-oriented sector, particularly the capital-intensive sectors such as electrical appliances, and machinery and transport equipments, 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 prefers to depreciate assets due to their possession of fixed assets. On the contrary, tax

incentives on the domestic-specific sector might not be the key factor on investment decisions. The location-specific advantage, for example seems more influential. The average ETR of firms which are domestic-specific sectors is about 19%, which is higher than that of the export-oriented sector.

In investigating how tax rates in each sector contribute to the fiscal revenue in Thailand, panel estimation is applied. This allows for more degrees of freedom. Moreover, the omitted variable bias can be controlled and the problem of multi-colinearity can be reduced. According to Hsiao (2003), this improves the accuracy of parameter estimates. The calculated results of the 240 companies 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 firms' data in the financial reports are obtained from SET Smart Database, the data on FDI is obtained from the Bank of Thailand's electronic database, and the corporate tax revenue is obtained from the Revenue Department. 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 2.

Table 2: Estimation Results for OLS Panel Data Regression by PGGive
Dependent variable: LCT

Variable	Coefficient Estimates	Standard Error	t-value
LETR	1.03825	0.3721	2.79**
LFDI	-0.203446	0.1840	-1.11
LPROF	0.255079	0.03804	6.71***
DUM	0.121035	0.06370	1.90*
CONS	-1.45252	0.5088	-2.85
Wald (joint): Chi^2 = 8070 [0.000] ** W ARCH 1-1 test: F(1,30) = 4.1660 [0.0501] Normality test: Chi^2(2) = 30.733 [0.0000]** hetero test: F(18,13) = 0.33531 [0.9833] RESET test: F(1,31) = 0.098393 [0.7559] Wald (dummy): Chi^2 = 8.150 [0.004] ** AR (1) test: N (0,1) = -1.440 [0.150] AR (2) test: N (0,1) = -4.349 [0.664]			

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

The coefficients for tax and profit elasticities show positive sign and are significant at the confidence interval of 99% and 95%, respectively. FDI, on the other hand, is not significant to tax revenue contribution in this case. The dummy variable indicates that investments that are ASEAN sources contribute significantly to the fiscal revenue. This further emphasises the significance of the fiscal influence of the member countries' government behaviour and firms' strategic planning within economic integration. The panel regression across industries suggests that, considering potential tax treaties within ASEAN Free Trade Area, the overall current competitive effective tax rates can still be raised to increase the joint tax revenue. That is, the regression suggests that a 1% increase in ETR would increase the sectors' tax revenue contribution by approximately 1.04%. Interestingly, the calculated effective tax rate has gradually increased over the last few years, the average ETR across sectors in Thailand were 17.1% in 2005, 16.2% in 2006, 16.9% in 2007 and 18.2% in 2008. There had been base-broadening measures by the government which vary quite significantly across industries.

6. Conclusions

The model of this paper considers the behaviour of the multinationals and governments, solving for equilibria of the three-stage sub-game. The key concept is to endogenise the firm's transfer price and government tax rates in the decision settings of both parties. Corporate taxes are analysed in the model under competitive and co-operative regimes between the governments. Conclusion shows that competitive tax rates can be raised so as to increase joint fiscal revenue in both countries. It is observed that the transfer price tends to deviate from the cost or the efficient level due to the market and industrial structure, its formulation and profit optimisation of transfer price when tax rates are considered. It is by nature that transfer price deviates, not only due to its internal co-ordination, but also as a result of government decisions of whether the competitive or co-operative regime is employed. The application extends to Thailand's data. The calculated ETRs across sectors suggest that governments must consider how the tax incentives influence the investment decision in each sector. The panel regression across industries in Thailand implies that, considering potential tax treaties within ASEAN Free Trade Area, the overall current competitive effective tax rates can still be raised to increase the joint fiscal revenue among the member countries. The calculated effective tax rates on corporate income in Thailand has gradually increased over the last few years.

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Appendix III

Conference Paper presented at the Bi-Annual Conference

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

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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 compete in offering tax and tax-related incentives to attract investing multinational corporations. Despite the statutory tax rates announced by jurisdictions, the realised corporate tax expenses are revealed by their effective tax rates. Theoretical foundation has addressed the non-optimality of the current competitive tax policy packages offered by most developing countries. This paper empirically investigates the effective corporate tax rates (ETRs) in Thailand and Vietnam, calculated from the publicly available financial information of 240 companies listed in the Stock Exchange of Thailand and 121 companies listed in the Hochiminh Stock Exchange of Vietnam during 2005-2006. The analysis considers value of inbound investments, the structure of their profit which reflects investment quality, and their contributions to the country's corporate fiscal revenue. For both countries, the domestic-specific sector has 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 to increase the joint fiscal revenue without significantly harming FDI inflows.

Keywords: Tax Treaties, Fiscal Revenue, Corporate Taxes, AFTA
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, the accelerated potential economic growth and the 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.

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Despite the positive outcomes of advanced economic integration and reduction of tariff barriers, there are 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.

At present, it is urgently important for the public sectors to prepare for the emerging challenges caused by the reduction in inter-jurisdictional barriers to the movement of capitals. A pioneer study can start from within the sub-group of developing countries in APEC like Thailand and selected ASEAN countries, forming their own ASEAN Free Trade Area (AFTA). The rationale for possible tax co-operations and treaties within AFTA should, therefore, be worth considering at this initial attempt to scientifically analyze the issue. 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 from more countries.

As one of the rare inter-juristic tax research employing economic analysis in Thailand and Asia, this research focuses on the case of domestic corporate income tax policy packages in Thailand and Vietnam, both are members of a free trade area sub-set of APEC, that is, AFTA. The latter has particularly been an emerging attractive recipient of FDI, receiving an increasing share, for the past few years. These two countries are selected in the study for several reasons. In terms of labor costs and their close proximity, Thailand is said to be losing comparative advantage to Vietnam in several sectors. Of all the cumulative foreign direct investment (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 realized 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. 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 development into APEC level, are to be derived from the empirical findings. This should result in 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 conduct a theoretical and empirical assessment of 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). 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 solves for the effective tax rates (ETR) 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 ETR 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 ETR is calculated from 240 companies listed in the Stock Exchange of Thailand (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 ETR is calculated from 121 companies during the same period. The ETR is calculated from the firm's corporate income tax expenses out of the profit. This figure also reflects the outcome of the multinational firms' decisions in allocating their resources across jurisdictions. The analysis then considers the relationship between the solved ETR with FDI inflows in terms of the amount and the profit level and their contribution to corporate tax revenue among all the companies considered.

Table 1: Average ETR and Average Change in ETR by Category 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 Hochiminh Stock Exchange 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 2.

4. Major Research Findings and Policy Implications

Table 2: 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.

While the national statutory tax rates on corporation in Thailand and Vietnam are 30 percent and 28 percent, respectively, the average ETR is 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. 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 sector 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 which are 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 becomes 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.

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 1.04 percent for Thailand's data and 0.68 percent when combining the data from Thailand and Vietnam. 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 been base-broadening measures by the government which vary quite significantly across industries.

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.

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, by the next few years, when the effects of economic integration become more fully realised, 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, energy taxes, payroll taxes and non-profit-related activities taxes are receiving increasing interests among investors and policy makers which may eventually create possible loopholes. Third, there had been much discussion about taxing FDI inflows and very little over FDI outflows and the comparison of the tax burden with FDI inflows and other domestic investment.

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Appendix IV

Vietnamese Translation of the Research Briefing

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Phân tích về thu ngân sách của khả năng hình thành các Hiệp định thuế trong AFTA: Mô hình lý thuyết và Ứng dụng với dữ liệu của Thái Lan

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Tóm tắt

Cùng với các sáng kiến khác nhau để thúc đẩy quá trình hội nhập trong ASEAN và trong Khu vực mậu dịch tự do ASEAN (AFTA), các dòng vốn đầu tư trực tiếp nước ngoài (FDI) trong nội khối ASEAN trong vòng 2 thập niên qua đang tăng lên. Trong xu thế này, các nước thành viên trong ASEAN đang cạnh tranh với nhau trong việc đưa ra các chính sách thuế và ưu đãi thuế để thu hút sự đầu tư của các công ty xuyên quốc gia. Mặc dù các nước đều công bố mức thuế suất theo quy định của luật, nhưng chi phí thuế thu nhập doanh nghiệp thực tế lại được phản ánh thông qua mức thuế suất thực tế. Phần lý thuyết của bài viết này sẽ xem xét đến sự "không tối ưu" của các chính sách thuế "cạnh tranh" đang được nhiều nước đang phát triển đưa ra cho các công ty xuyên quốc gia. Mô hình trình bày sẽ xem xét đến vấn đề thiết kế chính sách thuế của chính phủ và quyết định đầu tư của các công ty xuyên quốc gia dưới giác độ quyết định chuyển giá trong một khu vực mậu dịch tự do. Các mức thuế suất cân bằng trong cả chế độ thuế "cạnh tranh" và chế độ thuế có sự "hợp tác" giữa các nước sẽ được xem xét đến. Việc ứng dụng của mô hình được mở rộng cho nguồn dữ liệu của Thái Lan. Kết quả tính toán mức thuế suất thuế TNDN thực tế (ETR) của các ngành đã cho thấy chính phủ cần phải xem xét đến tác động của các chính sách ưu đãi thuế đến quyết định đầu tư trong từng ngành là như thế nào. Phân tích hồi quy theo các ngành của Thái Lan đã chỉ ra rằng khi xét xét đến khả năng hình thành các hiệp định thuế trong ASEAN, các mức thuế suất thực tế theo chế độ cạnh tranh hiện đang áp dụng có thể tăng thêm để qua đó các nước cùng nhau gia tăng nguồn thu cho ngân sách. Điều thú vị là, mức thuế suất thực tế theo tính toán đã tăng lên trong vòng một số năm gần đây.

Từ khoá: Hiệp định thuế, thu ngân sách, thuế thu nhập doanh nghiệp

Phân loại mã của JEL: H21, H73, H87

1. Lý do nghiên cứu

Cùng với các sáng kiến khác nhau để thúc đẩy quá trình hội nhập trong ASEAN và trong Khu vực mậu dịch tự do ASEAN (AFTA), các dòng vốn đầu

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tư trực tiếp nước ngoài (FDI) trong nội khối ASEAN trong vòng 2 thập niên qua đã tăng lên (Hình 1). Theo Dữ liệu thông kế Đầu tư trực tiếp nước ngoài ASEAN, tổng số dòng vốn FDI luân chuyển trong nội khối ASEAN trong giai đoạn 2006-2008 chiếm khoảng 15% tổng số vốn FDI đổ vào khu vực này, đứng thứ hai sau số vốn FDI từ các nước trong EU. Trong xu thế này, các nước thành viên trong ASEAN đang cạnh tranh với nhau trong việc sử dụng chính sách thuế và ưu đãi thuế như là một công cụ để thu hútđầu tư của các công ty xuyên quốc gia trong và ngoài khu vực ASEAN. Các công ty này thường có kế hoạch sẽ chuyển dòng vốn đầu tư của mình từ những khu vực có mức lợi nhuận kỳ vọng thấp sang các khu vực có mức lợi nhuận cao hơn. Dưới giả độ hiệu quả "nội bộ", chi phí sản xuất có thể giảm do giá của tư liệu sản xuất thường có sự khác biệt giữa các quốc gia. Bên cạnh đó, trong bối cảnh hội nhập, các doanh nghiệp có thể vượt qua được các trở ngại về bảo hộ cũng như các hạn chế về nhập khẩu của các nước thành viên (trong trường hợp đầu tư vào các dự án sản xuất hàng xuất khẩu). Ví dụ, cả các công ty xuyên quốc gia ở trong và ngoài EU đầu tư vào EU có thể tránh được hàng rào thuế quan từ bên ngoài và được hưởng lợi từ các lợi thế về địa bàn. Xem xét đến hành vi của các công ty xuyên quốc gia, các nước thành viên trong EU đang cùng nhau xem xét khả năng có được sự tối ưu trong quá trình xây dựng và thiết kế chính sách thuế của mình thông qua các hiệp định thuế.

Bài viết này sẽ xem xét trên phương diện lý thuyết sự "không tối ưu" trong các chính sách thuế cạnh tranh hiện đang được nhiều nước đang phát triển đưa ra đối với các công ty xuyên quốc gia. Phần phân tích lý thuyết sẽ mô hình hoá việc thiết kế chính sách thuế thu nhập doanh nghiệp (TNDN) và các quyết định đầu tư của các công ty xuyên quốc gia trong một khu vực hội nhập. Cụ thể, mô hình sẽ phân tích "nội sinh" chính sách thuế TNDN thông qua việc xem xét đến khả năng chính phủ các nước nước cùng nhau xây dựng mức thuế suất và mức giá chuyển (transfer price) bởi các công ty xuyên quốc gia. Phân tích này giả định trụ sở chính của các công ty xuyên quốc gia có được sự kiểm soát toàn bộ đối với hoạt động của các công ty con. Mô hình này nghiên cứu về trạng thái cân bằng hoàn hảo theo "trò chơi" ba giai đoạn (three-stage sub-game perfection equilibrium) trong bối cảnh có sự hiện diện của các hành vi chuyển giá và các quyết định của cơ quan thuế. Dưới dạng tổng quát, trạng thái cân bằng cạnh tranh sau đó sẽ được xem xét trong mối tương quan so sánh với trạng thái cân bằng có sự hợp tác, đây là trường hợp khi mà chính phủ các nước cùng nhau tham gia vào việc tối ưu hoá nguồn thu chung.

Việc ứng dụng mô hình này sẽ được dùng để phân tích mức thuế suất thuế TNDN thực tế của Thái Lan dựa trên các thông tin tài chính sẵn có của 240 công ty được niêm yết trên Thị trường chứng khoá Thái Lan trong giai đoạn 2005-2008, và đóng góp của mỗi công ty đối với số thu từ thuế TNDN của Thái Lan. Nhìn chung, sự khác biệt về mức thuế suất (mức thuế theo quy định của luật thuế) là động cơ dẫn gây nên sự dịch chuyển của thu nhập giữa từng vùng lãnh thổ này sang vùng lãnh thổ khác. Số thuế TNDN phải nộp của các

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công ty có hoạt động ở Thái Lan được xác định dựa theo mức lợi nhuận ròng của công ty và được xác định trên cơ sở dồn tích. Công ty sẽ phải xem xét đến tất cả các nguồn thu phát sinh hoặc có nguồn gốc từ các hoạt động kinh doanh thực hiện trong một niên độ tài chính (năm tài chính). Các khoản chi phí được giảm trừ được xác định theo các điều kiện quy định trong Luật thuế (Revenue code). Mức thuế suất thuế TNDN phổ thông hiện hành ở Thái Lan là 30% và được thu trên mức lợi nhuận ròng. Tuy nhiên, Thái Lan có một số chính sách ưu đãi thuế do Cơ quan đầu tư (Board of Investment) đưa ra, ví dụ các ưu đãi liên quan đến khấu hao, giảm trừ hàng tồn kho, về điều chỉnh lạm phát, về các khoản chi phí kinh doanh được giảm trừ, khấu trừ thuế và kỳ miễn thuế. Vì thế, tuy thuế suất đã được các nước quy định trong luật, song số thuế TNDN thực tế phải nộp có thể được xác định thông qua "mức thuế suất thực tế". Theo đó, bài viết này sử dụng khái niệm "mức thuế suất thực tế" để phân tích các chính sách ưu đãi kinh tế (economic incentives) của Thái Lan và phân tích tác động của thuế đối với thu ngân sách. Tiếp cận theo cách này sẽ cho phép chính phủ đánh giá được liệu chính sách thuế của mình có được quản lý có hiệu quả hay không.

2. Ứng dụng: Thuế suất thuế TNDN thực tế ở Thái Lan và số thu từ sắc thuế này

Việc ứng dụng mô hình này sẽ phân tích xác định mức thuế suất thuế thu nhập doanh nghiệp thực tế (Effective corporate tax rates - ETR) của Thái Lan dựa trên các thong tin tài chính sẵn có của 240 công ty được niêm yết trên Thị trường chứng khoán Thái Lan (SET) trong giai đoạn 2005-2008, và đóng góp của các công ty này đối với số thu từ thuế TNDN của Thái Lan. Các doanh nghiệp này không bao gồm các định chế tài chính, các doanh nghiệp đang trong quá trình cải cách và các doanh nghiệp được niêm yết trên Thị trường cho đầu tư thay thế (Market for Alternative Investment- MAI). Theo nghiên cứu của Rochonanonda (2006), phần lớn thu nhập của các doanh nghiệp (khoảng 60%) là từ các công ty niêm yết trên SET. Thuế suất thực tế ETR được xác định dựa trên số thuế thu nhập doanh nghiệp mà các doanh nghiệp nộp so với mức lợi nhuận mà các doanh nghiệp thu được. Con số này cũng sẽ cho biết kết quả hoạt động của các công ty xuyên quốc gia khi thực hiện phân bổ nguồn lực của mình ở những vùng lãnh thổ khác nhau. Sự thay đổi về mức thuế suất ETR trong giai đoạn 2005-2008 được minh hoạ trong Bảng 1.

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Bảng 1: Mức thuế suất ETR bình quân và sự thay đổi bình quân của ETR theo ngành trong giai đoạn 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%

Nguồn: Tính toán của tác giả. Dữ liệu lấy từ nguồn dữ liệu của SET, HOSE.

Bảng 1 cho thấy trong khi mức thuế suất thuế TNDN quy định trong luật là 30%, nhưng mức thuế suất thực tế chỉ alf 17,49%. Điều này cho thấy các doanh nghiệp đã nhận được nhiều chính sách ưu đãi thuế khác nhau từ các cơ quan nhà nước. Tuy nhiên, những ưu đãi này không đồng đều giữa các ngành sản xuất, ETR của các ngành biến động trong khoảng từ 9,58% đến 21,52%. Do Chính phủ Thái Lan tập trung vào việc thúc đẩy các ngành công nghiệp xuất khẩu, nhất là những ngành sử dụng nhiều vốn như ngành sản xuất thiết bị điện tử và ngành sản xuất thiết bị và phương tiện vận tải, nên có thể dễ dàng nhận thấy rằng mức thuế suất thực tế (ETR) của hai ngành này đã giảm đáng kể trong giai đoạn 2005-2008 (tính trung bình). Phần lớn các ngành sản xuất sử dụng nhiều vốn dựa vào các chính sách ưu đãi thuế. Ngược lại, ưu đãi thuế đối với những ngành sản xuất hàng hóa để tiêu dùng trong nước có thể không phải là nhân tố chi phối đến quyết định đầu tư vào những ngành này. Những yếu tố gắn với lợi thế về địa điểm dường như có tính quyết định hơn. Mức thuế suất ETR bình quân của những ngành sản xuất cho tiêu dùng nội địa vào khoảng 19%, cao hơn so với những ngành sản xuất hàng xuất khẩu.

Để ước tính xem mức thuế suất của các ngành này đóng góp như thế nào đến thu ngân sách ở Thái Lan, phương pháp ước lượng panel được sử dụng. Điều này cho phép tính đến nhiều yếu tố tự do hơn. Bên cạnh đó, những vấn đề liên quan đến việc bỏ sót biến có thể kiểm soát được và cũng có thể giảm bớt mức độ đa cộng tuyến. Theo Hsiao (2003), điều này có thể giúp củng cố độ tin cậy của các tham số được ước lượng. Kết quả tính toán cho 240 công ty sau đó được tính bình quân và phân theo từng ngành. Hàm ước lượng bao gồm các biến số sau: số thuế thu nhập doanh nghiệp của từng ngành (CT) là biến phụ thuojc của dòng vốn FDI, mức thuế suất thực tế (ETR) và mức lợi nhuận của từng ngành (PROF). Dữ liệu của từng doanh nghiệp được thu thập từ dữ liệu

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của SET, dữ liệu về FDI được thu thập từ nguồn dữ liệu điện tử của Ngân hàng Thái Lan và số thu thuế TNDN được lấy từ Vụ thu thuế. Biến giả được sử dụng để xác định liệu dòng vốn FDI là từ các nước ASEAN hay không. Hàm ước lượng là hàm log-tuyến tính (log-linear), được hiểu là các hệ số co giãn. Kết quả ước lượng và các kiểm định về độ tin cậy và hệ số tương quan được minh họa trong Bảng 2.

Bảng 2: Kết quả ước lượng đối với dữ liệu hồi quy từ PGGive

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.

Hệ số tương quan đối với độ co giãn của thuế và lợi nhuận có giá trị dương và có ý nghĩa tại khoảng tin cậy tương ứng là 99% và 95%. Ngược lại, biến FDI không có ý nghĩa đối với việc đóng góp vào nguồn thu thuế trong trường hợp này. Biến giả cho biết nguồn vốn đầu tư có nguồn gốc từ các nước ASEAN đã đóng góp đáng kể vào số thu ngân sách. Điều này càng cho thấy tầm quan trọng về tài khóa của hành vi chính phủ các nước thành viên cũng như kế hoạch chiến lược của các doanh nghiệp trong phạm vi liên kết kinh tế. Hồi quy chéo giữa các ngành cho thấy khi cân nhắc đến khả năng hình thành các hiệp định thuế trong ASEAN, các mức thuế suất cạnh tranh thực tế hiện hành có thể tăng thêm để qua đó cùng nhau gia tăng nguồn thu cho ngân sách. Cụ thể, kết quả hồi quy chỉ ra rằng 1% tăng thêm về ETR có thể làm gia tăng số thu thuế của ngành đó thêm khoảng 1,04%. Điều thú vị là mức thuế suất thực tế tính toán được đã dần tăng lên trong vòng một số năm gần đây. Mức thuế ETR bình quân của các ngành ở Thái Lan năm 2005 là 17,1%, năm 2006 là 16,2%, năm 2007 là 16,9% và năm 2008 là 18,2%. Đã có một số biện pháp để mở rộng cơ sở tính thuế đã được Chính phủ thực hiện và những biện pháp này có sự khác biệt khá lớn giữa các ngành.

3. Kết luận

Mô hình trình bày trong bài viết này phân tích về hành vi của các công ty xuyên quốc gia và của chính phủ các nước, xác định các điểm cân bằng cho một "trò chơi" ba giai đoạn. Nội dung chính là ước lượng vai trò của việc

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chuyển giá của các công ty và mức thuế suất của chính phủ trong quá trình hai chủ thể này đưa ra các quyết định. Thuế TNDN được phân tích trong mô hình theo cả chế độ thuế cạnh tranh và chế độ thuế có sự hợp tác giữa chính phủ các nước. Kết luận thu được chỉ ra rằng mức thuế suất trong chế độ cạnh tranh có thể tăng lên để từ đó có thể tăng nguồn thu chung ở cả hai quốc gia. Bài viết cũng chỉ ra rằng mức giá chuyển có xu hướng khác với chi phí, mức hiệu quả do cấu trúc thị trường và cấu trúc ngành, khác với các thức hình hành và mức giá chuyển để tối ưu hóa lợi nhuận nếu như xem xét đến mức thuế suất. Rõ ràng việc mức giá chuyển có sự khác biệt không phải chỉ là do sự hợp tác trong nội bộ doanh nghiệp mà còn do những quyết định của chính phủ là liệu chế độ thuế cạnh tranh hay chế độ thuế phối hợp sẽ được áp dụng. Ứng dụng của mô hình được mở rộng cho nguồn dữ liệu của Thái Lan. Mức thuế suất thuế TNDN thực tế (ETR) tính toán được của các ngành đã cho thấy chính phủ cần phải xem xét đến tác động của các chính sách ưu đãi thuế đối với quyết định đầu tư như thế nào trong từng ngành. Phân tích hồi quy giữa các ngành của Thái Lan đã chỉ ra rằng khi cân nhắc đến khả năng hình thành các hiệp định thuế trong ASEAN, các mức thuế suất thực tế theo chế độ thuế cạnh tranh có thể tăng thêm để qua đó cùng nhau gia tăng nguồn thu cho ngân sách. Điều thú vị là mức thuế suất thực tế tính toán được đã tăng lên trong vòng một số năm gần đây.

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