BASE EROSION AND PROFIT SHIFTING

IN INDONESIA

Arnaldo Purba

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Statement of Originality of the Thesis

I declare that this thesis is my original work of research undertaken between July 2014 and July 2018 at the Research School of Accounting, Australian National University, in Canberra, Australia. To the best of my knowledge, all sources and material previously published or written by any other person have been acknowledged in the text and/or in the references of the thesis.

Signature :

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Abstract

The ownership, location and internalisation (OLI) framework introduced by Dunning (1977) explains why multinational enterprises (MNEs) establish subsidiaries overseas. According to the OLI framework, MNEs have advantages over companies that operate at the domestic level, including more power, such as patent, trademark and international reputation (ownership), more flexibility to choose locations for better access to customers and lower tariffs (location) and, most importantly, broader opportunities to set up intra-firm prices and processes (internalisation). While there have been strong indications that Indonesian affiliates of foreign MNEs have been using the internalisation aspects of the OLI framework, such as profit shifting, to avoid Indonesian corporate income tax (CIT), there are no peer-reviewed studies on the existence of profit shifting by MNEs in Indonesia.

When an MNE shifts profit out of a host country, it simultaneously reduces both the taxable income and the accounting profit reported in the host country. Therefore, in this thesis, profit is represented by two measurements: taxable income and accounting profit before tax.

Using confidential tax return data for the period 2009–2015, this thesis investigates the issue of profit shifting in Indonesia by conducting three related studies, which are outlined below.

Study 1 investigates whether foreign-owned Indonesian companies (FOICs) shift profits out of Indonesia by examining the effect of the difference in statutory corporate tax rates (STR) between the source country of investment and Indonesia on the profit reported by FOICs in Indonesia. The regression results show that the lower the tax rate

of the parent country relative to Indonesia, the lower the profit reported by FOICs, providing empirical evidence consistent with the profit shifting occurring in Indonesia.

Study 2 further investigates whether FOICs shift profits out of Indonesia by following an approach introduced by Hines and Rice (1994) based on the Cobb–Douglas production function with some modifications. The regression results show that a tax rate that is one percentage point lower in the parent country reduces the accounting profit and taxable income reported by FOICs in their Indonesian tax returns by 2.56% and 2.89%, respectively. These findings are consistent with the findings of Study 1 and provide further evidence of profit shifting from Indonesia to low-tax countries.

Study 3 attempts to provide more direct evidence of the existence of cross-border profit shifting in Indonesia by investigating whether FOICs use the two most commonly used channels to shift profits: intra-group transfer pricing and debt financing. This is done by matching FOICs with comparable domestic-owned Indonesian companies (DOICs) and comparing the paired sample in terms of (1) earnings before interest and taxes scaled by sales (to detect profit shifting using transfer pricing), and (2) long-term debt to related parties scaled by assets (to detect profit shifting using intra-group debt financing). The results suggest that while FOICs use both channels to shift profits, transfer pricing plays a more significant role than debt financing.

This thesis contributes to the literature by providing empirical evidence of profit shifting by MNEs to erode the CIT base of Indonesia.

Contents

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List of Acronyms

A	Level of productivity in the local country
ABDC	Australian Business Deans Council
AOI	Apple Operations International
ATE	Average treatment effect
AP	Pre-tax accounting profit
APA	Advance Pricing Agreement
AP/S	AP scaled by total sales
ASEAN	Association of Southeast Asian Nations
ASX	Australian Securities Exchange
BBC	British Broadcasting Corporation
BEPS	Base erosion and profit shifting
BKPM	Badan Koordinasi Penanaman Modal (Indonesian Investment Coordinating Board)
BPS	Badan Pusat Statistik (Statistics Indonesia)
BTD	Book-tax difference
CapInt	Capital intensity
CFC	Controlled Foreign Company
CIT	Corporate income tax
DGCE	Directorate General of Custom and Excise
DGT	Directorate General of Tax
DOIC	Domestic-owned Indonesian company
EBIT	Earnings before interest and taxes
EBIT/S	Earnings before interest and taxes scaled by total sales

EoI	Exchange of information
ETR	Effective tax rate
FDI	Foreign direct investment
FITO	Foreign income tax offset
FOIC	Foreign-owned Indonesian company
FTO	Foreign investment tax office
G20	Group of Twenty
GDP	Gross domestic product
GMM	Generalised method of moment
GPPTL	General Provisions and Procedures of Taxation Law
HRA	Hines and Rice approach
IDX	Indonesian Stock Exchange
IDR	Indonesian Rupiah
IMF	International Monetary Fund
ITL	Income Tax Law
K	Capital
KMK	Keputusan Menteri Keuangan (Finance Minister Decree)
KPMG	Klynveld Peat Marwick Goerdeler (one of the Big Four auditors)
ln*X*	Natural logarithm of *X*
L	Labour
LTO	Large taxpayer office
LTL	Long-term liability
LTL_RP/TA	Long-term liabilities to related parties scaled by total assets
MAP	Mutual agreement procedure
MNE	Multinational enterprise

MoF	Ministry of Finance
MTO	Medium taxpayer office
NPWP	Nomor pokok wajib pajak (see TIN)
OECD	Organisation for Economic Co-operation and Development
OLI	Ownership, location and internalisation
OLS	Ordinary least squares
PBB P2	Pajak bumi dan bangunan sektor pedesaan dan perkotaan (Rural and urban property tax)
PBB P3	Pajak bumi dan bangunan sektor perkebunan, perhutanan dan pertambangan (Plantation, forestry and mining property tax)
PER	Peraturan Direktur Jenderal Pajak (Director General of Tax Regulation)
PLCTO	Public listed company tax office
PMK	Peraturan Menteri Keuangan (Finance Minister Regulation)
PSAK	Pernyataan Standar Akuntansi Keuangan (Indonesian Financial Reporting Standard)
PSM	Propensity score matching
PTL	Property Tax Law
PTR	Parent's tax rate
RMTO	Regional medium taxpayer office
Rp	Rupiah, the currency of Indonesia
SPV	Special purpose vehicle
STLG	Sales tax on luxury goods
STO	Small taxpayer office
STR	Statutory tax rate
TDDPO	Taxation Data and Document Processing Office

THC	Tax haven country
TI	Taxable income
TIN	Tax identification number
TIU	Technical implementing units
TI/S	TI divided by total sales
TRdiff	Tax rate difference
TSDCO	Tax service, dissemination, and consultation office
UN	United Nations
US	United States of America
USD	US dollar
UU KUP	Undang-undang Ketentuan Umum dan Tata Cara Perpajakan (GPPTL)
UU PBB	Undang-undang Pajak Bumi dan Bangunan (PTL)
UU PPh	Undang-undang Pajak Penghasilan (ITL)
UU PPN	Undang-undang Pajak Pertambahan Nilai (VATL)
VAT	Value-added tax
VATL	Value-Added and Luxury Goods Tax Law
VIF	Variance inflation factor
WB	The World Bank
WIPS	World Investment Prospects Survey

CHAPTER 1:
INTRODUCTION

1.1 Background and Motivation

The number of corporations operating across countries, known as multinational enterprises (MNEs), has increased significantly since the 1980s (Markusen, 2002). The relationship between MNEs and the countries in which these companies operate (host countries) is deemed to be mutually beneficial. While MNEs seek lower production costs by investing in host countries, host countries benefit from several advantages offered by MNEs, including tax revenue, employment and transfer of knowledge and skills. However, the growth of MNEs has worried many policymakers and academics, who have identified MNEs as shifting profits to low-tax countries (Kind, Midelfart, & Schjelderup, 2005). In response, governments have taken action to fight profit shifting by MNEs. For example, in 1998, the Organisation for Economic Co-operation and Development (OECD) published a report entitled 'Harmful Tax Competition: An Emerging Global Issue' (OECD, 1998). Larger-scale action took place in 2013, when the OECD headed the Base Erosion and Profit Shifting (BEPS) project, which was initiated by the Group of Twenty (G20). Since then, the project—better known as the OECD/G20 BEPS project, or simply the BEPS project—has set the agenda for tax authorities in many countries to jointly combat profit shifting by MNEs.

However, the incidence of profit shifting is still notable. For example, in May 2016, the British Broadcasting Corporation (BBC) reported that 100 French tax officials and police raided the Paris headquarters of Google, which was accused of owing €1.6 billion in unpaid taxes as a result of international tax arrangements (BBC, 2016). Prominent online sources such as the *Financial Times* (Thomson, Waters, & Houlder, 2016),

Associated Press (Satter & Liedtke, 2016), *Guardian* (Chrisafis & Garside, 2016), *USA Today* (Hjelmgaard, 2016), *Reuters* (Rose & Labbé, 2016) and the *Telegraph* (Titcomb, 2016) also covered this story. For example, according to the *Financial Times*, Google allegedly used complex tax avoidance to shift profits to low-tax jurisdictions. Specifically, the *Financial Times* reports that Google set up its European headquarters in Dublin, Ireland (a country that imposes the lowest corporate tax rate in Europe), and channelled its profits through the country from all over Europe. As a result, in France in 2014, the company paid only €5 million in corporate tax out of total revenues of €225.4 million (Thomson, et al., 2016). This is a strong indication that large MNEs have been using BEPS to avoid paying taxes in host countries.

BEPS is defined as strategies used by MNEs to exploit gaps and mismatches in tax rules in different countries by shifting profits to low-tax locations to reduce the corporate tax being paid (OECD, 2014a). By definition, BEPS is a tax-avoidance strategy and is therefore legal, whereas tax evasion is illegal: 'Although tax avoidance is mostly legal and tax evasion is not, both result in loss of revenue to the government, and, by the definition, both defeat the intent of the government in enacting its taxing statutes' (United Nations (UN), 2011, p. 437). Accordingly, many countries and prominent international institutions, including the OECD, International Monetary Fund (IMF), World Bank (WB) and UN, consider BEPS an essential global issue that needs to be eliminated or at least restricted. They also agree that actions to address BEPS should involve both developed and developing countries because cross-border tax-avoidance activities are likely to occur in both.

Most existing studies use data from developed countries, and almost none use data from developing countries—particularly firm-level tax return data. Some prior studies reveal that developing countries are victims of profit shifting by MNEs and argue that

BEPS may disadvantage developing countries more than developed countries (e.g. Christian Aid, 2009; Cobham, 2005; Oxfam, 2000; Baker, 2005). However, these studies are not peer-reviewed and therefore may not provide sufficiently rigorous empirical evidence to support their argument.

Recently, some peer-reviewed studies (e.g. Crivelli, De Mooij, & Keen, 2015; Janský & Prats, 2015; Salihu, Annuar, & Obid, 2015) have used financial data for MNEs to examine the incidence of BEPS in developing countries. For example, in a working paper published by the IMF, Crivelli, et al. (2015) provide empirical evidence that developing countries are more vulnerable to cross-border profit shifting than developed countries because of lower tax inspection capacity and greater dependency on corporate tax revenues. However, according to the OECD (2015a), studies that use financial data to detect the incidence of BEPS may provide less reliable results than studies that use tax return data. Compared with financial data, tax return data can better capture the existence of profit shifting by MNEs because the latter can better capture the incidence of BEPS (OECD, 2015a). Therefore, while recent peer-reviewed studies have made a significant contribution to literature relating to BEPS in developing countries, further studies are needed to provide more reliable empirical evidence on the incidence of BEPS in developing countries.

This thesis pursues empirical evidence of both the existence of cross-border profit shifting[1] and the channels used to shift profits by analysing Indonesian confidential corporate tax return data. It is important to note that the data are obtained from the Directorate General of Tax (DGT)—the Indonesian tax authority—under a data nondisclosure agreement. The DGT removes all identifying particulars from the data

[1] Cross-border profit shifting, profit shifting and BEPS are used interchangeably throughout this thesis.

because of privacy protection requirements. As a result, firms are anonymised, and this thesis only uses tax return data supplied by the DGT.

A key data item in tax returns is taxable income (TI), which is the tax base of income tax. Thus, any reduction in TI is a direct measurement of tax base erosion. Given that profit shifting reduces the TI reported to the tax authority, the use of TI data reported in tax returns will capture the incidence of profit shifting and the erosion of the income tax base better than financial data. Therefore, while this thesis measures profit in two ways—TI and accounting profit (AP), which are both reported by foreign-owned Indonesian companies (FOICs) in their Indonesian tax returns—the key measurement of profit used as the dependent variable to investigate profit shifting is TI.

This thesis derives evidence for the existence of profit shifting by foreign MNEs by examining whether the corporate tax rates of the parent companies affect the magnitude of profits reported by FOICs (i.e., entities through which foreign MNEs operate in Indonesia) in their Indonesian tax returns.[2] Evidence for the channels used by FOICs to shift profits out of Indonesia is identified by comparing the profitability and debts to related parties between FOICs and matched domestic-owned Indonesian companies (DOICs). The findings of this thesis are expected to fill the gap in the literature by providing more reliable empirical evidence about the incidence of BEPS in a major developing country, namely, Indonesia.

This thesis uses Indonesia as the focus of the research. As a G20 member, Indonesia is actively involved in the BEPS project. Further, Indonesia was among the top 20 foreign direct investment (FDI) destination countries in 2012, and it was the world's fourth most prospective FDI destination country in 2013–2015 (UN, 2013a).[3] Therefore, in terms of

[2] Appendix 1 presents the Indonesian corporate tax return form known as Form 1771.
[3] This statistic is based on the World Investment Prospects Survey (WIPS) that was conducted by the UN in 2013. According to the UN (2013b), the survey results are based on 225 validated responses, and the survey was conducted among executives of the 5,000 largest nonfinancial MNEs, as well as professionals

the size of the economy and the magnitude of inbound FDI to the economy, studying cross-border profit shifting in Indonesia is substantially valuable, and the evidence provided will be beneficial to better understand the issue of profit shifting—particularly from the perspective of an emerging economy.

1.2 Research Question

The central research question of this thesis is: **Do FOICs shift profits out of Indonesia to the parent's country or other low tax countries?**

This thesis defines 'parent's country' as the country in which the immediate parent of an FOIC is located—not the location of the ultimate parent. The DGT only provides the country of the immediate parents of FOICs. In addition, this thesis defines 'parent's tax rate' as the statutory tax rate of the country in which the immediate parent is located. For example, PT Google Indonesia is an FOIC and a subsidiary of Google Asia Pacific Pte Ltd, which is located in Singapore. Google Asia Pacific is ultimately owned by Alphabet Inc. in the United States (US). Here, Google Asia Pacific Pte Ltd. is the immediate parent. Therefore, this thesis uses the Singaporean tax rate rather than the US tax rate to examine whether PT Google Indonesia shift profits out of Indonesia.

Three studies are conducted to provide answers to the central research question. Study 1 and Study 2 detect whether FOICs use profit shifting strategies to avoid Indonesian corporate income tax (CIT). Study 3 identifies the channels used by FOICs to shift profits out of Indonesia. The research questions of the three studies are presented below.

working in 245 national and subnational investment promotion agencies. This information demonstrates the worthiness of choosing Indonesia as the subject of the study—particularly in terms of the magnitude of FDI.

Study 1: **Does the tax rate difference between the country of residence of an FOIC's parent and Indonesia affect the TI and pre-tax AP reported by FOICs in their Indonesian tax returns, after controlling for firm size, maturity and industry?**

Study 2: **Does the tax rate of the country of residence of an FOIC's parent affect the TI and AP reported by FOICs in their Indonesian tax returns, after controlling for the true profit generated by capital and labour inputs?**

Although the research question of Study 2 is similar to that of Study 1, Study 2 uses a different approach to detect profit shifting. Specifically, Study 2 uses the Hines and Rice (1994) approach (hereafter HRA), which is a widely recognised technique used to detect the existence of cross-border profit shifting by MNEs.

Study 3: **How do FOICs shift profits from Indonesia?**

Study 3 attempts to find more direct evidence of the existence of BEPS in Indonesia by identifying the channels that FOICs are likely to use to shift profits by comparing the performance between FOICs and comparable DOICs in two indicators that are expected to capture the two most widely used channels by MNEs to shift profits: transfer pricing and high debt financing by related parties. The two indicators are: (1) earnings before interest and taxes scaled by total sales (to detect profit shifting using the transfer pricing channel) and (2) long-term debt to related parties scaled by total assets (to detect profit shifting using the debt financing channel).

1.3 Major Findings

Study 1 uses the statutory corporate tax rate (STR) difference between countries in which the parent companies are located and Indonesia ($STR_{Parent} - STR_{Indonesia}$) as incentives for FOICs to determine the magnitude of profits they report in their Indonesian tax returns. The key finding is that the STR difference is positively associated with the

level of TI and AP reported by FOICs. That is, the lower the parent's STR relative to the Indonesian STR, the lower the TI and AP reported by FOICs, and vice versa. This suggests that FOICs shift profits out of Indonesia to low-tax jurisdictions to avoid Indonesian CIT. More precisely, the regression result shows that an STR in the parent's country that is one percentage point higher (lower) relative to Indonesia is associated with a 1.68% and a 1.27% increase (decrease) in the TI and AP respectively (both scaled by total sales) reported by FOICs in their Indonesian tax returns. This finding provides preliminary evidence of the incidence of cross-border profit shifting in Indonesia and is further supported by the empirical evidence from the other two studies in this thesis.

Study 2 further examines the presence of cross-border profit shifting in Indonesia by adopting the HRA with some modifications. This approach is widely used to investigate the incidence of profit shifting by MNEs. After analysing a final sample of more than 3,000 firm-year observations from 2009 to 2015, this study finds that the effect of a variation of one percentage point in the parent's tax rate on reported AP (TI) by FOICs to the Indonesian tax authority is 2.56% (2.89%).

Therefore, the results of Study 1 and Study 2 provide evidence that profit shifting occurs in Indonesia. Study 3 attempts to discover how FOICs shift profits. More specifically, it investigates whether FOICs use the two most widely used channels (transfer pricing arrangements and high debt financing) to shift profits by comparing profitability and debts to related parties between FOICs and DOICs. The first step of the investigation is to generate a dataset that contains a matched DOIC for each FOIC. This study uses the propensity score matching (PSM) technique for the matching procedure. Next, the matched dataset obtained from the PSM procedure is analysed using paired *t*-tests and ordinary least squares (OLS) regressions. The results of all tests suggest that FOICs use both transfer pricing and debt financing to shift profits out of Indonesia.

Further, the regression results indicate that transfer pricing plays a more important role than debt financing in FOICs avoiding Indonesian CIT.

1.4 Outline of the Thesis

This thesis consists of seven chapters.

Chapter 1 introduces the thesis in four sections. The first section provides the background and motivation of the study, and it describes the incidence and contemporary development of cross-border profit shifting around the world, as well as the importance of providing empirical evidence from a developing country's perspective. The second section states the central research question of the thesis and the research question for each study. Section 3 presents the key findings of the three studies in this thesis. Finally, Section 4 outlines the structure of the thesis.

Chapter 2 explains taxation in Indonesia in two parts. The first part describes the Indonesian tax system, including how companies are taxed under Indonesian tax law, how Indonesian tax law defines FDI, how FOICs register in an Indonesia tax office and how Indonesian tax law treats income tax paid overseas. The second part explains tax administration in Indonesia, including the organisation structure of the DGT, how tax reforms have affected the structure of the Indonesian tax office and the quality of tax services and data, and the performance of tax revenue and tax compliance in Indonesia.

Chapter 3 presents a literature review of cross-border profit shifting. First, it explains the theory of corporate tax avoidance, with an emphasis on the theory of tax avoidance by MNEs, and methods used to identify the existence of profit shifting by MNEs. It then provides a general review of studies that focus on tax avoidance by MNEs in developed countries and developing countries. Finally, it discusses profits shifting activities by FOICs and efforts undertaken by the DGT to fight profit shifting.

Chapter 4 presents Study 1 of the thesis. Prior studies allege that MNEs shift profits from both developed and developing countries. However, few empirical studies have used tax return data from developing countries. Study 1 fills this gap by investigating how the tax rate difference between the parent country of an FOIC and Indonesia affects the profit reported by the FOIC in its Indonesian tax return. This is the first step in identifying the existence of profit shifting by foreign MNEs operating in Indonesia.

Chapter 5 presents Study 2 of the thesis. According to Fuest and Riedel (2012), there is limited knowledge of profit shifting in developing countries because the findings of most existing studies are difficult to interpret, mainly because of problems relating to data reliability and the method used to measure profit shifting. Study 2 reinforces the findings of Study 1, which finds that FOICs shift profits out of Indonesia, using the HRA with some modifications. The HRA is based on the Cobb–Douglas production function and has been widely cited in the literature of international tax avoidance—particularly in studies that focus on detecting the occurrence of cross-border profit shifting.

Chapter 6 presents Study 3 of the thesis. Further to the findings of Study 1 and Study 2, which suggest that FOICs use profit shifting strategies to avoid Indonesian CIT, Study 3 attempts to provide more direct evidence of cross-border profit shifting in Indonesia by examining the channels used by FOICs to shift profits out of Indonesia. Most existing studies agree that MNEs use two channels to shift profits: transfer pricing and debt financing. Using transfer pricing, MNEs arrange prices for intra-firm transactions so they will end up paying lower income taxes than they should. Using debt financing, MNEs use debt rather than equity to finance their business in high-tax countries so they can claim interest expenses as a deduction, which leads to low tax liability. This study investigates whether FOICs use the two channels by comparing FOICs and comparable DOICs in terms of earnings before interest and taxes scaled by total sales (as

a proxy for profit shifting using the transfer pricing channel) and long-term debt to related parties scaled by total assets (as a proxy for profit shifting using the debt financing channel).

Chapter 7 concludes the thesis. It presents an overview and conclusion of the thesis, as well as contributions and limitations of the study, suggestions for future research and concluding remarks.

CHAPTER 2:

TAXATION IN INDONESIA

This chapter discusses taxation in Indonesia in two sections. Section 2.1 describes the Indonesian tax system. In line with the topic of the thesis, this section mainly focuses on the tax system that is applicable to company taxpayers. Section 2.2 outlines tax administration in Indonesia, including Indonesian tax reforms, development of the Indonesian tax office structure and nationwide network, DGT performance in terms of tax revenue collected and the extent to which company taxpayers contribute to it, and performance of Indonesian tax to gross domestic product (GDP) ratio and tax compliance.

2.1 Indonesian Tax System

The general rules and procedures of taxation in Indonesia are regulated under Law No. 6/1983 (General Provisions and Procedures of Taxation Law) as lastly amended by Law No. 16/2009 (hereafter GPPTL). Article 1 (1) of GPPTL defines tax as a compulsory contribution to the state by individuals and entities that is enforceable by law, without direct benefit in return and is used for the purposes of the state for the greatest prosperity of the people. In the explanatory section, GPPTL states that the Indonesian tax system adheres to the self-assessment system, which aims at simpler tax administration.[4]

The self-assessment system enables taxpayers to assess their own tax liabilities, such as computing TI and tax liability, paying tax owed and reporting the tax liabilities in their tax returns. Another important feature of the self-assessment system is that

[4] As explained in Section 2.2, one of the most important results of the major tax reform in 1983 was that the Indonesian tax assessment system shifted from an official assessment system to a taxpayer assessment, or self-assessment, system.

taxpayers are expected to 'comply willingly without the need for enquiries, obtrusive investigations, reminders or the threat or application of legal or administrative sanctions' (James & Alley, 2002, p. 30).

GPPTL Article 1 (2) defines a taxpayer as an individual or entity that possesses tax rights and obligations pursuant to the provisions in the tax laws. Further, GPPTL Article 1 (3) refers to an entity as a group of people and/or capital that conducts business or not, such as a company, partnership, state or local government-owned enterprise, cooperative, pension fund, association, foundation, and social and political organisation, as well as other forms of entity, such as collective investment contract and permanent establishment. Therefore, entity basically includes any type of taxpayer other than individuals.

The central government imposes a range of taxes through several Indonesian tax laws. Since the major tax reform in 1983,[5] these taxes can be divided into four major types: (1) income taxes (imposed under Income Tax Law No. 7/1983 as lastly amended by Law No. 36/2008; hereafter ITL); (2) value-added taxes (imposed under Value Added and Luxury Goods Tax Law No. 8/1983 as lastly amended by Law No. 42/2009; hereafter VATL); (3) land and building taxes (imposed under Land and Building Tax Law No. 12/1985 as lastly amended by Law No. 12/1994; hereafter Property Tax Law [PTL]);[6] and (4) other taxes (mainly stamp duty, which is imposed under Stamp Duty Law No. 13/1985). This thesis only focuses on the first type of tax, namely income taxes—particularly CIT.

[5] Discussed in more detail in Section 2.2.1.

[6] PTL divides property taxes into two parts: (1) rural and urban property tax (known as PBB P2 in Indonesia); and (2) plantation, forestry and mining property tax (known as PBB P3 in Indonesia). On 1 January 2014, the central government transferred the authority to manage and collect PBB P2 to local governments. Meanwhile, PBB P3 is still managed by the central government.

The rest of this section is divided into two subsections as follows. Section 2.1.1 outlines the income tax system for company taxpayers as regulated in ITL and Section 2.1.2 defines FDI and outlines how Indonesian tax law treats income tax paid overseas.

2.1.1 Company Income Tax System in Indonesia

According to ITL Article 1, income tax is imposed on income received or deemed to be received by a taxpayer in an income year. This provision contains three essential components. The first component is 'taxpayer'. According to ITL Article 2, whether an entity or an individual is a resident taxpayer is determined based on residency; thus, a resident company taxpayer is a company established or domiciled in Indonesia.[7] Given that FOICs domicile in Indonesia, they are considered resident taxpayers, similar to DOICs. FOICs and DOICs are therefore treated equally for tax purposes. In contrast, a non-resident company taxpayer is a company not established or domiciled in Indonesia, but that conducts business activity or receives income other than from business activity, either via or not via a permanent establishment such as a place of management, a branch or a representative office. If the business activity is run through a permanent establishment, ITL requires that the permanent establishment be treated as a resident company taxpayer for tax purposes.[8]

The second component is 'income'. ITL Article 4 (1) defines income as any additional economic capability derived by a taxpayer from Indonesia and outside Indonesia that can be used for consumption or to increase the wealth of the taxpayer under any name or any form, including compensation in any form, lottery prizes, business

[7] Resident individual taxpayers are individuals who reside in Indonesia, individuals who have been present in Indonesia for more than 183 days within a 12-month period and individuals who have resided in Indonesia within a particular taxable year and who intend to reside in Indonesia.
[8] Non-resident taxpayers other than permanent establishments are not treated as resident taxpayers. For example, they do not need to file an annual tax return as resident taxpayers and permanent establishments do.

profits (including profits from sharia businesses), gain on sale of assets, tax refunds (that have been claimed as deductions), interest income, dividend in any form, royalties, rent income, gain on assets revaluation and insurance premiums received by insurance companies.

The elucidation of ITL Article 4 (1) explains that ITL refers to income as a broad meaning and that the definition shall not be limited to examples mentioned in the Article. It further explains that the income tax shall be imposed on any increase in economic capability received or deemed to be received[9] by a taxpayer from any source that can be used for consumption or for increasing the wealth of the taxpayer. ITL emphasises that the income definition focuses more on the presence of additional economic capability than the source of the income. In addition, ITL states that income can be divided into four categories: (1) income from employment (e.g., salary) and independent work (e.g., income received by accountants and lawyers), (2) income from business activities, (3) passive income (e.g., interest, dividends, royalties, gain on sales of assets) and (4) other income (e.g., discharge of debts, prizes).

Further, ITL asserts that because the Law adopts the concept of income in a broad meaning, all types of income received or deemed to be received in an income year shall be combined to form the TI for that income year. Thus, if a company suffers a loss from a business in an income year, the loss can be used to offset income from the company's other sources of income (i.e., horizontal compensation). However, this does not apply to a loss incurred outside Indonesia. Moreover, income that is taxed with a final withholding tax[10] or that is exempt from income tax under ITL shall not be combined with other income that is subject to the non-final income tax rate.

[9] Gain on assets revaluation is an example of income that is deemed to be received.

[10] Final tax is a special treatment in taxing income. It contains three features: (1) the party that pays income (first party) withholds tax on the income received by another party (second party); (2) the second party excludes the income from its TI; and (3) the second party cannot claim the tax paid (i.e., tax withheld by

The last component is 'income year'. Both GPPTL (Article 1) and ITL (elucidation of Article 1) define income year as the period of the calendar year, unless the taxpayer uses a financial year. Most taxpayers in Indonesia adopt the calendar year as their financial year because it simplifies the preparation of tax reports.

ITL lists not only types of income that should be taxed under the Law, but also several types that should be excluded (exempt) from TI. Article 4(3) of the Law lists the exempt incomes as follows: (1) donations to religious institutions that have been authorised by the government; (2) bequeathed assets received by religious, education and social institutions or individuals that run micro and small businesses;[11] (3) inheritance; (4) assets received by company taxpayers in exchange for shares or equity contributions; (5) benefits in kind, unless given by non-taxpayers or given by taxpayers under final income tax and deemed-profit schemes;[12] (6) insurance claims received by individual taxpayers;[13] (7) dividend income received by resident company taxpayers if the following two criteria are satisfied: the recipient owns at least 25% of the shares of the company that distributes the dividends, and the company that distributes the dividends was established and is located in Indonesia; (8) pension contribution received by pension funds; (9) gain from investment received by pension funds in (8); (10) profit distribution received by partners of a partnership and by members of a cooperative, foundation,

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the first party) to offset against its tax payable (non-creditable). The rate of final tax varies depending on the type of business activity. For instance, the final withholding tax rate for interest income received from any deposits held with banks and the final withholding tax rate for prizes won in lotteries is 20% and 25%, respectively.

[11] Micro, Small and Medium Business Law No. 20 Year 2008 Article 6 states that a business is classified as a micro or small business based on two criteria: net asset and revenue. A micro business is a business that possesses net assets and revenue of Rp50 million or less and Rp300 million or less, respectively. A small business is a business that possesses net assets and revenues of more than Rp50 million but not more than Rp500 million, and more than Rp300 million but not more than Rp2.5 billion, respectively. Rp is the symbol for Rupiah, which is the official currency of Indonesia. The currency code is IDR (Indonesian Rupiah). Rupiah, IDR and Rp are used interchangeably throughout this thesis.

[12] For instance, facilities (e.g., housing, car) received by a resident taxpayer who works for a foreign diplomatic representative office in Jakarta are regarded as income because a diplomatic office does not meet the definition of taxpayer under ITL.

[13] As explained in elucidation of ITL Article 4(3e), this is consistent with ITL Article 9 (1d), which disallows insurance premiums paid by individual taxpayers as deductions.

association and organisation, because under GPPTL Article 1 (3), all entities, including cooperative, partnership, foundation, association and organisation, are treated as taxpayers; (11) income generated by small, micro and medium venture capital companies that do not trade shares in stock exchanges;[14] (12) scholarship allowances; (13) existing surplus in non-profit organisations and (14) aids or compensation paid by social institutions.

ITL Article 6 (1) states that TI shall be derived from total assessable income less expenses incurred to generate, collect and maintain the income.[15] Therefore, taxpayers can claim any expenses incurred for the sake of generating, collecting or maintaining income as a deduction. According to ITL, deductible expenses include expenses that are incurred that directly or indirectly have a nexus with assessable income. The word used in the definition is 'includes' rather than 'means', implying that it does not really define 'deductions'. Therefore, from the definition and wording, it can be interpreted that a deductible expense implies a broad meaning of deductions for tax purposes, even though the elucidation of deduction provision in ITL Article 6 (1) does not specifically mention that the deductions are not limited to the examples listed in the following paragraph, as in the elucidation of income provision in ITL Article 4(1).

ITL provides the following examples of deductible expenses: purchase costs of goods, salary expenses, administrative expenses, taxes other than income tax, depreciation and amortisation, contributions to a pension fund, losses incurred from the sale or transfer of assets used in the business, losses on foreign exchange, research and

[14] President Regulation No. 9 Year 2009 Article 1 (3) defines a venture capital company as a type of financing company that invests capital in another company (investee company) in the form of shares, convertible bonds or profit sharing for a certain period. Whether a venture capital is a micro, small or medium business depends on the two criteria (net asset and revenue) as set in Micro, Small and Medium Business Law No. 20 Year 2008 Article 6. While micro and small business criteria have been stated previously, a medium business is a business that possesses net assets and revenues of more than Rp500 million but not more than Rp10 billion, and more than Rp2.5 billion but not more than Rp50 billion, respectively.

[15] ITL uses the term 'expenses' instead of 'deductions', which is used in countries such as Australia.

development (R&D) if conducted in Indonesia, scholarships, apprenticeships and training expenses, uncollectible receivables, donations for national disasters, donations for R&D conducted in Indonesia, costs of social infrastructure development, donations in the form of education facilities stipulated by a government regulation, and donations for sport enhancement. If there is a loss after subtracting the deductions from the gross income, ITL allows the loss to be carried forward for a maximum of five succeeding years.

The Indonesian CIT rate was 30% between the enactment of ITL in 1984 until 2008. It then decreased to 28% in 2009 and 25% in 2010.[16]

According to ITL, income tax is applicable to different types of income at different rates, as follows:

1. Article 4(2)

   To promote investment and saving and to simplify tax collection by the tax office and tax reporting by taxpayers, the government made the following incomes subject to final withholding tax: interest income from savings and bonds, lottery prizes, dividend income received by individual taxpayers, income from selling shares and other securities, and income from selling/renting land and buildings. The tax rates imposed on such incomes are diverse and are regulated in specific government regulations. For example, Government Regulation No. 19/2009 imposes 10% final withholding tax on dividend income received by individual resident taxpayers.

2. Article 21

[16] For individual taxpayers, ITL levies a progressive income tax rate of 5% to 30%, which has remained unchanged since 2009. The progressive income tax rate structure consists of four layers: (1) 5% for TI up to Rp50 million; (2) 10% for TI above Rp50 million to Rp250 million; (3) 25% for TI above Rp250 million to Rp500 million; and (4) 30% for TI above Rp500 million.

Employers including government treasurers, pension funds and other entities are obliged to withhold tax[17] on income received by individual resident taxpayers resulting from employment, services or any other activities performed by taxpayers. The tax rates used are the progressive income tax rates for individual taxpayers.

3. Article 22

   The finance minister is authorised to assign: (1) treasurers in government bodies to withhold tax on income received by suppliers resulting from the supply of goods to government bodies; (2) certain entities to withhold income tax on imports or other activities (e.g., automotive and cement industries); and (3) certain entities to withhold income tax on the sale of luxury goods. Luxury goods are determined based on the type and prices of the goods. Examples include cruise ships, luxury houses, luxury condominiums and apartments, and luxury vehicles. The tax rates imposed on such incomes depend on the type of transaction, and the rates are regulated in specific Finance Minister Regulations.

4. Article 23

   If resident taxpayers or permanent establishments (i.e., non-resident taxpayers that are treated equally as resident taxpayers for tax purposes) pay the following income to other resident taxpayers, they are obliged to withhold tax on the income received by the other taxpayers: dividend income received by company taxpayers, interest income other than that mentioned in Article 4(2), income from royalties and prizes (other than the lottery), awards and bonuses that are not taxed under Article 21 (the tax rate imposed is 15%), and rent income other than that mentioned in Article 4(2) (the tax rate imposed is 2%).

[17] Withholding tax is a special treatment in taxing income other than final withholding tax. The only difference between withholding tax and final withholding tax is that the party who receives the income can claim the tax paid by the party who pays income to offset against its tax payable (creditable).

5. Article 24

   This article is about foreign income tax offset and is discussed in detail in Section 2.1.2.

6. Article 25

   As Articles 21–23 cover employment income and passive income, ITL Article 25 mainly refers to instalment payments of tax on income from businesses. It requires taxpayers to pay instalments based on the difference between the previous year's tax payable and income taxes already paid for ITL Articles 21–24. Accordingly, the formula to compute the monthly income tax instalment is:

   $$\text{Monthly income tax instalment} = \frac{\text{last year's tax payable} - \text{tax paid for Article 21,22,23,24}}{12}$$

7. Article 26

   If resident taxpayers or permanent establishments pay the following income to non-resident taxpayers other than permanent establishments,[18] they are obliged to withhold tax: dividend income, interest income other than that mentioned in Article 4(2), income from royalties, income from renting assets, salaries from employment, delivering services, and other activities, prizes and rewards. The applicable tax rate is 20% unless stated otherwise in a tax treaty between Indonesia and the taxpayer's country of domicile (Section 2.1.2 discusses the tax treaty in more detail).[19]

[18] Other types of non-resident taxpayers are non-resident individual taxpayers and non-resident entity taxpayers other than permanent establishments. ITL Section 4(b) defines non-resident individuals as individuals who receive income from Indonesia but do not reside in Indonesia, or who live in Indonesia for not more than 183 days within a 12-month period, and defines non-resident entity taxpayers other than permanent establishments as entities that receive income from Indonesia but are not established or located in Indonesia.

[19] Based on this explanation, dividends can be taxed on three different tax rates: (1) 10% if received by resident individual taxpayers (under Article 4(2) of ITL); (2) 15% if received by resident company taxpayers (under Article 23 of ITL), but disregarded if received from a resident company taxpayer and the recipient controls at least 25% of the shares of the distributing company (under Article 4(3) of ITL); and (3) 20% if received by non-resident taxpayers, unless stated otherwise in the tax treaty between Indonesia and the domicile country of the recipient (under Article 26 of ITL).

According to Article 26(5) of ITL, the tax withheld on income received by a non-resident taxpayer is final tax unless:

a. the non-resident taxpayer is a parent company of a permanent establishment in Indonesia and the income received by the parent company is derived from business activities that are similar[20] or effectively related[21] to those of the permanent establishment

b. the status of the non-resident taxpayer changes to a resident taxpayer in the same income year as the period in which the income was received.

8. Article 29

ITL Article 29 requires resident taxpayers (including permanent establishments) to compare the total tax credit with tax payable in that income year before they file their annual income tax return. Tax credits are taxes already paid on income in a particular income year that can be used to offset the tax payable in that income year. According to ITL Article 28(1), tax credits are income tax paid for ITL Articles 21–25 and 26(5a,b). Tax credit Article 24 is about foreign income tax offset and is explained in more detail in Section 2.1.2.

Total tax credit is the sum of taxes already paid for ITL Articles 21–25 and 26(5a,b). Tax payable is TI multiplied by the CIT rate. If the tax paid is greater than the tax payable, the taxpayer can file a request for a tax refund. In contrast, if the tax paid is

[20] For example, if a parent company overseas receives income from selling products that are similar to those sold by its permanent establishment in Indonesia, the income is deemed to be received by the permanent establishment instead of the parent company. The tax withheld on such income is not final tax; therefore, it can be claimed as tax credit by the resident company that withholds the tax.

[21] For example, if a parent company overseas receives income from royalties and provides management services in connection with the royalties through a permanent establishment to a resident taxpayer in Indonesia, the income received from selling the royalties is deemed to be received by the permanent establishment instead of the parent company because the royalties are effectively connected to the activities of the permanent establishment. The tax withheld on such income is not final tax; therefore, it can be claimed as tax credit by the resident company that withholds the tax.

lower than the tax payable, the taxpayer is required to pay the shortage under Article 29 before submitting their annual income tax return.

No ITL articles allow the CIT paid on company profit to be attached to the dividends and claimed by shareholders as a tax credit. This implies that Indonesia adopts the classical system of company taxation (as in the US) rather than the dividend imputation system (as in Australia). In the classical system of company taxation, income tax paid by a company cannot be passed on to its shareholders, whereas the dividend imputation system allows this to occur. Tran (2015, p. 575) explains the Australian dividend imputation system as follows: 'Under the imputation system, income tax paid by companies can be passed on to resident equity-holders as tax credits when profits are distributed as dividends'. He adds: 'consequently, corporate tax is not necessarily a real cost, and publicly owned Australian firms with predominantly domestic ownership may have less incentives to manipulate taxable income to avoid tax'. As Indonesia adopts a classical system that taxes company profit and shareholders' dividend income separately, Indonesian companies have incentive to avoid CIT to maximise shareholders' wealth. Further, Tax avoidance literature suggests that foreign-owned companies avoid paying taxes in the countries where they run their business by shifting profits to lower-tax jurisdictions. This reasoning applies to FOICs.

In Indonesia, consolidation only applies to financial reporting and is not adopted for tax purposes. As a result, all intra-group transactions, including transfer pricing and debt financing, are eliminated only in consolidated financial reports, but remain reflected in corporate tax returns. This institutional arrangement allows the investigation of intra-group transactions using tax return data in Study 3 which examines whether FOICs use intra-group transfer pricing and/or debt financing to shift profits out of Indonesia.

2.1.2 Definition of Foreign Direct Investment and the Foreign Income Tax Offset in Indonesia

To understand and appreciate international tax planning by MNEs, one must have a basic knowledge of the elements of international commerce foundation within a country (Scholes, Wolfson, Erickson, Maydew, & Shevlin, 2009). However, before discussing this knowledge, this section will define FDI under Indonesian law and then outline the registration procedures of an FOIC in an Indonesian tax office to lay the foundation for an explanation of how a foreign affiliate becomes a taxpayer in the country.

An MNE consists of a group of companies operating in different countries under the control of a parent company. Foreign MNEs are foreign companies that operate in Indonesia via direct investment, known as 'FDI firms' (DGT, 2011, p. 62)[22] or, more popularly, FOICs (DGT, 2015a). That is, an FOIC is a company that is established or acquired by an MNE to conduct business in Indonesia; therefore, it is part of a foreign MNE. Given that many of the FOICs included in the dataset used in this thesis were established many decades ago, it is important to trace back the FDI regulations imposed by the government in the first place.

On 10 January 1967, the President of Indonesia signed Foreign Direct Investment Law No. 1/1967.[23] According to Article 1 of the Law, FDI encompasses foreign investments in the form of conducting business in Indonesia whereby foreign investors

[22] This is consistent with tax literature (e.g. Markusen, 1995, as discussed in Subsection 3.1.2), which uses the terms MNEs and FDI firms interchangeably.

[23] Laws and Regulations Establishment Law No. 12 Year 2011 regulates the process of a bill becoming law in Indonesia (previously regulated under Law No. 10 Year 2004 and Law No. 2 Year 1950). Basically, a bill can be filed either by the parliament or the president (Article 43). The bill proposed by the president is prepared by the minister or the head of non-ministerial government in accordance with the scope of duties and responsibilities (Article 47). The bill is then sent to the head of the parliament (Article 50 (1)). If a bill is prepared by the parliament, the head of the parliament is required to send the bill to the president (Article 47 (1)). The parliament or the president (represented by a relevant minister) is required to start discussing the bill within a maximum period of 60 days from the receipt of the bill (Article 49 (2) or Article 50 (3), respectively). If the parliament and the government jointly approve the bill, the head of the parliament is required to send the bill to the president for enactment (Article 72 (1)). Subsequently, the president is required to sign the bill within a maximum period of 30 days from the day the bill was approved (Article 73 (1)). This marks the entry into force of the law.

directly bear the risk of the investments. However, neither the Law nor the lower-level regulations (i.e., government regulation, presidential regulation and presidential decree) specified any ownership limitations. On 16 April 1992, the government issued Government Regulation No. 17/1992[24] regarding the ownership requirement for FDIs. Some important features of the regulation are: (1) the investment should not be less than USD250,000; (2) domestic investors should possess at least 5% of the total shares at the time the company is established; and (3) domestic investor shares should increase to at least 20% in 10 years and 51% in 20 years. On 19 May 1994, the government revoked Government Regulation No. 17/1992 by imposing Government Regulation No. 20/1994. A key change made in the new regulation was that the government kept feature (2) above and removed features (1) and (3), suggesting that the government relaxed the investment requirements to boost FDI inflow to Indonesia. On 20 July 2000, Presidential Decree No. 96/2000 regarding FDI was made. The new decree differentiated business sectors closed to FDI from sectors open to FDI. The business sectors that are open to FDI were divided into two categories based on maximum ownership by foreign direct investors (i.e., 49% and 95%).

On 26 April 2007, the government and the parliament revoked Law No. 1/1967 and signed new Law No. 25/2007. Article 1 of the new Law redefines FDI as capital investment activity in the form of business in Indonesia by foreign investors either fully using foreign capital or partly using domestic capital. The enforcement of the new Law was followed by several other government regulations (i.e., No. 77/2007, 111/2007, 36/2010 and 39/2014).[25] Although these regulations contain broader sectors and a wider

[24] Government Regulation No. 17/1992 Article 12 revokes all previous decrees of the head of the Indonesian Investment Coordinating Board (BKPM) regarding FDI, suggesting that until the early 1990s, the ownership limitation had been regulated under decrees of the head of BKPM, which are relatively low-level regulations in the Indonesian law structure (even compared with a government regulation).

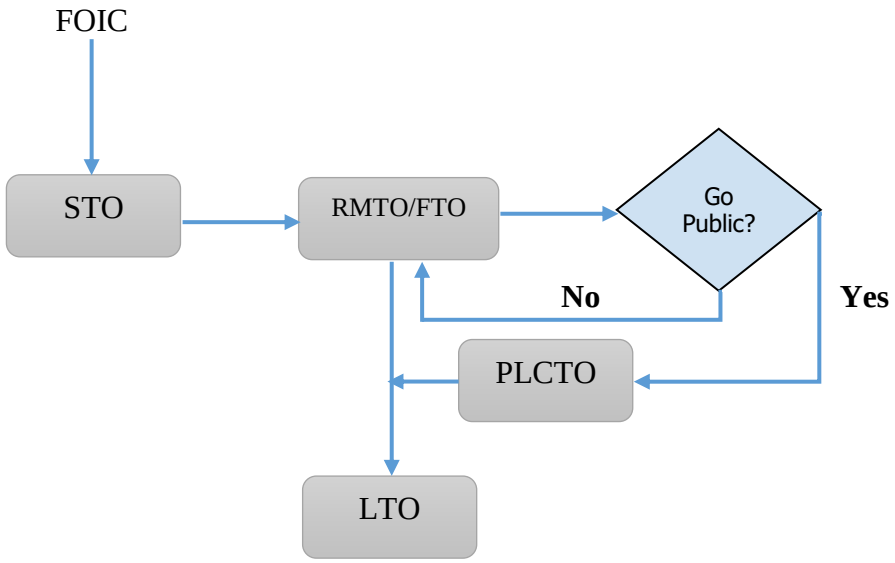
[25] The latter government regulation revoked the previous one (i.e., Government Regulation No. 111/2007 revoked Presidential Decree No. 77/2007, Government Regulation No. 36/2010 revoked Government

range of ownership limit, they basically follow the two principles in Presidential Decree No. 96/2000: (1) they differentiate sectors that are open for FDI from those that are not; and (2) the ownership limit is more diverse, but still in the range of 49%–95%.

As explained in Section 2.2.1, DOICs and FOICs are resident-company taxpayers and are therefore equally treated for tax purposes in Indonesia. However, there is a minor difference regarding their registration in a tax office because of the presence of foreign investment tax offices (FTOs). Figure 2.1 illustrates the tax registration procedures of an FOIC in Indonesian tax offices.

Figure 2.1

Registration of an FOIC in Indonesian Tax Offices



An FOIC is registered in a small taxpayer office (STO) for the first time. The company's registration status can be changed to either a regional medium taxpayer office

Regulation No. 111/2007 and Government Regulation No. 39/2014 revoked Government Regulation No. 36/2010), which means that Government Regulation No. 39/2014 is still in force today. Government Regulation No. 39/2014 significantly changes the previous regulations by broadening the ownership range to 30%–100%. However, as the latter regulation came into force on 24 April 2014 and all FOICs included in this thesis were established before that date, the regulation is not relevant to this thesis. Therefore, this thesis uses Government Regulation No. 36/2010.

(RMTO) or an FTO by a decree of the Director General of Tax. If the company is listed on the stock market (very few are), the Director General of Tax issues another decree to declare the registration change of the company to a public-listed company tax office (PLCTO). FOICs with certain revenue, total assets and total tax paid may be transferred to a large taxpayer office (LTO) by a decree of the Director General of Tax.

According to Scholes, et al. (2009), there are three elements of international commerce foundation. The first element is the ways in which foreign income is taxed. The tax literature groups countries by taxation of foreign income into two broad categories: territorial and worldwide systems (Markle, 2015). Countries that adopt the territorial system exempt foreign income from income tax calculations. In contrast, countries that adopt the worldwide system tax foreign income at their domestic rates and allow credits for tax paid on foreign income to avoid double taxation. As discussed in Section 2.2.1, ITL Article 4 (1) states that all income from Indonesia and outside Indonesia are subject to Indonesian income tax, suggesting that the country has adopted the worldwide income system.

Markle (2015) finds that, on average, MNEs subject to territorial tax systems shift more profits than those subject to worldwide tax systems when the parent country is involved, and the two groups appear to shift equally among their foreign affiliates. Different from Markle (2015), Scholes et al. (2009) suggest that MNEs in countries that impose worldwide tax systems may have incentive to shift profits as those in countries that impose territorial tax regimes. The reason for this is that, while most countries with worldwide tax systems allow resident taxpayers to claim tax paid in foreign countries as an offset against their domestic tax liability, in some cases the full amount of tax paid overseas cannot be claimed because of the tax offset limit imposed by the government.

Indonesian foreign income tax offset policy is discussed in more detail at the end of this section.

The second element is the ways in which foreign operations can be structured by MNEs. As Scholes et al. (2009) suggest, MNEs can choose to operate their foreign affiliate as a branch, a partnership or a subsidiary company because most countries impose income tax on branches, partnerships and subsidiaries differently. This is also true in the case of Indonesia. For example, profit distribution received by partners in a partnership is exempted from income tax. In contrast, income distributed to shareholders in a subsidiary will be taxed as dividend income. Under ITL Article 2(5), MNE branches are categorised as permanent establishments. Further, ITL Article 2(1a) states that permanent establishments are treated as resident company taxpayers for tax purposes. For instance, permanent establishments are required to lodge an annual tax return, similarly to domestic companies. Nonetheless, permanent establishments are different from subsidiaries because permanent establishments are required to report income derived from Indonesia only. In contrast, subsidiaries are required to report worldwide income in their Indonesian annual tax returns.

The focus of this thesis is foreign MNEs that operate their affiliates in Indonesia in the form of subsidiaries (i.e., FOICs). There are several reasons for focusing on subsidiaries: (1) subsidiaries are usually larger: they have larger capacity in terms of production, sales and technology; (2) FDI inflow to Indonesia mostly takes the form of establishing or acquiring subsidiaries; and (3) more importantly, subsidiaries as separate legal entities are more suitable for complex transactions designed to shift profits.

The third and most important element of international commerce foundation is how foreign tax credits can be structured by MNEs. As explained earlier, Indonesia has adopted the worldwide tax system. This means that all income received from Indonesia

and outside Indonesia is assessable income under Indonesian tax law. However, losses incurred outside Indonesia cannot be used to offset against assessable income.

To avoid double taxation of foreign income, ITL Article 24 allows tax already paid offshore by resident taxpayers to be credited in the same year against tax payable in Indonesia as long as it does not exceed a certain level. The foreign tax credit (FTC) limit or foreign income tax offset (FITO) limit is intended to prevent taxpayers from obtaining tax relief in excess of the domestic tax payable on the foreign income. Indonesian Finance Minister Decree No. 165/2002 specifies that the FITO limit is calculated as follows:

$$\text{FITO limit} = \frac{\text{income from overseas}}{\text{global TI}} \text{ X total tax payable}$$

In addition, the decree requires that the FITO limit calculation be performed for each country if the foreign income is derived from several countries.

According to ITL Article 24, the tax paid overseas that can be claimed as FITO is the tax directly imposed on income obtained by Indonesian taxpayers from overseas. Therefore, tax paid overseas may not be eligible to be claimed as FITO if the income after tax is not transferred to the Indonesian taxpayer. The income tax imposed on the income transferred to the Indonesian taxpayer is the tax that can be considered FITO. An example is presented below to explain how much FITO can be claimed for the tax paid overseas.[26]

Indonesian Company A is the sole shareholder of X Inc. in Country U. The income- and tax-related information of X Inc. in 2013 is as follows:

(1) TI of X Inc.	Rp20,000,000,000
(2) Corporate income tax (25%)	5,000,000,000
(3) Income after tax (paid out as dividends)	15,000,000,000
(4) Withholding tax on dividends (20%)	3,000,000,000

[26] All foreign currency amounts have been converted into Indonesian Rupiah at the appropriate exchange rate for tax purposes. In practice, the exchange rate for tax purposes is regulated by the Finance Minister decree on a weekly basis.

(5)	Dividends received by Company A	12,000,000,000

Suppose that the TI of Company A's Indonesia operations in 2013 is Rp50,000,000,000. The tax payable is computed as follows:

(6)	TI from Indonesia operations	Rp50,000,000,000
(7)	Dividends (before withholding tax)	15,000,000,000
(8)	Total TI	65,000,000,000
(9)	Tax payable (25%)	16,250,000,000

FITO limit = $\frac{15{,}000{,}000{,}000}{65{,}000{,}000{,}000} \times 16{,}250{,}000{,}000$ = Rp3,750,000,000

Given that the amount of withholding tax paid in Country U (Rp3,000,000,000) is less than the FITO limit (Rp3,750,000,000), Company A can claim the withholding tax Rp3,000,000,000 on the dividends received as FITO. Therefore, in 2013, Company A's final tax liability (liability after including FITO) is Rp16,250,000,000 − Rp3,000,000,000 = Rp13,250,000,000.

2.2 Indonesian Tax Administration

The DGT is a single directorate within the Indonesian Ministry of Finance (OECD, 2013a).[27] The DGT's head office is led by the Director General of Tax, an Echelon 1 structural position within the Ministry of Finance.[28]

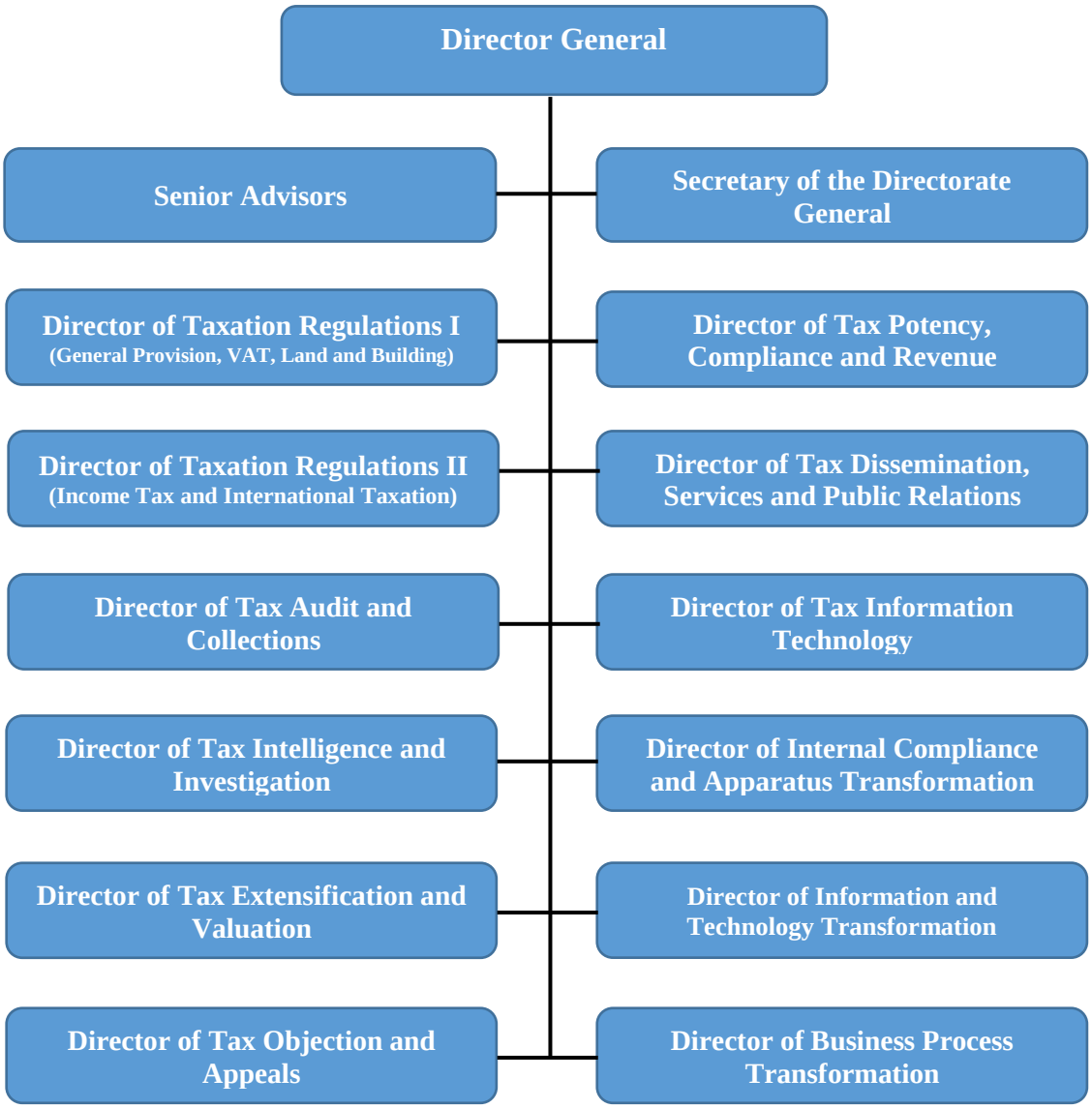
Figure 2.2 depicts the organisational structure of the DGT head office.

[27] The OECD (2013a) classifies four broad categories of institutional setups for conducting tax administration: a single directorate within the Ministry of Finance (MoF); multiple directorates within the MoF; unified semi-autonomous body in which the head of the tax authority reports to a government minister; and a unified semi-autonomous body with a board, in which the head of the tax authority reports to a government minister and an external official oversees the board.

[28] The Indonesian MoF is headed by the Finance Minister. There are five structural levels under the minister's supervision: Echelon 1, 2, 3, 4 and staff (non-echelon). The lower the number of the echelon, the higher the position in the ministry. For example, within the DGT, the Director General, a Director, a Deputy Director and a Head of Section are Echelon 1, 2, 3 and 4, respectively.

Figure 2.2

Organisational Chart of the DGT Head Office[29]



Source: Directorate General of Tax (2015b)

In the head office, the Director General of Tax is assisted by one secretary, four senior advisors and 12 directors. The vision of the DGT is 'to become the best state tax

[29] This chart is valid to 20 December 2015. On 21 December 2015, the Indonesian Finance Minister signed Regulation No. 234/PMK.01/2015, which set up three new directorates within the DGT: Directorate of Law Enforcement, Directorate of International Taxation and Directorate of Tax Intelligence. The Directorate of Tax Intelligence and the Directorate of Law Enforcement were formerly a single directorate called the Directorate of Intelligence and Investigation.

administrator'. The missions of the DGT are to (1) collect tax revenue based on high voluntary tax compliance and fair law enforcement; (2) improve tax compliance through modern technology-based services; (3) equip tax officials with integrity, competency and professionalism; and (4) set up compensation for employees based on a performance management system (DGT, 2015b, p. 40). Indonesian tax offices throughout the country are expected to efficiently deliver tax services, disseminate tax information and monitor taxpayers, which boils down to the desire to have a higher level of tax compliance and therefore a greater collection of revenue from taxes.

The rest of this section is organised as follows. Section 2.2.1 lays the foundation of tax administration in Indonesia by summarising tax reform history in the country and its effect on the structure of the Indonesian tax office. Section 2.2.2 discusses the performance of Indonesian tax revenue and tax compliance during the study period of this thesis (2009–2015).

2.2.1 Tax Reforms in Indonesia

Efforts to improve the DGT's capacity to become an efficient tax collection institution began many years ago. In January 1981, the Indonesian Finance Minister received support from the Indonesian Planning Agency to initiate a major tax reform. According to Asher (1997), the main reason behind the government initiating the tax reform was the inefficiency of the tax system rather than pressure to increase tax revenue, because the government was receiving substantial revenue from oil at that time as a result of high oil prices. Subsequently, the minister asked the Harvard Institute of International Development to conduct technical studies and draft tax reform regulation for Indonesia (Asher, 1997). As a result, a technical expatriate team led by Professor Malcolm Gillis was formed in 1981. The team consisted of 28 experts in various areas (i.e., economists,

lawyers, tax administrators, accountants and computer scientists) from eight different countries—mostly the US. They worked on a major project known as the Indonesian tax reform project (hereafter the 1983 tax reform) under the Indonesian government's financing plan during 1981–1984 (Gillis, 1985).

In late 1983, the Indonesian government officially adopted the major tax reform recommended by the team. The recommendations included introducing the following legislations and tax information system:

1. General Provisions and Procedures of Taxation Law No. 6 Year 1983 (or GPPTL, known as 'Undang-undang Ketentuan Umum dan Tata Cara Perpajakan' or 'UU KUP' in Indonesia), entered into force on 1 January 1984.
2. Income Tax Law No. 7 Year 1983 (or ITL, known as 'Undang-undang Pajak Penghasilan' or 'UU PPh' in Indonesia), entered into force on 1 January 1984, replacing income tax laws enacted decades earlier by the former Dutch colonial administration.
3. Value Added and Luxury Goods Tax Law No. 8 Year 1983 (or VATL, known as 'Undang-undang Pajak Pertambahan Nilai' or 'UU PPN' in Indonesia), entered into force on 1 July 1984,[30] replacing Sales Tax Law enacted in 1951.
4. Land and Building Tax Law No. 12 Year 1985 (or PTL, known as 'Undang-undang Pajak Bumi dan Bangunan' or 'UU PBB' in Indonesia), entered into force on 1 January 1986.
5. Stamp Duty Law No. 13 Year 1985 (known as 'Undang-undang Bea Meterai' in Indonesia), entered into force on 1 January 1986.
6. A new computerised tax information system.

[30] However, the government postponed the VATL's effective date until no later than 1 January 1986. According to Gillis (1985), the reason for the postponement was that the Indonesian tax authority needed more time to prepare the new tax forms required by the newly enacted tax law.

According to Gillis (1985), the new laws and information system proposed by his team contained two essential changes that were vital to achieve the objectives. The first change was a major simplification of the tax structure, which was achieved by unifying the tax rates, broadening the tax base and discontinuing ineffective tax incentives. The second change was depersonalisation of tax administration, which aimed to minimise interactions between tax officials and taxpayers by relying more on withholding methods, electronic data processing of tax information and a shift from the official assessment system to a taxpayer assessment or self-assessment system. This shift changed the culture of taxation in Indonesia. Therefore, the changes proposed by the tax reform team were considered revolutionary.

The 1983 tax reform has arguably significantly improved the capability of the Indonesian tax administration. However, many things still need to be done to achieve the central objectives of the tax reform. Asher (1997, p. 163) summarises the challenges that the DGT is likely to encounter after completing the major tax reform:

> While the Indonesian tax reform represents a substantial improvement over the pre-reform situation… there is however a need to ensure that the tax environment remains internationally competitive. The key problems that remain to be solved are improving the technical capabilities of the tax administration, improving equity and putting into practice new techniques to improve enforcement and compliance.

Following the importance of improving tax administration capabilities, coupled with the need to respond to the 1997 Asian economic crisis (Widihartanto, 2014), the Indonesian Finance Minister launched the DGT Tax Administrative Reform Phase I (better known as ‘Modernisasi’ (modernisation) in Indonesia) in July 2002. ‘Modernisasi’ was aimed at ‘promoting voluntary compliance among taxpayers, enhancing the efficiency of administration and restoring taxpayers’ trust in the tax administration system’ (OECD, 2010, pp. 42–43). As a result, the DGT claimed that the tax administration reform equipped its tax office units nationwide with a ‘more efficient,

simplified and transparent business process, more advanced system and information technology, better human resources, improved good governance and more efficient structure of organisation' (DGT, 2009, p. 38).

The Tax Administrative Reform Phase I was completed at the end of 2008. The completion of the project was marked by the implementation of a new system (called 'SAPM—Sistem Administrasi Perpajakan Modern' or 'Modern Tax Administration System') throughout the DGT office network and the establishment of a new tax office structure nationwide. The DGT claimed that the SAPM promotes 'effectiveness and efficiency by improving the business processes and developing data processing units and a call centre' (DGT, 2009, p. 17). Within the new system, the DGT introduced standard operating procedures (SOP) as a guide for employees to perform their tasks consistently, and as a manual for taxpayers to become familiar with the service procedures (DGT, 2009). Since 2009, all employees have been equipped with the national tax service standards. Therefore, all tax officials and work units within the DGT have been expected to be 'modernised' because all employees have had knowledge of the novel SOP; thus, they have been expected to maintain high-quality performance in all tax offices nationwide. As a result, the quality of data has been much more reliable since 2009. For this reason, the study period in this thesis begins in 2009.

The tax administration reform has also changed the structure of the Indonesian tax office. Table 2.1 shows the composition of the Indonesian tax office during 2009–2015.

Table 2.1

Number of DGT Offices by Type, 2009–2015

Type of Office	Year						
	2009	2010	2011	2012	2013	2014	2015
Regional taxpayer office (RTO)	31	31	31	31	31	31	33
Large taxpayer office (LTO)	4	4	4	4	4	4	4
Medium taxpayer office (MTO)	28	28	28	28	28	28	28
Small taxpayer office (STO)	299	299	299	299	299	299	309
Tax service, dissemination and consultation office (TSDCO)	207	207	207	207	207	207	207
Technical implementing unit (TIU)	1	1	3	5	5	5	5
Total	570	570	572	574	574	574	586

Source: DGT annual reports, various years.

Before the modernisation, the Indonesian operational tax offices had been divided into three types based on the functions of the office: (1) tax service office (to administer general tax services and perform small-scale tax auditing for taxes other than property taxes); (2) land and building tax service office (to administer property tax services and perform small-scale property tax auditing); and (3) tax audit office (to perform comprehensive tax auditing for all taxes).

After the tax administration reform, the DGT unified all existing operational office types and established a new tax office structure based on the following taxpayer segmentations: (1) LTO to administer and perform tax auditing for the largest company taxpayers; (2) MTO to administer and perform tax auditing for medium company taxpayers; and (3) STO to administer and perform tax auditing for individual taxpayers and small company taxpayers (including start-up FOICs).

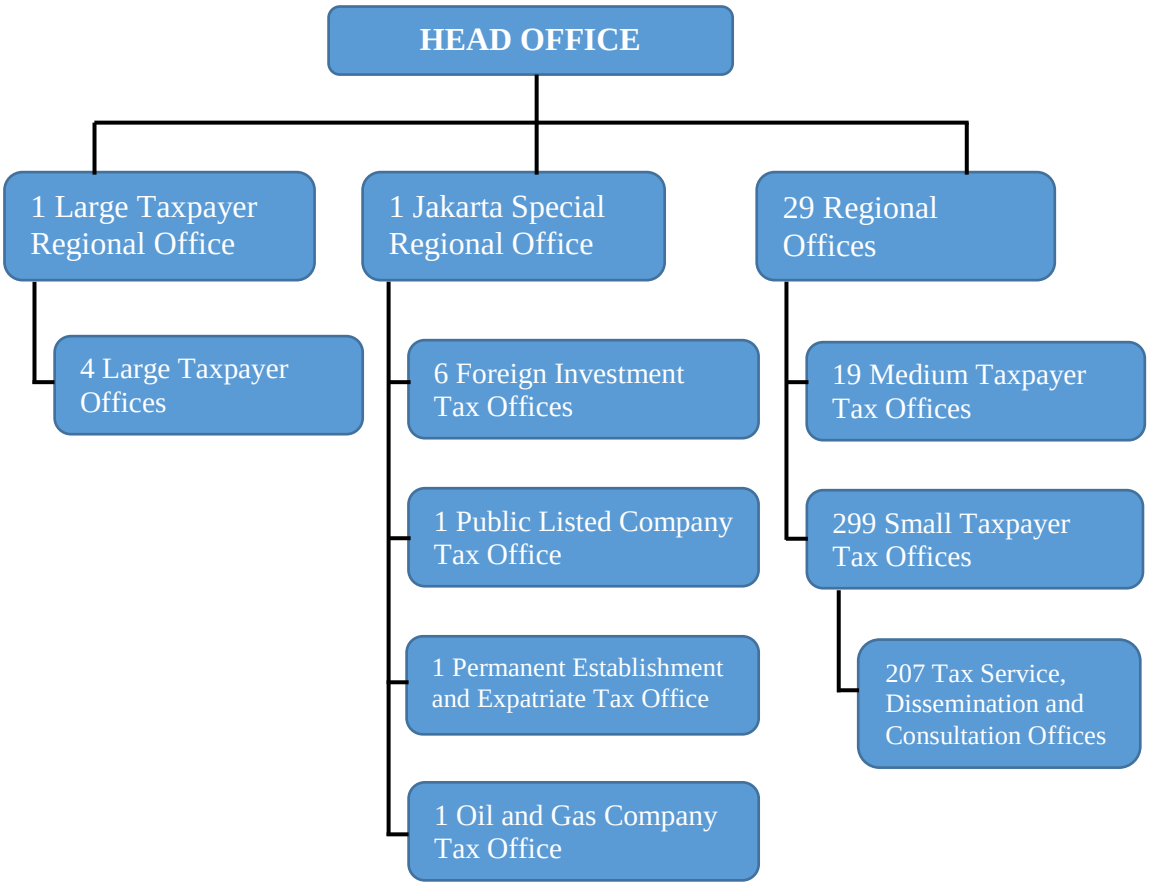
As Table 2.1 illustrates, the DGT changed its vertical units at least three times between 2009 and 2015. First, two new TIUs were set up in 2011: a Taxation Data and Document Processing Office (TDDPO) in Makassar and an External Data Processing Office in Jakarta. Second, two more TIUs were established in 2012: a TDDPO in Jambi and an Information and Complaint Service Unit in Jakarta. Finally, the DGT established two regional offices (South Jakarta II and West Java III) and 10 STOs (four in Jakarta, four in Java and two in Sumatra) in 2015 as a result of increased workload and the growing number of taxpayers (DGT, 2015b).

As shown in Figure 2.1, a company taxpayer is registered in either an LTO, an MTO or an STO. These three types of office are known as the operational units of the DGT. Therefore, the remainder of this section focuses on these three types of Indonesian tax office. The DGT completed the Tax Administration Reform Phase I in 2008. As a result, the numbers of LTOs and MTOs remained the same during the period 2009–2015. The number of STOs increased from 299 in 2014 to 309 in 2015, but this change does not affect this thesis because none of the final samples used in the studies in this thesis are obtained from the 10 newly established STOs. This is another reason why this thesis uses data from 2009.

Figure 2.3 illustrates the structure of the operational office of the DGT.

Figure 2.3

Organisational Chart of the Operational Units of the DGT[31]



Source: Pakpahan (2012, February)

The study period (2009–2015) includes four LTOs (all located in the capital of Jakarta), 28 MTOs and 299 STOs (309 STOs nationwide in 2015). The 28 MTOs consist of 19 RMTOs (located in big cities nationwide, with five in Jakarta) and nine special MTOs (SMTOs, all located in Jakarta).

[31] This chart is valid to 2014. On 10 December 2014, the government enacted Finance Minister Regulation No. 206.2/PMK.01/2014 concerning the DGT organisation structure, which was in effect for income year 2015 and beyond. The regulation has changed the number of Regional Offices, STOs and TSDCOs to 34, 303 and 206, respectively. The numbers of the other operational offices remained the same. However, the changes do not affect the structure of samples used in this thesis. TIUs are excluded from the chart because they do not perform direct tax services to taxpayers.

The nine SMTOs consist of six FTOs,[32] one PLCTO, one permanent establishment and expatriate tax office, and one oil and gas company tax office. In terms of the number of tax offices, STOs outnumber the other two office types. However, in terms of tax revenue contributions, STOs contribute a smaller amount. For example, contributions to the 2013 national tax revenue were 35.9%, 39.3% and 24.8% for LTOs, MTOs and STOs, respectively (IMF, 2014a).

In June 2009, Tax Administrative Reform Phase II was launched. It focused on two aspects: human resources and information and communication technology (DGT, 2010). Through the tax reform, the DGT conducted more training and renewed information and technology equipment in its offices nationwide. Unlike Tax Administrative Reform Phase I, which significantly changed the structure of the DGT's operational unit and improved the quality of the national tax database, Tax Administrative Reform Phase II is more like a minor or routine improvement to the organisation; therefore, it has an insignificant effect on the selection of the period of study in this thesis.

2.2.2 Tax Revenue and Tax Compliance in Indonesia

Tax revenue in Indonesia is still considered low despite the fact that the tax administration has been substantially upgraded since 2002 (OECD, 2012). Table 2.2 shows the composition of tax revenue collected by the DGT. All numbers are rounded to the nearest billion Rupiah. As shown in the table, CIT revenue (Article 25/29—Corporate) has been second only to domestic value-added tax (domestic VAT), except for 2014, where CIT revenue came in third place after domestic VAT and import VAT.

[32] To avoid confusion with the acronym 'FITO', which is a globally accepted acronym for foreign income tax offset, this thesis uses 'FTO' as the acronym for foreign investment tax offices of Indonesia.

Table 2.2

Central Government Tax Revenue in Billion Rupiah Collected by the DGT, 2009–2015

Type of Tax	Year						
	2009	2010	2011	2012	2013	2014	2015
Non-oil and gas income tax	267,571	297,860	358,013	381,605	417,691	459,085	552,222
Article 4(2) Final income tax	33,847	40,116	50,813	60,386	71,570	87,318	119,666
Article 21 Income tax on salary	52,073	55,178	66,748	79,595	90,163	105,625	114,044
Article 22 Income tax on payment by the government	4,369	4,738	4,946	5,507	6,837	7,256	8,478
Article 22 Income tax on import	19,203	23,600	28,292	31,610	36,331	39,454	40,249
Article 23 Income tax on passive income	16,033	16,315	18,703	20,304	22,206	25,535	27,882
Articles 25 and 29 Business income tax—Individual	3,347	2,935	3,287	3,763	4,383	4,704	8,258
Articles 25 and 29 Business income tax—Corporate	**120,313**	**131,951**	**154,603**	**152,132**	**154,292**	**148,719**	**182,274**
Article 26 Income tax on passive income paid by non-resident taxpayers	18,365	22,985	27,239	24,611	27,985	34,728	43,002
Other*	23	32	41	31	37	89	189
Borne by the Government**			3,339	3,665	3,886	5,655	8,180
VAT and STLG	193,068	230,580	277,792	337,583	384,718	408,830	423,710
Domestic VAT	126,812	131,016	157,370	192,097	226,896	240,938	280,203
Import VAT	66,256	84,164	107,000	126,609	138,990	152,313	130,132

Domestic STLG		7,609	8,049	10,453	11,550	10,243	9,367
Import STLG		4,791	5,374	8,423	7,281	5,336	4,008
Land and building tax	30,735	36,607	29,892	28,968	25,305	23,476	29,251
Stamp duty	3,116	3,968	3,928	4,211	4,937	6,293	5,568
Oil and gas income tax	50,044	58,873	73,096	83,461	88,747	87,446	50,109
Total	544,533	627,888	742,720	835,828	921,398	985,130	1,060,860

* An example of other non-oil and gas income tax is income tax on asset revaluation. ITL Article 19 authorises the finance minister to set the regulation on income tax on asset revaluation. Under Finance Minister Regulation No. 79/PMK.03/2008, a company taxpayer can revalue its depreciating assets after being authorised by the Director General of Tax. The excess of the fair market value over the carrying value will be taxed at 10%.

** There are several types of income for which the income tax is borne by the government, including income tax on salary received by civil servants, members of Indonesian armed forces and pensioners. Although this income brings no actual flow of money, it has been included as an item under non-oil and gas income tax for many years for reporting purposes. See Section 2.1.1 of this chapter for explanations of the type of taxes.

Sources: 2009 is from Tax Revenue (Indonesian Ministry of Finance, 2010, pp. 162-165); 2010 is from 2010 Tax Revenue (Indonesian Ministry of Finance, 2011, pp. 66-67); 2011 and 2012 are from Net Tax Revenue 2012–2011 (DGT, 2013, p. 129); 2013 and 2014 are from Tax Revenue (DGT, 2015b, pp. 94-95) and 2015 is from Revenue Performance by Type of Tax (DGT, 2016a, p. 107).

Indonesian CIT revenue (bold in Table 2.2) consists of two articles: (1) Article 25, which is monthly income tax instalments; and (2) Article 29, which is underpaid income tax paid by taxpayers at the end of the income year. The CIT revenue contribution is relatively low considering Indonesia is a developing country in which corporate tax revenue is expected to contribute a more significant percentage. The Indonesian CIT revenue contribution is even lower than that of a developed country such as Australia, with corporate tax revenue accounting for 22.6% of the total tax revenue in the income year of 2012–2013.[33]

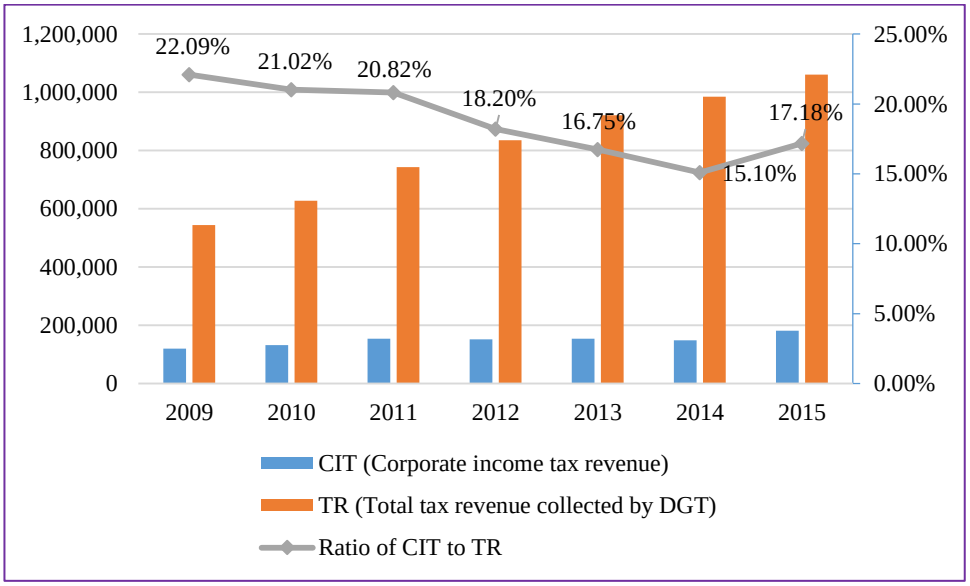
While CIT revenue collected has steadily increased, the contribution to the total tax revenue collected by the DGT decreased from 22.09% in 2009 to 15.1% in 2014. It then increased in 2015 but is still below the 2012 level. The Indonesian CIT rate decreased

[33] http://www.treasury.gov.au/Policy-Topics/Taxation/Pocket-Guide-to-the-Australian-Tax-System/Pocket-Guide-to-the-Australian-Tax-System/Part-2 accessed 4 January 2016.

from 28% in 2009 to 25% in 2010 and remained the same afterwards. This suggests that the downwards trend of the CIT revenue contribution is not caused by a decrease in CIT rates. Figure 2.4 illustrates the contribution of corporate income to the tax revenue of Indonesia over the period 2009–2015.

Figure 2.4

Corporate Income Tax Revenue Contribution, 2009–2015



Central government tax revenue (i.e., the sum of tax revenue collected by the DGT, and customs and excise revenue collected by the Indonesian Directorate General of Custom and Excise (DGCE)) has never been less than 60% of the total central government revenue from year to year and is therefore the main source of revenue in the national budget.[34] However, the country's tax-to-GDP ratio (the ratio of tax revenue to GDP in a particular year) is considered low. Table 2.3 illustrates the tax-to-GDP ratio performance in Indonesia during 2009–2015.

[34] Revenue collected by the DGT and DGCE constantly contributes approximately 85%–90% and 10%–15%, respectively, of the state revenue every year.

Table 2.3

Tax-to-GDP Ratio in Indonesia, 2009–2015

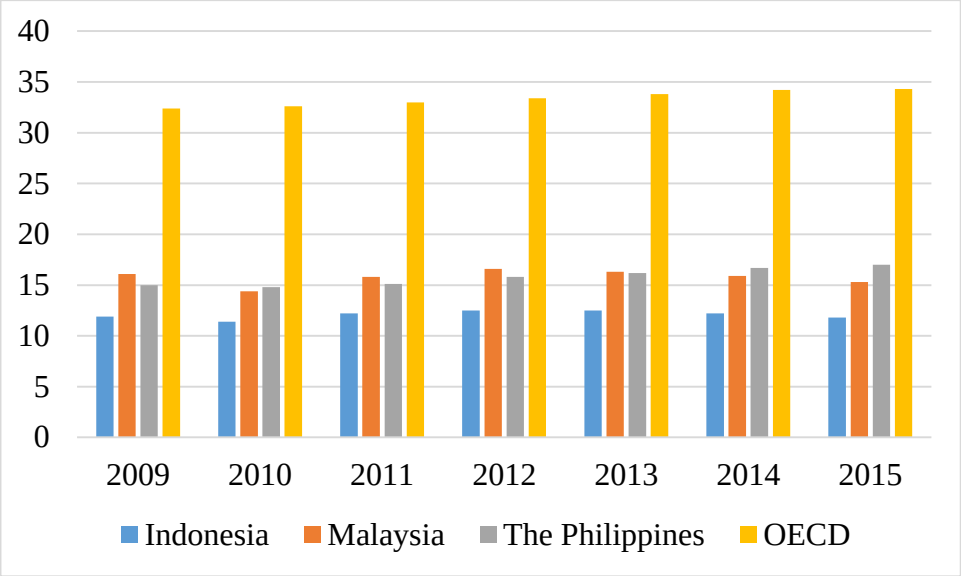
Description	Year						
	2009	2010	2011	2012	2013	2014	2015
GDP (at current price)	5,606	6,864	7,832	8,616	9,546	10,570	11,532
Central tax revenue (A)	620	723	874	981	1,077	1,147	1,240
Local tax revenue (B)	38	47	63	73	87	103	108
Nat. resources revenue (C)	139	169	214	226	226	241	101
Tax-to-GDP ratio (%)							
A+B+C to GDP	14.22	13.68	14.70	14.86	14.56	14.11	12.57
A+B to GDP	11.74	11.22	11.96	12.23	12.19	11.83	11.69
A to GDP	11.06	10.53	11.16	11.39	11.28	10.85	10.75

Sources: GDP 2009, 2010–2011 and 2012–2015 are from BPS (2013; 2015 and; 2017a , respectively). Central tax revenue and natural resources revenue are from Statistics Indonesia/Badan Pusat Statistik (BPS) (https://www.bps.go.id/linkTabelStatis/view/id/1286; local tax revenue is from https://www.bps.go.id/linkTabelStatis/view/id/1288). GDP and revenues are in trillion Rupiah (rounded).

Indonesia's low tax-to-GDP ratio has been noted by prominent international institutions such as the OECD and the WB. Their reports (e.g. OECD, 2012; WB, 2014) show that the nation's tax-to-GDP ratio was much lower than that of other countries in the Association of Southeast Asian Nations (ASEAN). For example, Malaysia and the Philippines consistently reached a tax-to-GDP ratio of more than 15%. The gap is much greater when compared with the OECD average of 33.8% (OECD, 2012). The WB (2014) notes that Indonesia's tax-to-GDP ratio of 11.39% in 2012 was below the average of low-income countries' tax-to-GDP ratio of 12.8% and was one of the lowest in the G20 economies. Figure 2.5 illustrates the performance of the Indonesian tax-to-GDP ratio compared with Malaysia, the Philippines and the OECD from 2009 to 2015.

Figure 2.5

Tax-to-GDP Ratio for Indonesia, Malaysia, the Philippines and the OECD, 2009–2015



Note: Tax-to-GDP ratios are in percentages.

Source: Table 3.1, Total tax revenue as percentage of GDP, 1990–2015 (OECD, 2017).

However, it should be noted that Indonesia's tax-to-GDP ratio excludes tax revenue collected by local governments and revenue from natural resources. For example, in 2013, the tax-to-GDP ratio increased to 12.23% when the total revenue included tax revenue collected by local governments throughout Indonesia. Further, the ratio increased to 14.86% when the total revenue included tax revenue collected by local governments and revenue from natural resources. The performance of the Indonesian tax-to-GDP ratio is not as good as that of its peers, even after including other revenues in the tax-to-GDP ratio calculation. To some extent, the relatively low tax-to-GDP ratio likely results from the low level of tax compliance in the country. Table 2.4 presents the proportion of taxpayers filing tax returns in Indonesia during 2009–2015.

Table 2.4

Proportion of Taxpayers Filing Tax Returns, 2009–2015

Description	Year						
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
No. of taxpayers	9,996,620	14,101,933	17,694,317	17,659,278	17,731,736	18,357,833	18,159,840
Corporate	**1,373,383**	**1,534,933**	**1,590,154**	**1,026,388**	**1,141,797**	**1,166,036**	**1,184,816**
Individual	8,623,237	12,567,000	16,104,163	16,632,890	16,589,939	17,191,797	16,975,024
Tax return filed	5,413,114	8,202,309	9,332,626	9,482,480	10,781,103	10,807,624	10,972,529
Corporate	**559,791**	**501,348**	**520,375**	**547,659**	**592,373**	**548,676**	**681,331**
Individual	4,853,323	7,700,961	8,812,251	8,934,821	10,188,730	10,258,948	10,291,198
Compliance ratio	54.15%	58.16%	52.74%	53.70%	60.80%	58.87%	60.42%
Corporate	**40.76%**	**32.66%**	**32.72%**	**53.36%**	**51.88%**	**47.05%**	**58.00%**
Individual	56.28%	61.28%	54.72%	53.72%	61.72%	59.67%	60.63%

Note: No. of taxpayers is the number of taxpayers obliged to file a tax return (i.e., the number of taxpayers obliged to submit an annual income tax return as of 1 January of the income year).
Sources: 2009–2012 are from 'Annual Income Tax Return—Filing Compliance Ratio, 2008–2012' (DGT, 2013, p. 178), 2013 and 2014 are from 'Compliance Ratio of Annual Income Tax Return Filing, 2010–2014' (DGT, 2015b, p. 133) and 2015 is from 'Ratio of Annual Income Tax Return Submission Compliance 2011–2015' (DGT, 2016a, p. 141).

As shown, the level of compliance for company taxpayers was below 50% before 2011.[35] Afterwards, it increased to more than 50%, except in 2014. The level of tax return filing compliance reached the highest level of 58% in 2015. Although major efforts were made by the office, such as conducting a tax census in 2011 and 2012,[36] the compliance level is still far from what the DGT expected. A low level of compliance can also be found among LTOs, which is surprising given that taxpayers are well managed and tax officials

[35] See Rosid, Evans, and Tran-Nam (2016) for a discussion of the level of compliance for individual taxpayers. Overall, they find that the high levels of perceived corruption in Indonesia have significantly undermined tax compliance behaviour.

[36] The tax census (known as 'sensus pajak' in Indonesia) is a national tax program that was run by the DGT in 2011 and 2012. The program enabled tax officials to visit taxpayers, ask questions and directly observe business activities at the taxpayers' premises. It was aimed at broadening the tax base by exploring tax potency and reinforcing tax fairness by directly reminding taxpayers to fulfil their tax obligations (DGT, 2013).

are well trained compared with other types of taxpayers and tax offices. For example, over the period 2009–2013, while taxpayers registered in LTOs and SMTOs showed considerably higher filing rates than those in RMTOs and STOs, there was a high incidence of not only late filing, but also non-filing of annual tax returns by LTO taxpayers (IMF, 2014a).[37]

Another important point that can be drawn from Table 2.4 is that the corporate level of compliance was always below the individual level of compliance over the period 2009–2015. According to the IMF (2014a), the fact that corporations have worse filing compliance than individuals is troublesome and may be a major factor in the nation's small income tax revenue relative to its regional peers. In line with the IMF's report, the OECD (2015b) confirms that the low compliance level has resulted in low tax-to-GDP ratios for the past decade and has contributed to a small government budget compared with peer countries.

The OECD (2015c, p. 10) summarises the tax administration reform and future challenges in Indonesia as follows:

> The work undertaken to date in modernising aspects of the tax administration, including HR Management, IT systems and audit and filing processes has resulted in significant growth in the tax revenue collected. Despite this however, Indonesia faces the challenge of addressing low rates of registration and voluntary compliance, and high rates of tax evasion. Strengthening enforcement activities and improving performance in the collection of tax arrears remain priority areas for the administration.

In addition to the challenges listed by the OECD (2015c) above, another major issue that Indonesia may face is the lack of capacity of its tax authority to tackle cross-border profit shifting by MNEs that conduct business through their subsidiaries in the country. The OECD (2012, p. 73) recommends that 'further increasing the authorities' capacity to

[37] The late filing and no-filing rates are as follows: large taxpayer offices 18.0 percent and 4.6 percent, respectively; special tax office: 13.5 percent and 3.1 percent, respectively; medium taxpayer offices 13.9 percent and 14.6 percent, respectively, and small taxpayer offices 48.6 percent and 3.7 percent, respectively (IMF, 2014a p. 26).

avoid profit-shifting and transfer pricing in the case of multinational enterprises would be useful'. Chapter 3 elaborates more on the issue of cross-border profit shifting by MNEs in general.

2.3 Chapter Summary

This chapter describes the tax system in Indonesia in two parts. First, it describes how the tax system in general, and income tax system in particular, works under Indonesian tax law. In the case of company income tax, Indonesia adopts the classical tax system, so company profit and shareholders' dividend income are taxed separately. Indonesia has not adopted consolidation for tax purposes, so companies in a group are taxed separately. Indonesia adopts the worldwide income system: all income derived by a taxpayer worldwide is subject to Indonesian income tax. To avoid double taxation, Indonesian tax law allows taxpayers to claim taxes paid overseas as tax credits. However, according to ITL, the amount of taxes paid overseas that can be claimed as tax credits is limited to the amount of tax payable on the foreign income under ITL.

Second, this chapter describes the Indonesian tax administration. The 1983 tax reform brought about fundamental changes to the Indonesian tax system and administration. For example, after adopting the new tax laws recommended by the tax reform team, Indonesia introduced a self-assessment system to replace the official assessment system. The tax reform also led to simpler but more modernised tax administration in Indonesia. The five tax laws produced by the tax reform are still operational today.

In the early 2000s, Indonesia undertook another tax reform, known as the Tax Administration Reform Phase I, which aimed to reform tax administration and provide cleaner and more transparent and reliable tax services. This reform changed the face of

tax offices nationwide by focusing on how to better serve taxpayers. The DGT's employees were better trained and information technology was drastically upgraded. The DGT claims that it is now a more trustworthy tax authority. The reform was completed nationwide in 2008; thus, the DGT began its new operations in 2009—the year used in this thesis as the start of the period of study. The Tax Administration Reform Phase II has changed neither the tax system nor tax administration; rather, it was more like a routine improvement of an institution.

Nevertheless, despite the tax reforms, the DGT does not appear to have become as effective as expected. The tax revenue collected from company taxpayers by the DGT is relatively low and is reflected in the tax-to-GDP ratio, which has been lower than that of its ASEAN peers for many years. The low level of tax compliance is considered the cause. One would normally expect the compliance ratio of company taxpayers—calculated as the ratio of the number of taxpayers who file an annual tax return to the number of taxpayers obliged to file an annual tax return—is higher than that of individual taxpayers. However, it is the opposite in the case of Indonesia. Further, LTOs, which are a type of tax office that administers the largest taxpayers in the country, suffer from a low level of tax compliance because the number of large taxpayers that fail to file their annual tax return is still significant.

Institutionally, the DGT is deemed to have relatively few resources to tackle international tax avoidance. With only two small units in charge of defending the country from all cross-border tax misbehaviour, Indonesia is likely to lose tax revenue because of international tax avoidance strategies. Unfortunately, as a single directorate under the Indonesian Ministry of Finance, the DGT has little independence and no power to change the structure of the organisation.

In summary, the Indonesian tax system and tax administration may have given FOICs more opportunities to avoid Indonesian CIT by using cross-border tax avoidance schemes such as profit shifting strategies.

CHAPTER 3:
PROFIT SHIFTING BY MNEs

This chapter discusses theories that are applicable to corporate tax avoidance and presents a general review of previous studies relating to profit shifting by MNEs in developed countries, developing countries and Indonesia. With regard to the country classifications, this thesis follows the WB's (2016) income group classification,[38] which divides the world economies into four groups: low, lower–middle, upper–middle and high. The WB refers to low- and middle-income economies as developing economies. While the country classifications may change over time because they are determined once a year (i.e., on 1 July each year), Indonesia was consistently classified as a lower–middle-income country over the period 2009–2015. Following the WB classifications, Indonesia is categorised as a developing country for the purpose of the studies in this thesis.

This chapter consists of four sections and is organised as follows. The first section discusses the theories of tax evasion and tax avoidance, with an emphasis on the theory of tax avoidance by MNEs. In addition, it briefly discusses the methods used by previous studies and this thesis to identify profit shifting by MNEs. The second section reviews prior studies that focus on MNEs' profit shifting in developed countries, while the third section does the same for developing countries. The last section deals with the issue of profit shifting by MNEs in Indonesia, including the DGT's efforts to fight profit shifting.

[38] Other than by income group, the WB also categorises all 188 WB member countries plus 26 other economies with populations of more than 30,000 by geographic region and by operational lending. For more detail, see https://datahelpdesk.worldbank.org/knowledgebase/articles/378834-how-does-the-world-bank-classify-countries.

3.1 Theory of Tax Avoidance and Methods Used to Identify the Incidence of Base Erosion and Profit Shifting

3.1.1 Theory of Corporate Tax Avoidance

According to Hanlon and Heitzman (2010, p. 137), one challenge for researchers in the area of tax avoidance is that 'there are no universally accepted definitions of, or constructs for, tax avoidance or tax aggressiveness; the terms means different thing to different people'. Therefore, before discussing the theory of corporate tax avoidance and indicators of profit shifting by MNEs, this section will briefly define tax avoidance, explain how it differs from tax evasion and outline the definition of tax avoidance used in this thesis.

Tresch (2015, p. 265) defines tax avoidance and tax evasion as follows:

> Tax avoidance refers to taxpayers taking advantage of the provisions of the tax laws to reduce their tax liability, such as arranging to take income in the form of lightly taxed capital gains or untaxed fringe benefits rather than as fully taxed wages and salaries. Avoiding taxes is legal and its consequences are certain.
>
> Tax evasion refers to hiding sources of taxable income from the tax authorities to reduce one's tax liability, such as not reporting gambling winnings or failing to file a tax return when required to do so. Evading taxes is illegal and its consequences are uncertain; they depend on the probability of the taxpayer being caught.

These definitions provide a clear line between tax avoidance and tax evasion: tax avoidance is legal and tax evasion is illegal. Consistent with such definitions, Sandmo (2005) argues that, unlike a taxpayer that commits tax evasion (a tax evader) and should worry about the risk of being detected by the tax authority, a taxpayer that commits tax avoidance (a tax avoider) can be much less concerned about the possibility of being noticed by the authority because their actions simply exploit loopholes in the tax law; therefore, they are within the legal framework of the law. However, Sandmo (2005) also contends that from a moral point of view, distinguishing between tax avoidance and tax evasion is not an important issue because tax avoiders and tax evaders are likely to behave indifferently. After all, Sandmo (2005, p. 646) mentions that 'the borderline between what

seems morally right and wrong does not always coincide with the border between what is legal and illegal', suggesting that there is no line that clearly separates the two.

Therefore, it is not surprising that several studies that focus on corporate tax avoidance (but not specifically tax avoidance by MNEs) do not distinguish between tax avoidance and tax evasion. This is because there are difficulties in determining the legality of the behaviour surrounding the transactions and a clear-cut differentiation between tax avoidance and tax evasion is over-simplified (e.g. Hanlon & Heitzman, 2010; Dyreng, Hanlon, & Maydew, 2008; Weisbach, 2003). Some studies avoid using the two terms and choose another expression to represent the tax-reporting misbehaviour. For example, Slemrod (2004, p. 878) uses the word 'selfishness' 'to avoid getting bogged down trying to distinguish between what technically is (illegal) tax evasion and what is (legal) tax avoidance'.

As explained in Section 1.1, BEPS is defined as strategies used by MNEs to exploit gaps and mismatches of tax rules in different countries by shifting profits to locations where tax rates are low to reduce the overall corporate tax being paid (OECD, 2014a). The fact that BEPS is legal and yet defeats the intent of tax law means that it is not an exaggeration to say that BEPS is a tax misbehaviour. Nonetheless, unlike other tax misbehaviours that cannot be clearly categorised as tax avoidance or tax evasion, BEPS is relatively easier to classify. Following Tresch (2015) abovementioned definitions of tax avoidance and tax evasion, BEPS can be categorised as a tax avoidance strategy. In the Indonesian context, BEPS is defined as a cross-border profit shifting strategy used by FOICs without breaking Indonesian tax rules. The next paragraph provides examples that may clarify the concept.

BEPS arrangements include suppressing selling prices for goods and services sold to affiliates overseas and inflating the costs of goods sold, royalty payments, management

fees and interest paid to affiliates overseas. For example, an FOIC owned by a Singaporean company exploits the Indonesian transfer pricing rules gap by lowering the export sales price to the parent in Singapore. In another typical example, the parent finances the FOIC's (the subsidiary's) operation in Indonesia with debt rather than equity to suppress profits reported by the FOIC in Indonesia. By doing so, the FOIC can claim more deductions because interest expense is a deduction under ITL. Although interest income earned by the parent might be TI under Singaporean tax law, MNEs are better off overall because the Singaporean corporate tax rate is considerably lower than the Indonesian corporate tax rate. For the FOIC, cross-border profit shifting reduces both TI and book (accounting) income at the same time. The effect of simultaneously reducing TI and book income makes BEPS a book-tax conforming tax avoidance strategy (Hanlon & Heitzman, 2010).[39]

A number of theoretical papers analyse the theory of tax avoidance and tax evasion by individuals. For example, a seminal paper by Stiglitz (1986) presents a general theory of income tax avoidance by individuals. Another example is a widely cited paper by Allingham and Sandmo (1972) that theoretically analyses the extent to which an individual taxpayer decides to evade taxes by intentionally underreporting income. The latter paper is extended by Slemrod and Yitzhaki (2002), who present theoretical models that integrate tax avoidance and tax evasion into the overall decision problem encountered

[39] Another form of tax avoidance is book-tax nonconforming tax avoidance. This strategy reduces TI without lowering book income by exploiting the differences between tax law and financial reporting rules, causing book-tax differences (BTDs). In general, BTDs can be divided into two categories: (1) temporary BTDs are generated from differences in the timing of recognition between accounting income and TI, which will therefore reverse over time. For example, a firm may use the straight-line depreciation method for accounting purposes and the accelerated depreciation method for tax purposes to depreciate machinery; (2) permanent BTDs result from non-taxable revenues and/or non-deductible expenses provided in tax rules, and the BTDs will therefore never reverse. A typical example in the US is non-taxable government bond interest. Many studies examine the relationship between BTDs and tax avoidance—for example Blaylock, Shevlin, and Wilson (2011) examine the relationship between temporary BTDs and tax avoidance, and Frank, Lynch, and Rego (2009) examine the relationship between permanent BTDs and tax reporting aggressiveness.

by individuals. Another paper by Sandmo (2005) extends Allingham and Sandmo (1972) work by reviewing the existing theory of tax evasion by individuals and connecting it with other central issues in the theory of public finance.[40]

Many studies discuss the theory of tax evasion by corporations. For example, Chen and Chu (2005) model income tax evasion by corporations, and Crocker and Slemrod (2005) develop an economic theory of corporate tax evasion. Both studies connect the tax evasion strategy used by managers with the aim of gaining the wealth of the owners or shareholders. Both studies define tax evasion as an illegal tax avoidance strategy.

However, few theoretical studies have specifically discussed the theory of tax evasion by large international corporations. According to Gordon and Hines (2002), unlike individual taxpayers, it is uncommon for large corporations to commit tax evasion (e.g., deliberately underreporting income to tax authorities). Further, Gordon and Hines (2002, p. 1970) conclude that 'very little is known about the determinants or magnitude of international tax evasion, since the self-reported data that serve as the basis of analysis not surprisingly reveal nothing about it'. To a large extent, this conclusion suggests that MNEs use international tax avoidance rather than international tax evasion as an alternative to lessen their income tax liability.

In contrast, a number of studies discuss the theory of tax avoidance by corporations. In a review of tax research, Hanlon and Heitzman (2010) briefly discuss the theory of corporate tax avoidance by citing four papers that 'provide theory and predictions about the relationships and incentives of the various parties (i.e., insiders, outside shareholders,

[40] While theoretical papers about tax evasion by individuals are relatively abundant, empirical evidence on this issue is limited. According to Houston and Tran (2001), the reason is that most empirical evidence that describes evasion behaviour is based on surveys because directly observing such behaviour is almost impossible. Further, the authors explain that because tax evasion is a sensitive topic, individuals are less likely to take part in the survey (i.e., non-response bias), and even if they take part, they may not tell the truth (i.e., response bias). As a result, such biases undermine the validity and reliability of the study (Houston & Tran, 2001).

and the state) in corporate tax avoidance settings'. According to Hanlon and Heitzman (2010), three of the four papers (i.e. Slemrod, 2004; Chen & Chu, 2005; Crocker & Slemrod, 2005) lay a theoretical foundation for understanding corporate tax avoidance in connection with agency framework, and one paper (i.e. Desai, Dyck, & Zingales, 2007) introduces another perspective to the literature. However, only Slemrod (2004) and Desai, et al. (2007) are relevant to the discussion of the theory of tax avoidance by corporations.[41] Some other relevant studies are included in the discussion to clarify the idea introduced by the two papers.

Slemrod (2004) suggests that ownership–control separation means that a different conceptual framework is required to understand tax noncompliance of large firms (i.e., tax evasion and abusive tax avoidance). In a large firm, managers rather than owners make operational decisions, including tax-related decisions. Therefore, a manager's personal views on paying taxes as a civic duty affect their corporation's aggressiveness in avoiding taxes (Slemrod, 2004). However, some studies state that managers are likely to focus on maximising profits as the owners expected. In an extensively cited statement, Friedman (2007, pp. 173-174) writes that:

> In a free-enterprise, private-property system, a corporate executive is an employee of the owners of the business. He has direct responsibility to his employers. That responsibility is to conduct the business in accordance with their desires, which generally will be to make as much money as possible while conforming to the basic rules of the society, both those embodied in law and those embodied in ethical custom.

According to Slemrod (2004), while Friedman's statement suggests that managers should not engage in corporate tax evasion, it encourages managers to perform tax

[41] While Hanlon and Heitzman (2010) suggest that Chen and Chu (2005) examine corporate tax avoidance under the agency model, Chen and Chu (2005) and Crocker and Slemrod (2005) merely discuss the theoretical model of CIT evasion. As discussed previously in this section, both studies clearly define that tax evasion is illegal. Therefore, the tax avoidance–tax evasion definition bias is unlikely to be an issue in the two studies. For this reason, this thesis considers that these two papers lack a connection with the theory of corporation tax avoidance discussed in this thesis; therefore, they are excluded from further discussion.

avoidance. However, managers should be less aggressive if the behaviour endangers the value of the corporation (Slemrod, 2004). Accordingly, Slemrod (2004) suggests that the owners (i.e., shareholders) of the corporation need to clearly define the acceptable level of tax aggressiveness so that managers can make appropriate decisions to achieve the owners' desired level of wealth.

In a widely cited study, Jensen and Meckling (1976) develop the agency relationship theory, which theorises that the equilibrium contractual form (positive aspects) rather than the structure of the contractual relation, such as compensation incentives (normative aspects), between the manager and the owner should be the focus aspects of an agency relationship. Positive aspects include 'incentives faced by each of the parties and the elements entering into the determination of the equilibrium contractual form characterising the relationship between the manager and the owners' (Jensen & Meckling, 1976, p. 310). This theory implies that a compensation incentive is not the most important factor in the manager–owner relationship. In the context of tax avoidance, the equilibrium contractual form between the manager and owner regarding the level of tax aggressiveness may be a key positive aspect in the relationship. That is, the manager and the owner should sit together to determine the level of tax aggressiveness that will maximise both parties' interests (tax-aggressiveness equilibrium).

Desai, et al. (2007) propose a new perspective to the literature on corporate governance and corporate taxation by including two variables that they believed had been omitted in previous studies. The first omitted variable is the state. In addition to the manager and the outside shareholders, the state should be part of the standard analysis of corporate governance. The second factor that is allegedly omitted in previous studies is the effect of corporate governance on the functioning of the corporate tax system.

Desai et al. (2007) integrate the analysis of corporate governance and corporate taxation by analysing the interaction between three parties, i.e., state, manager and owners. They theorise that corporate governance (i.e., the relationship between the manager and shareholders) and the corporate tax system (i.e., how the state designs and enforces corporate taxes, or how tax revenue responds to changes in tax rates) influence one another. Specifically, their theoretical and empirical analysis provides two new insights. First, higher tax rates deteriorate corporate governance, but strong tax enforcement can strengthen it. Second, good (bad) corporate governance positively (negatively) affects the sensitivity of tax revenue to tax rate changes. Desai and Dharmapala (2009) extend the work of Desai, et al. (2007) and posit that including corporate governance as an important determinant of corporate tax avoidance strategies provides a more nuanced prediction as opposed to the traditional view of corporate tax avoidance, suggesting that tax avoidance increases the wealth of owners (shareholders) only in the presence of good corporate governance.

The theory of corporate tax avoidance discussed in this section applies to corporations in general, which could be multinational enterprises or domestic enterprises. The next section discusses the theory that underlies tax avoidance by MNEs according to existing literature.

3.1.2 Definition of Multinational Enterprises and Theory of Tax Avoidance by Multinational Enterprises

Before discussing the theory that underlies tax avoidance by MNEs based on some relevant theoretical papers, this section begins by defining MNEs and identifying the reasons why MNEs make foreign direct investment and establish foreign affiliates.

Markusen (1995, p. 170) defines MNEs as 'firms that engage in direct foreign investment, defined as investments in which the firm acquires a substantial controlling interest in a foreign firm or sets up a subsidiary in a foreign country.' He proposes that the fundamental reasons why investors may choose to establish an affiliate overseas is that MNEs are different from domestic companies: 'If foreign multinational enterprises are exactly identical to domestic firms, they will not find it profitable to enter the domestic market' (Markusen, 1995, p. 173). Further, he suggests several inherent disadvantages and advantages that MNEs commonly encounter. The disadvantages include higher costs of doing business in a different country (e.g., higher communication and transportation costs, higher costs of posting personnel abroad) and adapting to the new environment (e.g., unfamiliarity with language and customs, and being outside their domestic business and government networks).

The inherent advantages that MNEs have are superior technology and lower costs resulting from economies of scale (Markusen, 1995). In addition, Markusen (1995) refers to the ownership, location and internalisation (OLI) framework proposed by Dunning (1977). The framework posits that the advantages of OLI must be present for MNEs to undertake FDI. The two paragraphs below describe the three conditions according to Markusen (1995) explanation.

First, ownership is any advantage that represents valuable market power that other firms do not possess, including a patent, blueprint, trade secret, trademark or reputation for quality. Second, location refers to the advantage that an MNE can obtain by producing goods in a foreign country. Lower tariffs, quotas, cheaper transport costs and factor prices, and better access to customers are some advantages of a location for MNEs.

The third and probably the most decisive advantage is internalisation. For some MNEs, possessing the first two advantages (i.e., ownership and location) may be

insufficient to set up a foreign affiliate because they have alternative options such as giving a licence to a domestic firm in the foreign country to produce goods or use their production method. In doing so, the parent company can simply sell the blueprints to a domestic firm in the target foreign country rather than setting up an affiliate in that country and facing costly and difficult processes. The advantage of internalisation encourages MNEs to set up affiliates in foreign countries. Internalisation is defined as an opportunity to exploit a product or process internally among companies within the same ownership. That is, internalisation gives MNEs affiliates located in different countries the opportunities to arrange internal prices and processes for products that are traded within the same group of companies. This explains why internalisation is the most decisive advantage for some MNEs setting up a foreign subsidiary. Citing Rugman (1986), Markusen (1995, p. 174) writes that 'internalisation is really the only thing that matters to understanding the multinational'.

Gordon and Hines (2002) extensively discuss theories that underlie the tax avoidance behaviour of MNEs. They state two theories of MNE behaviour: (1) MNEs as financial intermediaries; and (2) MNEs as corporate tax avoiders. In the first, or initial, theory, setting up a foreign affiliate is considered an investment alternative overseas for resident taxpayers. It assumes that MNEs do not possess the three advantages in the OLI framework. The theoretical analysis reveals that under the initial theory, all MNEs would be indifferent to the countries of foreign affiliates, and they should be indifferent to tax-rate differences between domestic and foreign countries. However, they also reveal that the results of existing studies oppose this theory, that existing studies demonstrate that tax rates in host countries are negatively related to FDI inflow to countries, and that

reported profits by MNEs are negatively related to tax rates (or higher profits reported by MNEs in low-tax jurisdictions and tax havens).[42]

The second theory in Gordon and Hines's (2002) paper states that MNEs are corporate tax avoiders. They start by emphasising the significant difference between a closed economy and an open economy and posit that the growing cross-border trade in goods and services increases the contributions of MNEs to the economy. Further, they argue that the more integrated capital market worldwide has forced researchers to modify the existing work on tax policy by considering several factors that are unique to an open economy setting.

Further, Gordon and Hines (2002) theorise that a much broader complication that has been excluded in a closed economy setting needs to be considered in an open economy setting. According to the authors, this complication exists because of tax rate differences between countries that influence the behaviour of MNEs both operationally and financially. This behaviour includes the preference of where to locate affiliates overseas, the decision to determine the optimal scale of affiliates' operations, and decisions regarding the preference of locating debt, research activity and exports (Gordon & Hines, 2002). Lastly, consistent with internalisation in the OLI framework, a unique characteristic of an open economy setting is that MNEs possess flexibility to choose certain prices to be used in transactions among their affiliated group members, which allows them to report an overall lower income tax burden (Gordon & Hines, 2002).

[42] The definition of tax havens in this thesis follows that of Scholes, et al. (2009). They describe that, in addition to the low tax rates that attract people and companies interested in legal tax avoidance, tax havens offer 'strong bank secrecy laws and limited tax information-sharing agreement'. The authors posit that 'strong privacy laws increase the attractiveness of tax havens to those laundering illegal income and those interested in evading taxes on their legal income' (Scholes, et al., 2009, p. 329).

In analysing the behaviour of MNEs, Gordon and Hines (2002) review some evidence provided by the existing literature.[43] First, the existing literature confirms that debt financing is more attractive for affiliates in high-tax jurisdictions and that equity financing is more attractive for affiliates in low-tax jurisdictions. Second, the literature confirms that MNEs use transfer prices regardless of the requirement of the OECD for MNEs to use an arm's-length principle.[44] Based on the evidence provided by the existing literature, Gordon and Hines (2002) conclude that while MNEs contribute a significant payment in taxes each year, they successfully avoid income taxes by means of profit shifting.

Gordon and Hines (2002) then reconcile the evidence provided by prior studies with the evidence from their own theoretical framework using the theory of MNEs as corporate tax avoiders. They find that while some aspects of MNEs' behaviour are consistent with the theory, others are not. Rather, they are consistent to the extent that MNEs' behaviour in reallocating income explains the low profits reported in high-tax jurisdictions and the high profits reported in low-tax jurisdictions.[45]

Theoretical papers, mostly in economic literature, discuss the economic behaviour of MNEs—particularly because transfer prices have been constrained by tax regulations

[43] Other strategies that can be used by MNEs to lower tax obligations are to adjust the timing to repatriate dividends (as in some countries, including the US and Indonesia, income from foreign affiliates are taxed only when the income is repatriated as dividends), by choosing the form of business organisation that offers higher tax incentives and by conducting more R&D activity in affiliates with excess foreign tax credits (Gordon & Hines, 2002).

[44] In general, the arm's-length principle is the market price of a similar transaction between independent parties. This principle is described in more detail in Chapter 6 of this thesis.

[45] Gordon and Hines (2002) also explain that a further complication in regard to MNEs is that firms can avoid taxes not only on their capital income, but also on other income. For example, entrepreneurs (owners who are also managers) leave their wage payments in the firm so it is corporate income rather than personal income. According to Gordon and Hines (2002), through such income reallocation, entrepreneurs may end up with a tax rate on earnings that is as low as one available in a tax haven. Although they do not explicitly suggest that this complication is a motivation for MNEs to set up a foreign affiliate in a high-tax country, they presume that it is likely. To some extent, this may explain why MNEs tend to invest more significantly in both low- and high-tax countries. For example, Chari, Chen, and Dominguez (2012) find a significant increase in FDI by emerging markets (particularly China and India) in the US over the period 1980–2006.

for decades. Brief summaries of five of these papers—including four theoretical studies in economics and one theoretical study in accounting—are presented below.

Horst (1971) posits that one of the distinguishing characteristics of MNEs is that they use 'optimal transfer price' rather than 'open market' prices to value intra-firm transactions, consistent with the internalisation advantage in the OLI framework. Further, his theoretical analysis reveals that MNEs' decisions to produce, sell and set the transfer prices in Country A or B largely depend on the marginal costs of production and differences in tariffs and tax rates between the two countries. Assuming that the firm is burdened by tariffs on its imports and taxes on its profits in addition to production costs, Horst (1971) also finds that MNEs minimise their global tax liability by always choosing either the lowest or highest possible transfer prices. For example, to maximise its global after-tax earnings, an MNE will choose the lowest possible transfer price if the relative tax rate difference between the importing and exporting countries is lower than the tariff rate in the importing country.

Copithorne (1971) posits that MNEs have greater opportunities to mobilise capital and profits than smaller national companies. He argues that while transfer prices cannot be used to maximise global before-tax earnings, they are commonly used by MNEs to shift profits from one company to another, depending on the preference of management to show more of the profits in a particular affiliate than in others. The degree of profit shifting is larger when corporations ship a larger number of products to their subsidiaries because they have greater freedom in setting the prices used in intra-firm transactions. Two other conclusions from Copithorne (1971) theoretical analysis are: (1) that international corporations do not change the levels of prices and outputs if corporation taxes remain unchanged; and (2) that MNEs are likely to shift profits out of a country

(and are likely to pay less CIT in a country) in which marginal tax rates are high, currency is weak or capital movements are controlled.

Eden (1983) notes that existing literature (including Horst 1971, discussed above) uses the tax differential–tariff rate relationship to show how MNEs set the optimal transfer price. She argues that the existing literature assumes that MNEs are free to set transfer prices, but in fact they are not. According to Eden (1983), transfer pricing settings depend on customs and tax regulations; therefore, they are restricted by legislation in most OECD countries. Subsequently, she theoretically examines the effects of regulation restrictions on resource allocation decisions by MNEs in Canada and finds that customs valuation methods affect transfer prices, which eventually affect MNEs' output, sales and trade flows.

The last example of the studies in economic literature that theoretically discuss tax avoidance by MNEs is that of Grubert and Slemrod (1998), who posit that parent corporations in high-tax countries tend to shift profits to their affiliates in low-tax countries. Specifically, they theorise that tax rate differences between countries affect the choice of locating real activity by MNEs, which will in turn affect the location in which the profit is reported. Thus, in addition to the theory of tax avoidance by MNEs (i.e., MNEs are international tax avoiders), Grubert and Slemrod (1998) theorise that the tax structure (i.e., tax rates and tax systems) affects MNEs' decision to locate investment and the decision to shift profits. They complement their theoretical analyses with empirical analysis by examining micro-level data for 1987 relating to US corporations and their investments in Puerto Rico. Consistent with their theory, the empirical results show that a large proportion of the investment of US MNEs in Puerto Rico results from opportunities to shift profits, suggesting that the advantages of income-shifting activity are the predominant reason why US MNEs invest in Puerto Rico.

In accounting literature, Merville and Petty (1978) theoretically examine transfer prices as the tool for achieving MNEs' goals. They posit that MNEs benefit from tax rate differences in different countries because it allows them to locate profits in the lowest tax countries. They argue that transfer prices can be used by MNEs not only to minimise costs, but also to optimise financial resources and shift assets to have a more favourable business prospect. However, they realise that MNEs cannot set a transfer pricing mechanism to achieve all of these goals simultaneously. Therefore, they design two approaches to analyse the role of the transfer pricing mechanism. In the first approach, the mechanism is assessed as a tool to maximise profits in the lowest tax rate jurisdiction (single-objective approach). In the second approach, they treat the transfer pricing mechanism as a tool to accomplish three main goals that an MNE can achieve through transfer prices (multiple-objective approach): (1) maximising worldwide profits; (2) achieving subsidiary profits goals; and (3) maintaining pricing bounds. In addition to proposing the mathematical models, Merville and Petty (1978) provide numerical examples (using US MNEs as parent firms) to facilitate an understanding of the proposed models.[46] They find that the multiple-objective approach offers a significantly more robust outcome in combining the profit-maximising goal with other prospective goals.

According to the OLI framework, internalisation is the most decisive factor that MNEs possess in setting up foreign affiliates. Moreover, studies that analyse tax avoidance by MNEs provide evidence consistent with the theory of MNEs as tax avoiders. In conclusion, the theory of tax avoidance by MNEs and the relevant theoretical studies suggest that MNEs use tax avoidance strategies by exploiting opportunities to shift profits between affiliates within the same group.

[46] In the numerical example analysis, the authors use hypothetical parameter estimates and acknowledge that it would be preferable to use actual firm data because the parameters should be unique to each firm. However, as they admit, this is impossible for confidentiality reasons.

3.1.3 Methods and Indicators Used to Identify the Incidence of Base Erosion and Profit Shifting

Existing literature that reviews studies on tax avoidance by MNEs (e.g. Fuest & Riedel, 2010; Gravelle, 2010) identifies two major groups of empirical studies that focus on the issue of tax avoidance by MNEs. In the first group, researchers observe the association between reported profitability and tax rate differences across countries (e.g. Weichenrieder, 2009; Clausing, 2016). In the second group, researchers examine the different channels used by MNEs to shift profits (e.g. Clausing, 2003 investigates transfer pricing; Huizinga, Laeven, & Nicodeme, 2008 study income shifting through debt). However, some studies examine both. For instance, Mills and Newberry (2004) not only examine whether the tax rate differences between the US and the parent countries of foreign MNEs affect income reporting by foreign-controlled companies in the US, but also whether those MNEs use debt financing as the channel for shifting profits from the US.

The OECD (2015a) suggests that six indicators exhibit the incidence of BEPS and its magnitude. The following points summarise the descriptions of the six indicators and how they indicate that BEPS is occurring:[47]

1. Concentration of FDI relative to GDP

   This is a macroeconomic indicator that measures real economic activity. A significantly high ratio of FDI to GDP may indicate the occurrence of BEPS.

2. High profit rates of low-tax affiliates of top global MNEs

   This indicator compares the profit rate (i.e., profits/assets) with the effective tax rate (ETR i.e., tax expense/profit) of MNE affiliates for top global MNEs. For each affiliate, a profit rate differential (the difference between the affiliate's profit

[47] The summary is based on the OECD (2015a, pp. 49-64).

rate and its MNE group's worldwide profit rate) is compared with the affiliate's ETR differential (the difference between the affiliate's ETR and its MNE group's worldwide ETR). A positive profit rate differential and a negative ETR differential infer the incidence of BEPS.

3. High profit rates of MNE affiliates in lower-tax locations

   This indicator compares the profit rate (i.e., profits/assets) of top global MNE affiliates in low-tax jurisdictions with the MNEs' worldwide profit rate. A higher number indicates that stronger profit shifting into low-tax jurisdictions is occurring.

4. Effective tax rates of large MNE affiliates relative to non-MNE entities with similar characteristics

   This indicator compares the ETRs of large MNE affiliates with local companies with similar characteristics. A lower ETR of the MNE's affiliates compared with the ETR of local companies may indicate the incidence of BEPS.

5. Concentration of royalty receipts relative to R&D spending

   The indicator compares the average ratio of royalties received with R&D expenditure for a group of high-ratio countries to the average ratio for the other countries in the sample. A higher indicator suggests a greater possibility of the incidence of BEPS.

6. Interest expense to income ratios of MNE affiliates in countries with above average statutory tax rates

   The OECD (2015a) believes that debt allocation is one of the BEPS strategies used by MNEs to decrease their worldwide tax liability. Substantial interest paid by affiliates in countries with STRs above the weighted average indicates the incidence of BEPS.

The OECD (2015a, p. 16) also emphasises that the six BEPS indicators confirm the conclusions of existing studies that 'profit shifting is occurring, is significant in scale, is likely to increase, and creates adverse economic distortions'. As discussed below, even though evidence from a developing country's perspective on the incidence of BEPS is still rare, it is likely that developing countries also suffer from cross-border profit shifting strategies. The next two sections of this chapter discuss studies that have been conducted regarding profit shifting by MNEs in developed countries and developing countries.

3.2 Profit Shifting by Multinational Enterprises in Developed Countries

Empirical studies that focus on tax avoidance strategies by MNEs using data from developed countries are relatively well documented. They encompass a wide range of strategies used by MNEs to shift profits from high-tax to low-tax jurisdictions using intra-firm transfer mispricing, high corporate debt financing and the strategic location of assets and overhead costs (Janský & Kokeš, 2015). The increasing availability of data in developed countries plays an important role in conducting empirical studies. Early studies on profit shifting in developed countries used country-level data or industry-group data. Empirical studies then used MNEs' firm-level financial reporting data. Recently, the development of research that uses the tax return data of MNEs in developed countries has become fairly advanced, as shown in Christian and Schultz (2005), Dowd, Landefeld, and Moore (2017) and Grubert (2012).

Empirical studies on profit shifting by MNEs in developed countries began in the 1970s, when oil and gas companies expanded their operations overseas. It is therefore not surprising that the studies mainly focus on examining whether oil and gas MNEs adopt profit shifting strategies to minimise their overall CIT. Most of the studies focus on the US and have identical findings, that is, MNEs exploit cross-border profit shifting

strategies to reduce their overall tax burden. For instance, Jenkins and Wright (1975) use US petroleum corporation data during 1969–1972 to provide evidence that multinational petroleum companies use international operations arrangements to minimise their tax obligations. In another study, Bernard and Weiner (1990) use data from the US petroleum industry during 1973–1984 and find little evidence to support the claim that multinational petroleum companies shift profits because of differences in average effective CIT rates between importing and exporting countries.

The availability of data—both in terms of quantity and quality—allows the study of profit shifting in developed countries to improve over time. Weakness and limitations of previous studies are often improved by subsequent studies. For example, Klassen, Lang, and Wolfson (1993) examine geographic income shifting by 191 US MNEs in response to changes in tax rates in four regions: the US, Europe, Canada and Others during 1984–1990. After controlling for changes in the underlying profitability of MNEs (i.e., using a control sample of US and non-US firms, geographic area, size and multi-nationality), they find that US MNEs shift profits to the country in which the tax rate decreased from the country in which the tax rate increased. For instance, in 1985, they find that MNEs shifted profits to the US from Canada, where the tax rates increased in that year. In 1986, they find that the MNEs shifted profits from the US to Europe, where tax rates decreased in that year.

However, according to Jacob (1996), the incidence of profit shifting found by Klassen, et al. (1993) may result from two mechanisms: (1) MNEs use transfer pricing schemes; and (2) MNEs deliberately change their business methods (e.g., locating more profitable operations in low-tax jurisdictions) in response to tax rates changes. However, Klassen, et al. (1993) do not clearly express which one has been used by US MNEs to shift profits (Jacob, 1996). Using data on the volume of intra-firm international trades as

a proxy for profit shifting occurrences, Jacob (1996) improves Klassen, et al. (1993) by investigating how US MNEs shift their profits. He finds that they used transfer prices to shift profits both before and after the US Tax Reform Law in 1986.

In terms of the magnitude of the revenue loss caused by profit shifting activities, the existing literature also provides robust and ample evidence that the size of revenue loss caused by profit shifting in advanced economies is substantial. For example, Pak and Zdanowicz (2002) evaluate US MNEs and US subsidiaries of foreign parents and estimate that the US Government experienced revenue losses of USD53 billion from the transfer pricing of exports and imports of goods in 2001. In a study that covers US multinational firms and their foreign affiliates, Clausing (2009) empirically estimates that USD180 billion profit from corporations is shifted out of the US, leading to more than USD60 billion in revenue losses in 2004. Several years later, Clausing updated this work and found a revenue loss of around USD90 billion (around 30% of the country's corporate tax revenue) resulting from income shifting by US affiliates of foreign MNEs in 2008 (Clausing, 2011).

More current research shows that the findings from the earlier studies remain valid. For example, using a unique panel dataset[48] of US tax returns during 2002–2012, Dowd, et al. (2017) examine the effect of profit shifting behaviour of US MNEs on profits reported by their affiliates abroad. While they find that the reported profits significantly depend on whether the foreign countries have a low or high tax rate, under linear specification, they provide evidence that a one percentage point reduction in the tax rate will result in a 1.4% increase in reported profits, regardless of whether the original tax rate is low or high. Beuselinck, Deloof, and Vanstraelen (2015) scrutinise the effect of tax enforcement and public listing status on income shifting by European MNEs during

[48] Panel data (also called longitudinal data) refers to data for *n* different entities observed at T different periods: (X_{it}, Y_{it}), $i = 1, \ldots, n$ and $t = 1, \ldots, T$ (Stock & Watson, 2015, p. 397).

1998–2009. They find that European MNEs shift profits from high-tax countries to low-tax countries, and they provide evidence that income shifting is greater when local tax enforcement is weak.

Theoretical research in corporate tax avoidance is discussed mostly in economic literature, as shown in Section 3.1. In contrast, empirical studies on corporate tax avoidance have been conducted for decades in many disciplines, including economics, accounting, finance and law.[49] However, empirical studies mostly focus on developed countries.

The issue of profit shifting by MNEs in developed economies has been discussed in economic and accounting literature for many years. Most studies focus on profit shifting by means of transfer pricing. Transfer pricing tax issues were previously extensively discussed in economic literature, but not in accounting literature (Halperin & Srinidhi, 1987). However, recently, the number of studies in accounting literature has been steadily increasing. The following paragraphs discuss the development of the profit shifting–tax avoidance issue by MNEs in economic literature and accounting literature.

As discussed in Section 3.1.2, studies that theoretically model the profit shifting behaviour of MNEs have existed since the early 1970s. However, it was not until the works of Grubert and Mutti (1991) and Hines and Rice (1994) that empirical evidence of profit shifting by MNEs was quantitatively provided. According to Dharmapala (2014a, p. 424), the methods introduced by the two papers are the primary approach to the empirical estimation of BEPS in the economic literature. They are early pioneering research on multinational income shifting and are important because they establish a

[49] Hanlon and Heitzman (2010, p. 127) summarise how the multidisciplinary nature of tax research gives rise to research difficulties in the tax area as follows: 'The multidisciplinary nature of tax research is what makes tax research exciting (yes, exciting), yet difficult. Tax research can be difficult not only because one has to follow tax studies in accounting, finance, economics, and law (through academic institutions, governmental agencies, and policy think tanks), but also because different disciplines often use different languages and have different perspectives.' Therefore, to avoid complexity, this thesis bases its discussion on economic and accounting literature only.

conceptual framework that continues to be highly influential. In addition, the two studies are among the most widely cited papers in tax avoidance research and have inspired subsequent studies in economic literature (e.g. Desai, Foley & Hines, 2006; Hong & Smart, 2010; Julio & Yook, 2016) and accounting literature (e.g. Lisowsky, 2010; Sikka & Willmott, 2010; De Simone, 2016). Therefore, brief summaries of the two seminal economic papers are provided below.

Using 1982 data on a cross-section of 33 countries, Grubert and Mutti (1991, p. 285) examine three related aspects of US MNEs' activity: (1) the ability to shift profits from high-tax countries to low-tax countries; (2) the effect of host country taxes and tariffs on the distribution of real capital; and (3) the influence of tax and tariff policies on international trade patterns of the US and host countries. To examine whether companies shift profits to low-tax jurisdictions, they regress profitability (using two measures: the ratio of book income to sales and the ratio of book income to equity) on tax rate (both statutory marginal corporate tax rate and average ETR; the latter is measured as a ratio of foreign taxes paid to book income of US-controlled corporations with positive profits) and growth in the US's GDP as an indicator of economy-wide profitability. As companies may disproportionally shift profits to the lowest-tax jurisdiction, they also include the inverse of the two tax rates in their empirical estimates to allow for the effect that is concentrated in the lowest-tax countries. They find that, in all cases, the reported profits are negatively correlated to tax rates, suggesting that the companies shift profits to lower-tax jurisdictions.

Hines and Rice (1994) posit that MNEs have the ability to shift not only profits, but also the use of productive factors (e.g., employment) to low-tax jurisdictions. They examine this premise by evaluating the 1982 data on the use of 41 tax haven countries

(THCs)[50] by US MNEs in reported profit–tax incentive regressions. Hines and Rice (1994) identify the pre-tax income of an affiliate as the sum of 'true' income and 'shifted' income (Dharmapala, 2014a, p. 424). True income is generated by means of capital and labour inputs. To predict the level of the true income, they include measures of capital inputs (e.g., fixed tangible assets) and labour inputs (e.g., employment compensation) in the estimation model. In contrast, shifted income is determined by tax incentives (i.e., tax rate difference between the parent and the affiliate) to shift income in or out of the affiliate. They find that, even though US MNEs place a substantial amount of activities in THCs, the profits reported by affiliates in the THCs seem to be too high, suggesting that the level of reported profits is significantly influenced by lower tax rates in the THCs.[51]

Tax research in accounting literature that includes tax avoidance shares the same research questions as tax research in economics and finance literature. Nonetheless, according to Hanlon and Heitzman (2010), accounting literature offers three comparative advantages. Two of the comparative advantages that are relevant to this thesis are as follows.[52] First, tax research in accounting uses specific knowledge of financial accounting rules and an understanding of the institutional details of tax and financial reporting to identify and examine research questions. Second, in regard to tax avoidance research, accounting researchers benefit from understanding tax return data and income tax data in financial reports to derive measures of firms' tax avoidance activities and address

[50] Hines and Rice (1994, p. 175) argue that the four common attributes of tax havens (low corporate or personal tax rates, legislation that supports banking and business secrecy, advanced communications facilities and self-promotion as an offshore financial centre) are vague characterisations that make the process of classifying tax haven countries somewhat arbitrary. They then set up their own approach to identify the 41 tax haven countries. See Hines and Rice (1994) for more detail.

[51] Study 2 of this thesis (presented in Chapter 5) detects the incidence of cross-border profit shifting in Indonesia by adopting the approach introduced by Hines and Rice (1994) with some modifications. Therefore, a more detailed explanation of the HRA can be found in Chapter 5.

[52] The third comparative advantage is that accountants benefit by studying asymmetry problems (Hanlon & Heitzman, 2010). This advantage is less relevant to this thesis and therefore is not discussed further.

important questions about the determinants and consequences of tax avoidance. A brief summary is presented below of three papers in the accounting literature that empirically examine the issue of profit shifting by MNEs in developed countries.

Halperin and Srinidhi (1987) examine the effect of the two most commonly used transfer pricing rules by MNEs for tax purposes in the US (i.e., resale price method and cost plus method)[53] on resource allocation decisions by MNEs when the tax rate abroad is lower than in the US. Assuming that the tax rate abroad is lower than in the US, they document that both transfer pricing rules distort resource allocation, which results in lower overall pre-tax profits for the firm. They also document that MNEs in the US intentionally change the level of resource allocation to shift taxes to affiliates in lower-tax jurisdictions.

Collins, Kemsley, and Lang (1998) extend previous studies and suggest that they contain limitations because of data constraints (as in Harris, Morck, & Slemrod, 1993), period constraints (as in Klassen, et al., 1993; Harris, 1993) and differences in sample composition across countries that cannot be controlled because foreign subsidiary data in a given country are aggregated (as in Hines & Rice, 1994; Grubert & Mutti, 1991). Using a larger dataset on US MNEs' manufacturing companies and including a longer period of study (1984–1992), the authors examine the cross-sectional relation between firm-level foreign profit margins and average foreign tax rates. They find that an affiliate located in a higher-tax jurisdiction will shift around USD25–USD30 million income to the US each year.

[53] According to Halperin and Srinidhi (1987), under the US Tax Regulations Section 1.482-2(e) of the Internal Revenue Code, there are three methods for determining the appropriate transfer price: (1) comparable uncontrolled price method (i.e., the transfer price is the market price of the intermediate product); (2) resale price method (i.e., the applicable transfer price is the selling price of the final product minus an appropriate mark-up on the sale); and (3) cost plus method (i.e., the transfer price is the intermediate product's cost plus an appropriate mark-up on the cost).

Klassen, Lisowsky, and Mescall (2016) use a survey of tax executives from MNEs to investigate the differences in their transfer pricing strategies in an effort to minimise the tax burden of MNEs. They set two categories of transfer pricing strategies: avoiding disputes with tax authorities (indicative of the tax compliance transfer pricing strategy) and avoiding cash taxes paid (indicative of the tax minimisation transfer pricing strategy). After analysing the responses of 219 tax directors regarding their transfer pricing strategies and practices, they document that more corporations choose to avoid disputes with tax authorities (49%) rather than avoid cash taxes paid (41%). Their analysis shows that MNEs that choose the tax minimisation transfer pricing strategy use tax avoidance schemes significantly more often than those that choose the tax compliance transfer pricing strategy. On average, MNEs using the tax minimisation strategy report lower effective tax rate of 6.6% (implying tax savings of USD43 million) through transfer prices compared with MNEs that use the tax compliance transfer pricing strategy.

In sum, there are numerous empirical studies of cross-border profit shifting by MNEs in developed countries, especially the United States and the European Union, using country-level data, industry-level data, firm-level financial reporting data and tax return data. Prior studies find evidence of profit shifting in response to tax rate differences between countries and identify intra-group transfer pricing and debt financing as the main channels used to shift profits across country borders.

3.3 Profit Shifting by Multinational Enterprises in Developing Countries and the Base Erosion and Profit Shifting Project

The studies discussed in the previous section focus on developed countries and confirm that MNEs shift profits. However, MNEs operate not only in developed countries, but also in developing countries. As a result, when MNEs commit profit

shifting strategies, both developed and developing countries are likely to be affected. This makes BEPS a global issue, and developed countries alone cannot sufficiently address it. Unfortunately, while empirical studies on developed countries are abundant, few studies have focused on developing countries. This section discusses some studies that have developing countries as their focus. It also examines why there are limited empirical studies in developing countries.

Profit shifting within MNEs has been an issue in developed countries for decades. However, it has only recently come to the attention of policymakers in developing countries (Janský & Kokeš, 2015). To a large extent, reports of some international institutions and empirical studies that suggest and argue that developing countries may suffer from BEPS strategies by MNEs have considerably contributed to the attention. For example, the OECD (2013b) argues that MNEs are being accused of avoiding taxes worldwide—particularly in developing countries, where tax revenue is critical to promote sustainable development.

In line with the OECD's report, Dharmapala (2014b) claims that developed countries do not rely on corporate tax revenues and therefore do not consider BEPS activity by MNEs a major determining factor to their overall level of tax revenue. In contrast, developing countries rely on corporate tax revenue because it contributes a significant proportion of their total tax revenue, and they may find it difficult to switch to other forms of taxation (Dharmapala, 2014b). As a result, 'developing countries are especially vulnerable to BEPS activity' (Dharmapala, 2014b, p. 10). This statement is consistent with the OECD's (2014b) view that some of the lowest-income countries rely on income tax from the operations of foreign MNEs.

Indonesia is not an exception. From economic surveys on Indonesia, the OECD (2012, 2015b) finds that the nation's budget relies heavily on revenue from corporate tax.

Another international institution that finds that developing countries rely on corporate tax revenue is the IMF, which estimates that the global annual corporate tax revenue loss caused by BEPS is approximately 5% of the total CIT revenue (IMF, 2014b). Moreover, the IMF estimates that the loss is as high as 13% in developing countries, confirming the high vulnerability of developing countries to profit shifting.

In 2012, the G20 initiated a global project to tackle profit shifting by MNEs and asked the OECD to undertake the project. The OECD agreed and launched the project, called *Base Erosion and Profit Shifting*, in February 2013. The G20 countries which are not OECD members (e.g., Indonesia) became associates that have equal footing with OECD members in the project and agreed to adopt an Action Plan[54] to address BEPS in September 2013 (OECD, 2013c). Since its launch, the project has received consistent support from the G20 and is known as the OECD/G20 BEPS project or the BEPS project. The OECD continues to encourage developing countries to be involved in the project. For example, in its 'Economics Surveys: Indonesia 2015' report (OECD, 2015b, p. 15), the OECD recommends that Indonesia 'continue to be actively engaged in the OECD's Base Erosion and Profit Shifting (BEPS) Project' because the OECD believes that the project is an efficient tool to 'facilitate and improve corporate taxation for multinationals which should benefit Indonesia's tax collection' (OECD, 2016, p. 100).

The main purpose of the BEPS project is to provide an internationally coordinated approach that facilitates and reinforces domestic actions to protect tax bases and provide comprehensive international solutions to address the issue (OECD, 2014a). The reason is that, although most BEPS strategies are legal, according to the OECD (2014a), it generates several undesirable consequences. First, BEPS distorts competition because MNEs may gain competitive advantages from BEPS opportunities that domestic

[54] See the OECD's report entitled 'Action Plan on Base Erosion and Profit Shifting' for details of the 15-point action plan proposed by the OECD (2013c).

companies do not have. Second, it may cause the inefficient allocation of resources by distorting investment decisions towards activities that have lower pre-tax rates of return, but higher after-tax returns. Finally, it discourages voluntary compliance of most taxpayers because they observe that MNEs legally avoid income tax. The three potential distortions are compounded by the fact that most developing countries heavily rely on CIT revenue and have positioned studies on BEPS—particularly studies that focus on developing countries—as significantly important.

3.4 Profit Shifting by Foreign-owned Indonesian Companies and How the Directorate General of Tax Fights It

As discussed in Chapter 2, the two completed tax reforms in Indonesia have changed the nation's taxation system. The 1983 tax reform has introduced novel approaches, such as allowing taxpayers to calculate, pay and report their tax liabilities (self-assessment system), and it has introduced technology to replace the previous paper-based system. The tax administration reform that commenced in 2002 and was completed in 2008 has also significantly improved taxation in Indonesia—particularly in upgrading the face of the country's tax services. For instance, tax data recordings have been more reliable, tax officials have been more professional and the structure of the DGT organisation has been simplified.

However, the success of the two major tax reforms was not followed by satisfactory revenues collected from CIT. While the CIT amount collected has increased from year to year, the percentages of the CIT in total revenue collected consistently decreased from 2009 to 2014 and slightly increased in 2015. Moreover, the tax-to-GDP ratio of Indonesia has been lower than that of other ASEAN countries. In fact, the level of tax compliance

ratio (the ratio of corporate taxpayers that file a tax return to the number of corporate taxpayers that must file a tax return) were below 60% during 2009–2015.

As in other developing countries, taxation in Indonesia suffers from substantial tax evasion and tax avoidance. Further, until very recently, the Indonesian tax system is characterised by the absence of anti-avoidance provisions—particularly effective transfer pricing and debt financing (thin capitalisation) provisions. The lack of provisions to curb cross-border profit shifting along with the lack of power and flexibility of the DGT has made Indonesia vulnerable to international tax avoidance. Consequently, FOICs—the Indonesian affiliates of foreign MNEs—have an opportunity to avoid Indonesian CIT by using cross-border profit shifting strategies.

Based on data provided by the Indonesian Investment Coordinating Board (BKPM), there were 22,000 FOICs in 2014 (DGT, 2015a). These FOICs contributed more than 25% of the corporate tax revenue in 2014 (Indonesian Ministry of Finance, 2015).

Despite this significant contribution, Indonesian government officers have expressed concern that FOICs may have shifted profits out of Indonesia. For example, in 2013, Agus DW Martowardojo, Indonesian Finance Minister, stated that at least 4,000 FOICs have not paid CIT over the last seven years by claiming losses during that period (Jefriando, 2013). Two years later, his successor, Bambang PS Brodjonegoro, revealed that thousands of foreign-owned companies in Indonesia had never paid CIT since commencing their businesses in the country. The finance minister argued that the companies have used transfer pricing and debt financing to avoid taxes (Jefriando, 2015). The fact that numerous FOICs have avoided Indonesian CIT by allegedly using profit shifting schemes indicates that the 1983 tax reform and the 2002 tax administration reform have not been sufficient to support the DGT to fight cross-border profit shifting. However, there is almost no empirical evidence to support such claims. While some peer-

reviewed papers[55] have specifically discussed tax avoidance in Indonesia, they do not demonstrate sufficient empirical evidence regarding whether FOICs use profit shifting strategies to minimise their tax liability. The remainder of this section summarises two peer-reviewed papers that focus on the tax avoidance issue in Indonesia,[56] presents a tax avoidance provision to mitigate the incidence of BEPS in Indonesia and discusses some issues related to BEPS encountered by the DGT.

Lerche (1980), a peer-reviewed study on tax avoidance in Indonesia, does not specifically investigate tax avoidance—in particular, using profit shifting strategies—by foreign MNEs in Indonesia. However, it pioneers the empirical study of tax misbehaviour in Indonesia. By comparing the legal potential (i.e., the amount of tax revenue raised if all taxpayers pay taxes according to Indonesian tax law) and the real amount of tax revenue collected between 1969 and 1979, Lerche evaluates the efficiency and equity of the Indonesian tax system. He finds that Indonesia had suffered from low tax revenue for three main reasons: tax avoidance, tax evasion and tax collection inefficiency. Specifically, using a hypothetical calculation (i.e., not based on real-world data), he posits that, of an ideal tax revenue of USD1,500, the government can only collect USD250 (16.67%). The remaining USD1,250 (83.33%) is the potential revenue lost and is dispersed in three taxation gaps: USD500 (33.33%) caused by tax avoidance, USD550 (36.67%) caused by tax evasion and USD200 (13.33%) caused by inefficient tax collection procedures. While this finding is based on a hypothetical calculation, it indicates that tax avoidance strategies have been a major option for taxpayers in Indonesia to lower their tax burden.

[55] This thesis bases the criteria on the Australian Business Deans Council (ABDC) Journal Quality List 2013: http://www.abdc.edu.au/pages/abdc-journal-quality-list-2013.html.
[56] In fact, the two peer-reviewed papers discussed here are the only peer-reviewed papers that could be found in the literature on tax avoidance in Indonesia.

An empirical study that focuses on tax avoidance by foreign MNEs in Indonesia is that of Gramlich and Wheeler (2003). However, unlike this thesis which investigates whether FOICs avoid Indonesian CIT, Gramlich and Wheeler examine how Indonesian affiliates of US MNEs are used by their parent companies to avoid US CIT. Specifically, they study how two giant oil MNEs—Chevron and Texaco, collectively known as Caltex—used their Indonesian subsidiaries to avoid US CIT from 1964 to 2002. They find that the parent companies of Chevron and Texaco in the US suppressed their US CIT for decades by asking their subsidiaries in the US to pay higher market prices for Indonesian crude oil exported from Indonesian subsidiaries. The higher market price increased the cost of goods sold, which eventually reduced the parents' income taxes in the US. The authors also find that, as a result of the overpricing of oil exported to the US, the high income of Caltex—the subsidiary in Indonesia—is further distributed to the parents (Chevron and Texaco) in the US in the form of a higher dividend income along with foreign tax credit paid for the dividend in Indonesia. While it appeared that the Indonesian government collected higher income taxes because of the overpricing, Gramlich and Wheeler (2003) document that the Indonesian government granted Caltex extra oil to compensate for the extra taxes received. Although the study is less relevant to the issue of whether FOICs shift profits to avoid Indonesian income taxes, the study suggests that Indonesian affiliates are used by their parents in a profit shifting scheme to avoid the overall, or group, CIT.

Although there is little supporting empirical evidence, the DGT is aware that the incidence of international tax avoidance has increased because of the borderless economy. The following statement depicts the DGT's concern about tax avoidance by FOICs—particularly by means of transfer pricing arrangements (DGT, 2010, p. 80):

> Under the current globalisation, the intensity and magnitude of transnational transactions are more dominant in the economy either by related parties or

independent parties. This brings different tax implications and should receive serious concerns. Transfer pricing is closely related to transactions between affiliated parties, which must be strictly supervised since it can be used to reduce the tax that must be paid (tax avoidance).

The concern of the government can also be observed in the ITL amendments that have been passed by the legislature to date. The government has amended the ITL four times since it came into force on 1 January 1984. In the amendments, ITL Article 18 regarding international tax issues has been included three times. The tax avoidance provisions—especially those related to company tax avoidance—according to ITL Article 18 and its elucidation, as lastly amended in 2008 and took effect on 1 January 2009, are outlined below:

(1) The finance minister is authorised to issue a decree on the debt-to-equity ratio for tax purposes.

More debt generates higher interest expense. Given that interest is a deduction under ITL, a higher interest expense results in lower tax payable. Thus, companies have incentives to use debt rather than equity to finance their business activities. ITL Article 18(1) is therefore intended to restrict companies from treating equity as debt. ITL refers to equity as defined in the Indonesian accounting standards.

Following the authority mandated by ITL Article 18(1), the finance minister enacted Finance Minister Regulation (PMK) number 169/PMK.03/2015 (PMK 169/2015) about Debt to Equity Ratio for Income Tax Computation Purposes in 2015. The regulation came into effect on 9 September 2015 and was implemented in 2016. It is known as the Indonesian anti-thin capitalisation provisions and is intended to restrict the practice of profit shifting by means of high debt financing by FOICs. Under the regulation, taxpayers can claim the maximum debt-to-equity ratio of four to one for tax purposes. PMK 169/2015 replaced Finance Minister Decree (KMK) number 1002/KMK.04/1984 (KMK 1002/1984). Under KMK

1002/1984, the maximum debt-to-equity ratio is three to one. Although KMK 1002/1984 should have come into effect on 8 October 1984, but on 8 March 1985, the finance minister released a decree (254/KMK.01/1985) to postpone the implementation of 1002/KMK.04/1984 until an unspecified time.

(2) The finance minister is authorised to determine when a resident taxpayer is deemed to receive dividends from a non-listed foreign company provided that the taxpayer (or together with other resident taxpayers) controls at least 50% of the shares of the foreign company.

This provision is known as the Controlled Foreign Company (CFC) rules in Indonesia.[57] As explained in Section 2.2.2, under ITL Article 24, foreign income is included in the TI of a resident taxpayer only when foreign income is received by the resident taxpayer. The purpose of Article 18(2) is therefore to minimise tax avoidance by resident taxpayers that invest in non-listed foreign companies, but not to distribute or repatriate dividend income to the resident taxpayers. The following is an example of the implementation of the CFC rule according to the elucidation of ITL Article 18(2):

Company A and Company B, both are resident taxpayers, own shares of 40 percent and 20 percent respectively in X Ltd., a non-listed company domiciled in country Q. X Ltd. had generated profits after tax in the last few years but had not distributed dividends to its shareholders. In this case, Finance Minister has full authority to determine the time and the amount the dividends deemed to be received by Company A and Company B.

[57] According to the UN (2013c, p. 23), 'CFC rules are designed to prevent tax being deferred or avoided by taxpayers using foreign corporations in which they hold a controlling shareholding in low-tax jurisdictions and "parking" income there. CFC rules treat this income as though it has been repatriated and it is therefore taxable prior to actual repatriation'.

Following the authority given by ITL, the finance minister issued Finance Minister Regulation No. 158/2008 in 2008 (PMK 158/2008). It states that the dividends are deemed to be received either in the fourth month after the deadline of tax return submissions in the host country (the country in which the foreign income is generated) or in the seventh month if the tax law in the host country does not require the submission of tax returns. The amount the dividend deemed to be received should refer to the ownership interests. Using the example of the implementation of the CFC above, if X Ltd made an income after tax of Rp1 billion in 2009 and the finance minister decided that Company A and Company B should receive a dividend from X Ltd, both companies should include an income of Rp400 million (40% ownership interest in X Ltd multiplied by X Ltd's profit after tax of one billion Rupiah) and Rp200 million (20% ownership interest in X Ltd multiplied by X Ltd's profit after tax of one billion Rupiah) respectively in their TI.

(3) The Director General of Tax is authorised to re-determine income and deductions and to reclassify debt as equity for TI computation purposes for transactions between related parties using several methods that are internationally recognised, such as the price comparison method between independent parties (known as the comparable uncontrolled price method), resale price method and the cost-plus method.[58]

The government understands that transactions between related parties tend to result in a lower TI. The purpose of this provision is to prevent tax avoidance by deliberately suppressing income or boosting deductions from transactions between related parties. Similarly, the government notices that company taxpayers may report equity as debt. This provision allows the Director General of Tax to reclassify

[58] Elucidation of ITL Article 3 defines uncontrolled price method, resale price method, cost-plus method as defined by Halperin and Srinidhi (1987). See Section 3.2 for brief definitions of the three terms.

the debt as equity in accordance with ITL Article 18 and the related Finance Minister Regulation. ITL also authorises the DGT to make the reclassification by comparing the debt-to-equity ratio of the related parties with that of non-related parties. Therefore, the party that pays the interest on the debt may or may not claim the outgoing, or part of the outgoing, as a deduction. Accordingly, the party that receives the interest may or may not be taxed as if they receive a dividend income.

Following the authority mandated by ITL Article 18, the Director General of Tax issues the Director General of Tax Regulation PER-43/PJ/2010 about the Implementation of Arm's Length Principle for Transactions with Related Parties, in 2010 and was in effect on 6 September 2010. On 11 November 2011, the DGT amended PER-43/PJ/2010 by issuing PER-32/PJ/2011. PER-32/PJ/2011 is the current Indonesian transfer pricing provisions and is intended to ensure that related parties apply a fair market price in their business transactions. Among other things, PER-32/PJ/2011 requires related parties to provide detailed transfer pricing documentation regarding their pricing and profiting procedures.

(3a) The Director General of Tax is authorised to conclude an agreement with a taxpayer and collaborate with tax authorities from other countries to determine pricing for transactions between related parties.

A pricing agreement (known as an Advance Pricing Agreement or APA) is a deal between a taxpayer and the Director General of Tax regarding fair selling prices for taxpayers' products before taxpayers sell their products to their related parties. ITL specifically mentions that the objective of the agreement is to reduce the practice of transfer mispricing by MNEs.

An APA is considered advantageous for both taxpayers and tax authorities. It is beneficial for taxpayers because it provides legal certainty as well as simpler tax

computation documentation. For tax authorities, an APA is advantageous because it reduces the need to perform tax audits and subsequent corrections and adjustments. According to ITL, an APA can be a unilateral agreement or a bilateral agreement. If the parties involved are the Director General of Tax and a taxpayer, the agreement is called a unilateral APA. If the parties involved are the Director General of Tax and the tax authority of another country, it is called a bilateral agreement.

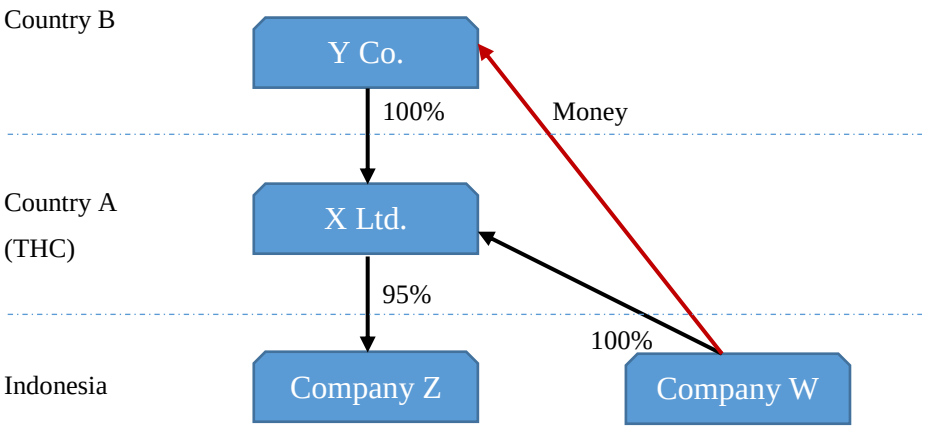
(3b) Taxpayers that buy shares or assets of other companies through a special-purpose company can be considered the actual party that purchases the shares or assets, provided that the taxpayers and the special-purpose company are related parties and the price of the transaction does not satisfy the arm's-length principle.

This provision is intended to prevent resident taxpayers from avoiding taxes by purchasing shares/equity of another resident company taxpayer using a foreign company that was established specifically for that purpose, known as a special-purpose company (in tax literature, a special-purpose company is also known as a special-purpose vehicle (SPV), a conduit company or a shell company).

(3c) The sale or transfer of shares of a special-purpose company that was established or domiciled in a THC and is a related party of a resident taxpayer could be deemed as the sale or transfer of shares of the resident company taxpayer. Figure 3.1 provides an example of this provision based on the elucidation of ITL Article 18 (3c).

Figure 3.1

Selling a Special-purpose Vehicle in a THC by a Foreign Company Deemed as Selling a Resident Company under Income Tax Law



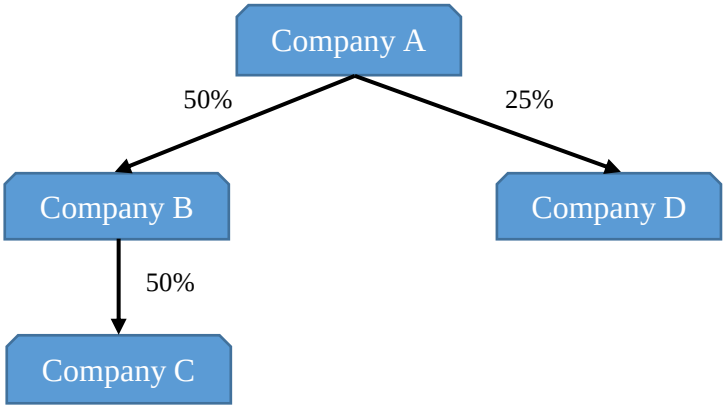
As shown in Figure 3.1, X Ltd is a company that was incorporated and domiciled in Country A, a THC. It controls 95% of the shares of Company Z, a resident company taxpayer. X Ltd is wholly owned by Y Co., a company domiciled in Country B and established as a conduit company to obtain the majority shares of Company Z in Indonesia. If Y Co. sells all of its shares in X Ltd to Company W, another Indonesian resident company taxpayer, the transaction is legally a transfer of shares of a foreign company by a foreign taxpayer. However, according to ITL Article 18 (3), the essence of this transaction is the transfer of shares of a resident company taxpayer by a foreign taxpayer. The reason is that, by acquiring X Ltd, Company W, which is an Indonesian resident company taxpayer, will simultaneously acquire Company Z, which is also an Indonesian resident company taxpayer. Consequently, any gain from the sale by Y Co. is subject to Indonesian income tax.

(4) ITL refers to two or more taxpayers that are connected by at least one of the following situations as related parties:

a. Ownership. This includes directly or indirectly owning at least 25% of the equity of other taxpayers or a relationship among taxpayers through ownership of at least 25% of the equity. Figure 3.2 illustrates related parties based on ownership according to the elucidation of ITL Article 18 (4a).

Figure 3.2

Related Parties Based on Ownership



As shown, Company A directly owns 50% of the shares of Company B. If Company B owns 50% of the shares of Company C, Company A indirectly has ownership of 25% of the shares in Company C. Further, Company A also owns 25% of the shares of Company D. In this case, the four companies are considered related parties. For example, Company A and Company B are related parties because of direct ownership. Company A and Company C are related parties because of indirect ownership, and Company C and Company D are related parties because of the common ownership by Company A.

b. Control of management or technology. Two or more companies are considered related parties if they are under the same control of management or technology. This provision implies that to be considered related parties, companies do not have to have ownership. The presence of control of management and technology in one

company by another company can also indicate that the two companies are related parties for tax purposes.

The amendments of ITL Article 18 above are the major provisions in combating tax avoidance by MNEs in Indonesia. These new provisions came into force on 1 January 2009 and have not been further amended. That is, the cross-border tax avoidance provisions remained unchanged from 2009 to 2015. This is another reason for the study period in this thesis to begin in 2009 and end in 2015.

Although ITL Article (18) contains relatively complete international tax avoidance provisions, it leaves some potential problems that arise because of the delay in issuing the operating regulations by the minister of finance and the Director of General Taxes as mandated by ITL Article 18(1) and (3), respectively. First, since the finance minister only issued 169/PMK.03/2015, which was effectively enacted on 9 September 2015, Indonesia did not have a specific thin capitalisation provision until that date. While the provision was in effect in September 2015, it is arguable that the new provision was not effectively in force until 2016 or even 2017 because taxpayers may need more time to become familiar with it. Therefore, practically thin capitalisation provisions did not exist during 2009–2015. Second, since the transfer pricing provision was in effect on 6 September 2010, it can be assumed that company taxpayers effectively began applying the new provision in 2011. Therefore, during the period of study of this thesis (2009–2015), Indonesia effectively did not possess transfer pricing provisions until 2011.

Previous studies find that transfer pricing rules effectively increase the use of the 'arm's-length principle' on intra-firm trade (e.g. Halperin & Srinidhi, 1987; Schjelderup & Weichenrieder, 1999)[59] and that thin capitalisation rules effectively lessen the incentive

[59] However, some studies find that transfer pricing rules may lower the income tax paid by MNEs in countries where transfer pricing rules are enacted. For example, Halperin and Srinidhi (1987) find that the US transfer pricing rules result in less taxes paid in the country because the firm's overall pre-tax profit would be lower under the rules than in an unconstrained situation. They also find that such restrictions

to use internal loans for tax avoidance (e.g. Buettner, Overesch, Schreiber, & Wamser, 2012; Buslei & Simmler, 2012). Therefore, the absence of such rules may have increased the opportunities for FOICs to shift profits out of Indonesia.

Another potential problem encountered by the DGT that is likely to affect its efficiency in combating alleged cross-border profit shifting is that the Indonesian tax authority is deemed to have insufficient resources to handle international tax issues. The DGT once had the Directorate of International Taxation Relations (an Echelon II unit), which exclusively dealt with issues of international taxation. The directorate was established in 1993, but it only existed for around one decade. Afterwards, while the DGT acknowledged that international tax avoidance was the main issue to overcome, it had only two relatively small units that watched international tax matters. One is the Sub Directorate of International Tax Treaty and Cooperation. This unit is an Echelon III unit under the Directorate of Tax Regulation II and focuses on drafting regulations on international taxation and the exchange of information with other tax authorities.[60] The other unit is the Sub Directorate of Special Transaction Audit, which is an Echelon III unit under the Directorate of Tax Audit and Collection. The total tax officials in both units numbered less than 50. The structure of the units that handle international tax cases remained the same until 2015.[61]

The small numbers of tax units and tax officials in charge of monitoring cross-border transactions has affected the number of cross-border tax cases detected. For example, only one transfer pricing case was handled by the DGT in 2008. As discussed

prompt MNEs to shift taxes from the US to lower-taxed affiliates overseas by changing the level of resource allocation.

[60] See Figure 2.2 for the structure of the head office of the DGT.

[61] In 2016, the DGT restructured the organisation and established three new directorates—one of which is the Directorate of International Taxation. This directorate is in charge of several fields in international taxation issues, such as formulating and implementing international tax policies, drafting the exchange of information, advance pricing agreements and mutual agreement procedures norms, standards, procedures and criteria, and providing mentoring, monitoring, control and evaluation of international tax policies (DGT, 2016b).

in Section 2.2, the DGT is a single directorate under the Indonesian Ministry of Finance. As a result, it does not have the authority to expand its own institution. Therefore, the DGT must optimise existing resources to tackle the progressive development of international tax avoidance. For instance, under the supervision of the Sub Directorate of Special Transaction Audit, the DGT conducted a transfer pricing management program in 2009. As part of the program, 1,000 tax officials (in particular, tax auditors) were trained in transfer pricing topics (Directorate General of Tax, 2010). As a result, transfer pricing cases handled by the Sub Directorate significantly increased in 2009 compared with the previous years. Table 3.1 shows the transfer pricing cases handled by the DGT in 2008 and 2009.

The significant increase that occurred after the training program indicates that transfer pricing is probably a common strategy used by FOICs to shift profits. It also explains the small number of transfer pricing cases detected in 2008. Indonesian tax auditors/officials did not have sufficient knowledge to understand that international transfer pricing was occurring.

Table 3.1

Transfer Pricing Cases, 2008–2009

Type of Case	2008 Semester 1	2008 Semester 2	2009 Semester 1	2009 Semester 2
Supervision	0	1	11	32
Audit	1	3	8	12
Objection	0	2	2	3
Appeal	0	2	5	10
Total	1	8	26	57

Source: DGT (2010, p. 81)

International tax disputes, such as transfer pricing cases between taxpayers and the DGT, are solved mainly by using provisions as stated in tax treaties between Indonesia (the host country—i.e., the source country of the business income) and the home country (i.e., the source country of the investment, sometimes called the domicile country of the income earner, or simply domicile country). A tax treaty is an agreement between two contracting states: a host country and a home country. It is designed to avoid double taxation or double non-taxation on certain incomes. Double taxation means that the same TI is taxed by both the home country and the host country. Double non-taxation refers to an income that is not taxed by both countries. For example, when a transfer pricing dispute occurs and it involves a related party domiciled in a country that is a tax treaty partner of Indonesia, the parties involved in the dispute can request tax relief according to the procedures agreed in the tax treaty. In Indonesia, a tax treaty is established based on ITL Article 32A and International Agreement Law No. 24 Year 2000. Table 3.2 shows the development of the Indonesian tax treaty network during 2009–2015.

Table 3.2

Tax Treaty Network of Indonesia, 2009–2015

Description	Year						
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total	59	59	60	60	63	65	65
Newly signed	-	-	Iran	-	Croatia Morocco Hong Kong	Suriname Papua New-Guinea*	-
Revoked	-	-	-	-	-	-	-

Note: *The effective date of the tax treaty with Papua New Guinea was 1 January 2015.

Source: DGT (2015b). See Appendix 2 for a list of Indonesia's tax treaty partners as at 30 June 2018.

In general, three key tax avoidance provisions are included in a tax treaty between Indonesia and its partner countries. The three provisions are considered important and relevant to the issue discussed in this thesis because they are the three mechanisms that can be used to curb cross-border profit shifting by FOICs. The first mechanism is the exchange of information (EoI). By agreeing to include an EoI article on the tax treaty, the designated representatives from the governments of the two contracting states (i.e., the competent authorities) agree to exchange data on taxes by request, automatically or both. Data collected from the partner tax authority can be used as supporting evidence (in some cases as the main evidence) to resolve the ongoing dispute. Therefore, the EoI is considered an effective tool for solving cross-border tax disputes such as transfer pricing. In many cases, the information received from another tax authority may be useful and may be the key to preventing tax disputes. In a recent development in the EoI, Indonesia joined the agreement for Automatic EoI under the OECD Common Reporting Standard in 2015, which will be in effect by 2018 (OECD, 2016). According to the OECD (2016, p. 99), the critical objective of the agreement is 'to improve the management of cross-border activities through cooperation of tax administrations in today's globalised economy'. The EoI for tax purposes is regulated under Government Regulation No. 74 Year 2011 Article 56.

The second feature is the mutual agreement procedure (MAP). According to the OECD (2007, p. 8), the MAP provision in tax treaties 'allows the competent authorities[62] to interact with the intent to resolve international tax disputes. These disputes involve cases of double taxation (juridical and economic) as well as inconsistencies in the

[62] According to the Minister of Finance Decree Number 188/KMK.01/2013, there are two competent tax authorities for the purposes of establishing and/or renegotiating a tax agreement between Indonesia and other countries: (1) Head of Fiscal Policy Office as the competent authority for establishing and/or renegotiating a Tax Treaty Agreement; and (2) Director General of Tax as the competent authority for establishing and/or renegotiating MAP and EoI. Like the DGT, the Fiscal Policy Office is an Echelon I unit under the Indonesian Ministry of Finance.

interpretation and application of a convention'.[63] A tax treaty usually contains at least one article that specifically regulates MAP procedures, which allows competent authorities from both contracting states to solve any cross-border tax disputes. In Indonesia, a MAP plays an important role because it 'provides opportunity for taxpayers in resolving tax disputes and is considered an alternative to settle the disputes other than objection and appeal' (DGT, 2015b, p. 78). Thus, a MAP is a tool that can be used to solve international tax disputes, and it is therefore only useful after a dispute arises. In Indonesia, the legal basis for establishing a MAP is ITL Articles 55–59.

The third feature is the APA. As explained earlier in this section, an APA is an agreement between the DGT and the taxpayer (or tax authority) regarding arm's-length prices for transactions between related parties. Therefore, an APA is a tool that can be used to avoid disputes because the prices are agreed before the transactions occur. Indonesia regularly performs APA, EoI and MAP with several contracting states every year—particularly with countries that have a large number of companies in Indonesia, such as Singapore, Japan and the US. The legal foundation of forming an APA is ITL Article 18 (3a).

As the Indonesian tax authority, the DGT is aware of the situation relating to international tax avoidance:

> DGT biggest challenges in the context of tax administration are transfer pricing, tax avoidance, and tax evasion. To overcome these challenges, in the coming years DGT will put more focus on tax intensification policy, improvement of taxpayers' compliance, and improvement of human resource capacity building. (DGT, 2013, p. 26)

Moreover, Arnold (2012) examines the performance of Indonesia's tax system and suggests that although the DGT has managed to make some progress, it needs to improve its capacity in the area of MNEs' profit shifting and transfer pricing, consistent with the

[63] However, although the MAP article requires the competent authorities to reach an agreement, it does not compel them to reach an agreement and resolve their tax disputes (OECD, 2007).

DGT's awareness. To date, it appears that the DGT is not sufficiently capable of tackling profit shifting, which magnifies the opportunity for FOICs to shift profits out of Indonesia.

3.5 Chapter Summary

This chapter outlines the contextual literature of profit shifting by MNEs. It begins by elaborating the theories that explain tax avoidance by MNEs. Internalisation, which is defined as an opportunity to exploit products or processes internally among companies within the same ownership, is believed to be central in giving MNEs opportunities to avoid tax liability using their worldwide affiliates. They have opportunities to deploy certain prices for products they sell (buy) to (from) different companies but within the same ownership to supress the overall tax burden. Prior studies show that the main trigger for cross-border tax avoidance has been tax rate differences between countries.

This chapter then analyses prior studies that examine the incidence of profit shifting in developed countries. Although there are ample studies both in terms of quantity and the variety of approaches used, they mostly focus on developed countries. Prior studies can be divided into two groups. The first group of studies detects the incidence of profit shifting by MNEs. Overall, they conclude that tax rate differences between countries create an incentive for MNEs to shift profits to low-tax jurisdictions to suppress their tax liability. The second group of studies identifies the channels used by MNEs to shift their profits. Most empirical studies find that the two channels that MNEs use the most to shift profits are transfer pricing and high debt financing.

Some prior studies suggest that developing countries also suffer from profit shifting by MNEs. While this suggestion is based on indirect indicators rather than actual data from developing countries, the occurrence of profit shifting by MNEs appears to be

genuine. As prior studies explain, the fact that developing countries heavily rely on revenue from corporate tax places them in a more vulnerable position compared with developed countries.

Finally, Indonesia is also aware of the development of international tax avoidance. While there is little empirical evidence on profit shifting by FOICs, there is a strong indication of its existence. Therefore, ITL amendments always include some articles that strengthen international tax provisions. However, despite the country's continuous efforts, Indonesia still appears to suffer from international corporate tax avoidance strategies. The most likely causes are insufficient anti-avoidance provisions and a lack of capability, both institutional arrangements and human resources, to tackle cross-border tax avoidance.

To date, there is little empirical evidence regarding the existence of profit shifting by MNEs in Indonesia, which is a major developing nation that is actively involved in the OECD/G20 BEPS project. Therefore, it is important to find empirical evidence of cross-border profit shifting in the country. This finding will support the statements made by two Indonesian ministers of finance and the suggestions made by prior studies and reports. Thus, this thesis presents three studies to fill the gap in the literature. Using Indonesian confidential tax return data obtained from the DGT, the three studies attempt to detect the incidence of profit shifting in Indonesia and identify how FOICs shift profits out of the country, as summarised below.

Study 1, presented in Chapter 4, examines how tax rate differences between the parent country of an FOIC and Indonesia relates to profits reported by the FOIC in its Indonesian tax return. This is the first step needed to identify the existence of profit shifting by MNEs operating in Indonesia. The results of Study 1 lay the foundation for the other two studies of this thesis.

Study 2, presented in Chapter 5, reinforces the findings of Study 1 by using the Hines and Rice Approach (HRA), which is a well-recognised and widely used research method to detect the presence of profit shifting activities by MNEs.

Study 3, presented in Chapter 6, attempts to determine how FOICs shift profits out of Indonesia by examining the channels they use for cross-border tax avoidance strategies. As explained in Section 3.1.1, transfer pricing arrangements and high debt financing are the two channels mostly used by MNEs to shift profits. Study 3 examines whether FOICs use these two intra-group profit shifting channels to shift profits out of Indonesia.

CHAPTER 4:

RELATION BETWEEN TAX RATE DIFFERENCE AND THE PROFIT REPORTED IN INDONESIA

4.1 Introduction

This chapter presents Study 1 of this thesis. It attempts to provide preliminary evidence of the existence of cross-border profit shifting in Indonesia which is a major developing economy. Study 1 empirically examines the relation between the tax rate difference between the parent's country of FOICs and Indonesia and the profit that FOICs report in their Indonesia annual tax return. Tax rate difference (defined as the corporate tax rate of the parent's country of an FOIC minus the Indonesian corporate tax rate) motivates FOICs to shift profits out of Indonesia.

After analysing a sample of around 6,000 firm-year observations over the period 2009–2015, multivariate regressions find a positive relation between the tax rate difference and the profit reported in Indonesia, suggesting that FOICs shift profits out of Indonesia to lower tax countries. This finding provides preliminary empirical evidence of the incidence of profit shifting from a developing country's perspective using confidential tax return data. This preliminary evidence leads to the next two related studies of this thesis.

The remainder of this chapter is organised as follows. Section 4.2 presents the literature review and develops the hypothesis. Section 4.3 describes the research design of the study, including the sample selection procedure and the measurement of variables. Section 4.4 reports the empirical results of the study. Finally, Section 4.5 summarises the chapter.

4.2 Literature Review and Hypothesis Development

A number of studies have empirically examined the effect of tax rate differences on BEPS activities and have provided empirical evidence of profit shifting towards countries with lower tax rates (e.g. Hines & Rice, 1994; Collins, et al., 1998; Huizinga & Laeven, 2008; Newberry & Dhaliwal, 2001). Recent studies (e.g., Clausing, 2016) find that TI is sensitive to corporate tax rates, which is consistent with the findings in previous studies. Therefore, as Beer and Loeprick (2015) conclude, the finding that MNEs shift profits to lower-tax jurisdictions appears to hold over different periods in the past two decades, even though the studies use different public and private databases at the national, regional and global levels. However, previous studies show that the incidence of BEPS may depend on the type of tax rate difference that has been used in the study. The following paragraphs briefly discuss two types of tax rate differences that are most commonly used in previous international tax avoidance studies and provide the reasons for the type of tax rate difference used in this study.

The most important trigger used to detect profit shifting is the tax rate difference between the source country of the investment (home country) and the source country of the business income (host country). Based on existing literature, studies of profit shifting motivated by tax rate differences may use either statutory tax rate (STR) or effective tax rate (ETR) to compute tax rate differences to proxy for tax incentives to shift profits. Before discussing how the two tax rate differences are used in the profit shifting literature, it is necessary to define STR and ETR.

The OECD (2013b, p. 19) defines corporate STR as 'the rate specified in a country's tax law that is applied to a corporation's TI to determine the amount of the taxpayer's tax liability'. However, this type of tax rate does not capture the real tax burden because it does not include several important factors, such as tax allowances deducted against the

tax base, timing issues (e.g., choice of depreciation method) and tax planning strategies that may be used to achieve a desired level of actual tax paid (OECD, 2013b). In contrast, ETR is defined as 'the ratio of corporate income tax to a pre-tax measure of corporate profit over a given period of time… being based on measures of actual taxes paid, and therefore capturing the range of factors affecting actual tax liability (statutory provisions as well as tax planning)' (OECD, 2013b, p. 19).

The use of either STR or ETR difference is a topic of debate in the central issue of profit shifting. For example, Dowd, et al. (2017) suggest that using STR rather than ETR is a common practice in the profit shifting literature. In contrast, some researchers (e.g. Clausing, 2016; Grubert, 2012; Clausing, 2009; Grubert & Mutti, 1991; Grubert, 2003) argue that ETR is considered a more appropriate measure than STR. Some studies (e.g., Clausing, 2003; Dowd et al., 2017; Mills and Newberry, 2004) use both STR and ETR in their analyses. Although studies that use both STR and ETR in their analysis confirm the mainstream findings that MNEs shift profits to low-tax jurisdictions, some studies find mixed results. The next paragraph summarises these studies.

Clausing (2003) obtains similar results using both STR and ETR to examine profit shifting by MNEs. Using US intra-firm international transaction data during 1997–1999, she finds that US MNEs use lower export prices and higher import prices for intra-firm transactions than for non-intra-firm trade transactions when the tax rate in the other country is lower than the US tax rate. The results are consistent either using STR or ETR. An example of a study that uses both STR and ETR and obtains slightly different results is that of Dowd, et al. (2017). In their log-linear model, they find that the semi-elasticity of the reported profit to the tax rate is 1.44 for STR and 1.08 for ETR. They conclude that the difference is insignificant. An example of a study that uses both STR and ETR and obtains completely different results is that of Mills and Newberry (2004). Using financial

data and confidential tax return data of foreign-controlled US corporations during 1987–1996, they find that tax incentives affect foreign MNEs' income reporting in their US subsidiaries when they define tax incentives as the difference between US STR and foreign parent ETR. In contrast, they do not find any tax incentive effects when they measure tax incentives as the difference between US STR and foreign parent STR.

The OECD (2013b) compares STR with ETR regarding their capability in capturing the incidence of BEPS. According to the OECD (2013b), although ETR is a better measure of actual tax paid than STR, the use of ETR has the following issues. First, a low ETR does not necessarily mean aggressive tax planning strategies. It may result from a special tax provision introduced by the government as an incentive to promote certain policies. Second, the data needed to appropriately compute ETR (i.e., tax paid data as the numerator and pre-tax profit data as the denominator) are limited. As a result, the ETR derived from such limited data may be insufficient to indicate the existence of BEPS. Third, researchers tend to use different methods to calculate ETRs. Accordingly, similar studies may have different or even contradictory results. Given the flexibility in computing ETRs, some studies intentionally use certain ETR computation procedures to confirm the desired conclusion (OECD, 2013b).

In a paper that reviews the literature of tax avoidance by MNEs, Dharmapala (2014a) finds that the corporate tax rate difference between the parent's country and the affiliate's country remain the foremost incentive for investigating the occurrence of profit shifting into or out of the affiliate. Further, he suggests that STR is a typical choice for computing the tax rate difference because unlike ETR, which can be influenced by a firm and hence is endogenous to the firm's choice, STR is set by the government and hence is exogenous to the taxpayer's choice. Therefore, STR provides a more reliable source of identification despite the fact that it does not completely capture the actual tax burden

(Dharmapala, 2014a). A number of studies confirm that the STR discrepancy between countries is a major incentive for MNEs to shift profits (e.g. Bartelsman & Beetsma, 2003; Egger, Eggert, & Winner, 2010). Following Dharmapala's suggestion and the OECD's explanation above, this study chooses STR difference as the proxy for tax incentives for foreign MNEs operating in Indonesia through FOICs to shift profits out of Indonesia.

Based on the findings from prior studies, and following the suggestion that developing countries also suffer from the BEPS strategy (e.g. Crivelli, et al., 2015; OECD, 2013b), FOICs are therefore predicted to shift profits from Indonesia to their parent's country when the parent country's STR is lower than the Indonesian STR. Table 4.1 presents the tax rates of Indonesia and three major source countries of investment, namely, Singapore, Japan and South Korea for 2009–2015.

Table 4.1

Corporate Tax Rates of Indonesia, Singapore, Japan and Korea, 2009–2015

Country	Corporate Tax Rate (%)						
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Indonesia	28	25	25	25	25	25	25
Japan	40.69	40.69	40.69	38.01	38.01	35.64	33.06
Korea	24.2	24.2	22	24.2	24.2	24.2	24.2
Singapore	18	17	17	17	17	17	17

Japan and Singapore are two main origin countries of inflow FDI to Indonesia (Bank Indonesia, 2016). The two countries and South Korea head the list of parent countries in the sample used in this study. During 2009–2015, the Indonesian STR decreased from 28% in 2009 to 25% in 2010 and remained unchanged until 2015. During

the same period, corporate tax rates ranged from 33.06% to 40.69% in Japan (i.e., consistently significantly higher than the STR of Indonesia), 22%–24.2% in South Korea (i.e., consistently similar to the STR of Indonesia) and 17%–18% in Singapore (i.e., consistently lower than the STR of Indonesia). Consequently, it is predicted that Japanese-owned Indonesian companies do not have incentives to shift profits, Korean-owned Indonesian companies have weak incentives to shift profits and Singaporean-owned Indonesian companies have strong incentives to shift profits out of Indonesia.

As mentioned in Section 1.1 and briefly discussed in Section 3.1.1, cross-border profit shifting is a book-tax conforming tax avoidance strategy that reduces TI and AP simultaneously. Therefore, profit in this study is represented by two measurements. In addition to TI as the main measurement of profit based on tax law reported by FOICs in their Indonesian tax returns, this thesis uses accounting profit before tax based on financial reporting standards (AP), which is also reported by FOICs in their Indonesian tax returns. If FOICs shift profits out of Indonesia to low tax countries, there should be a significantly positive relation between the tax rate difference and the two profit measurements reported by FOICs to the Indonesian tax authority. That is, the lower the corporate tax rate of the parent's country, the lower the TI and AP reported by the FOIC in its Indonesian tax return. This prediction leads to the following two hypotheses, which are stated in the alternative form:

H1: TI reported by FOICs is positively related to STR differences between the residence countries of the parents and Indonesia ($STR_{Parent} - STR_{Indonesia}$) after controlling for firm size, maturity and industry.

H2: AP reported by FOICs is positively related to STR differences between the residence countries of the parents and Indonesia ($STR_{Parent} - STR_{Indonesia}$) after controlling for firm size, maturity and industry.

4.3 Research Design

4.3.1 Sample Selection and Period of Study

The final sample consists of FOICs registered in tax offices in Indonesia—most of them (72.62%) are registered in tax offices on the island of Java. All data are based on the Indonesian annual tax returns (Form 1771) reported by FOICs to the DGT and are confidential under the Indonesian tax law. The data were obtained under a data nondisclosure agreement. Firms are anonymised for privacy protection.

The period of the study is 2009–2015. There are two important reasons for starting the study from 2009. First, as discussed in Chapter 2, the DGT started a tax administrative reform, better known as 'modernisasi' (modernisation) in Indonesia in July 2002. The reform was aimed at 'promoting voluntary compliance among taxpayers, enhancing the efficiency of administration and restoring taxpayers' trust in the tax administration system' (OECD, 2010, pp. 42–43). The reform was completed at the end of 2008. The DGT claimed that the tax administration reform had equipped its tax office units nationwide with 'more efficient, simplified and transparent business process, more advanced system and information technology, better human resources, improved good governance and more efficient structure of organisation' (DGT, 2009, p. 38). That is, since 2009, the recording of tax return data has been more accurate, which in turn provides a more reliable database for research purposes. Second, according to De Boyrie, Pak, and Zdanowicz (2005), factors such as inflation, risk of default obligation, political risk and stability can erode a country's tax base by means of capital flight. Indonesia managed to control these aspects during 2009–2015. The reason for ending the period of study in 2015 is simply because that is the latest year for which data are available from the DGT when this study is conducted.

Table 4.2 shows how the final sample of firm-year observations is derived.

Table 4.2

Derivation of the Final Sample of Firm-year Observations—Study 1

	TI	AP
Number of firm-years between 2009–2015 for which the dependent variable can be calculated	11,281	11,281
Less:		
Number of firm-years with *TI* or *AP* less than zero	3,351	4,514
Number of firm-years with *TI/S* or *AP/S* greater than one	1,957	1,393
Number of firm-years with missing industry group	24	18
Final sample of firm-year observations	5,949	5,356

The distribution of countries in which the parents of FOICs are located can be found in Appendix 3. As part of the sample selection procedure, this study eliminates FOICs that reported losses in their tax return (i.e., if TI divided by total sales, *TI/S*, is less than zero or if AP divided by total sales, *AP/S*, is less than zero). The main reason is that this study aims to identify profit shifting activities by FOICs, and FOICs will not have profits to shift if they do not make profits. Although in some cases the losses reported in tax returns may be the result of profit shifting activities, it is impossible to distinguish artificial losses resulting from BEPS activities from genuine losses. Therefore, all observations with losses are excluded from the sample.[64] Observations with TI or AP greater than sales (*TI/S* > 1 or *AP/S* > 1) are excluded because it is likely that either the sales figures are erroneous, or the profit includes a gain from the sale of a business or a

[64] For different reasons, some previous studies exclude observations with losses from their final samples. For example, Mills and Newberry (2004, p. 96) exclude MNEs with losses from their sample because the losses 'drive the average effective tax rate above 100 percent'.

major capital asset and the proceeds are not included in the sales revenue (including these extreme values would distort the regression results).

There are 659 and 1,022 observations in the final sample of TI and AP, respectively, that use US dollar (USD) instead of Indonesian Rupiah (IDR) as the reporting currency in their Indonesian tax returns. For consistency, all values with USD are converted to IDR using the exchange rates for tax purposes set by the Indonesian finance minister's decrees. Appendix 4 shows the exchange rates and the corresponding finance minister's decree numbers.

4.3.2 Measurement of Variables and Regression Model

The key dependent variable is TI, which is reported by FOICs in their Indonesian tax returns, deflated by sales (*TI/S*). TI is a key feature of tax returns that may not be found in financial statements. Income tax liability is calculated based on TI (i.e., income tax liability = TI × CIT rate). Therefore, if companies want to avoid income tax, they need to supress the TI reported on their tax returns. In most cases, TI reported by FOICs in their tax returns is different from the AP they report in their income statements because of some adjustments required by ITL. In short, TI is AP plus positive adjustments minus negative adjustments.[65] Company taxpayers report both AP and TI in their tax returns. Therefore, in addition to the key dependent variable *TI/S*, this thesis also uses AP scaled by sales (*AP/S*) as a dependent variable to find further evidence regarding whether FOICs successfully shift profits out of Indonesia. Nonetheless, this thesis does not discuss *AP/S* model in detail as *TI/S* model to avoid duplication.

The independent variable is the tax rate difference (*TRdiff*) measured by the difference between the STR of the parent's country of an FOIC and the Indonesia STR.

[65] See Appendix 1, 1771—Corporate Annual Income Tax Return: Attachment I for the details of positive and negative adjustments according to ITL.

Focusing on the tax rate difference between the parent's country and Indonesia can address potential confounding effects of STR (Dharmapala & Riedel, 2013).[66] *TRdiff* is expected to capture the incentives for FOICs to shift profits out of Indonesia by means of several profit shifting channels, such as intra-group transfer pricing for goods and services, including licence fees for the use of intangible assets and management fees, and debt financing.[67] The STRs for different parent countries over the study period can be found in Appendix 5. Consistent with hypothesis H1 that FOICs shift profits to lower tax countries, the sign of the regression coefficient for *TRdiff* is predicted to be positive.

Four control variables are used in this study. First, total sales are used to proxy for the size of firms. Total sales are in a natural logarithmic form (ln*Sales*) to transform a most likely skewed variable—total sales—into a more approximately normal variable. An advantage of using sales rather than assets as a proxy for the size of firms is that sales might capture the size of firms better than assets when there are companies that have large sales but only a small quantity of assets. Given the inconsistent findings in the literature, following prior studies (e.g. Mills & Newberry, 2004), no sign is predicted for ln*Sales.*

Second, *Age* is used as a proxy for maturity of firms and is the number of years between an FOIC registering with a tax office and lodging its tax return. Prior studies (e.g. Mills & Newberry, 2004; Grubert, 1998) provide evidence of the so-called maturation effect, which theorises that mature companies report higher levels of income. Accordingly, the relation between profit (*TI/S* or *AP/S*) and *Age* is predicted to be positive.

[66] Dharmapala and Riedel (2013, pp. 95-96) explain that: 'While statutory corporate tax rate changes are likely to be exogenous with respect to firms' behaviour, interpreting the estimated effect of corporate tax rate changes may not be straightforward for a number of reasons. Corporate tax rate changes impose a common shock to all firms in a country, and so may potentially be correlated with unobserved variables that also determine the profitability, transfer prices, and financing choices of MNEs. In addition, changes in the corporate tax rate may not only affect the MNE's incentive to engage in profit shifting, but may also affect other decision margins. A rise in the corporate tax rate may, for example, dampen incentives to exert effort and consequently lower corporate profitability'.

[67] Chapter 6 of this thesis focuses on the channels used by FOICs to shift profits out of Indonesia.

Third, *Industry* is a series of indicator variables to control for industry effects. This study uses the two-digit industry classifications for Indonesian taxpayers set by the DGT.

Finally, this study controls for *Year* to provide a control for annual fluctuations in profit that may not be explained by other explanatory variables. This includes macroeconomic conditions that may differ from year to year and that are likely to affect the magnitude of profits reported by FOICs in tax returns.

Two ordinary least squares (OLS) regression models, represented by Equations (4.1) and (4.2), are used to examine the effect of the tax rate differences on the TI and AP reported by FOICs:

$$TI/S_{it} = \beta_0 + \beta_1 TRdiff_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-64} Industry_{it} + \beta_{65-70} Year_t + \varepsilon_{it} \quad (4.1)$$

$$AP/S_{it} = \beta_0 + \beta_1 TRdiff_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-64} Industry_{it} + \beta_{65-70} Year_t + \varepsilon_{it} \quad (4.2)$$

where:

TI/S_{it} is the TI divided by total sales for firm *i* in year *t*;

AP/S_{it} is the AP divided by total sales for firm *i* in year *t*;

$TRdiff_{it}$ is the tax rate difference (the STR of the residence country of the parent minus the STR of Indonesia) for firm *i* in year *t*;

$\ln Sales_{it}$ is the natural logarithm of total sales for firm *i* in year *t*;

Age_{it} is the number of years since registered with a tax office for firm *i* in year *t*;

$Industry_{it}$ is a set of 61 dummy variables representing industry grouping of firm *i* in year *t*;

$Year_t$ is a set of six dummy variables that is expected to account for annual fluctuations in *TI/S* or *AP/S* (the dependent variable) that were not caused by *TRdiff* (the independent variable) or any of the control variables;

ε_{it} is the error term.

4.4 Empirical Results

4.4.1 Summary Statistics

Descriptive statistics on the key variables are provided in Table 4.3. Panel A of Table 4.3 shows that the mean of *TI/S* is 0.085, indicating that, on average, FOICs in the sample reported TI of 8.5% of their sales. The mean of *TRdiff* is 0.013, indicating that, on average, the tax rate in the parent's country is 1.3 percentage points higher than that of Indonesia. The distribution of the final sample by industry groups for the *TI/S* regression model can be found in Appendix 6.

Panel B of Table 4.3 shows that *AP/S* has a mean of 0.109, indicating that, on average, FOICs in the sample reported AP of nearly 11% of their sales, which is 2.4 percentage points higher than *TI/S*. Similar to the *TI/S* regression model, the mean of *TRdiff* is 0.015, indicating that, on average, the tax rate in the parent's country is 1.5 percentage points higher than that of Indonesia.

Table 4.3

Descriptive Statistics—Study 1

A. TI

Variable	No.	Mean	Median	Standard Deviation	Minimum	Maximum
TI/S	5,949	0.085	0.050	0.107	0	1
TRdiff	5,949	0.013	0	0.090	−0.28	0.3
ln*Sales*	5,949	24.431	24.732	2.571	13.479	31.9
Age	5,949	10.275	8	8.645	0	40

Notes: *TI/S* is taxable income (before loss carried forward) deflated by sales reported in Indonesian tax returns (TI and sales are obtained from Indonesian tax return 1771 Sections A1 and I1a, respectively). *TRdiff* is the tax rate difference between the FOIC parent country's STR and Indonesia's STR (e.g., for Company A, whose parent's country is located in Singapore, the *TRdiff* in 2009 is 18% − 28% = −10%). See Appendix 5 for the STRs of countries over the study period. ln*Sales* is the natural log of sales. *Age* measures the maturity of the FOIC. It is obtained by subtracting the year in which the FOIC was incorporated and registered with a tax office in Indonesia from the year of observation.

B. AP

Variable	No.	Mean	Median	Standard Deviation	Minimum	Maximum
AP/S	5,356	0.109	0.067	0.134	0	1
TRdiff	5,356	0.015	0	0.092	−0.28	0.3
ln*Sales*	5,356	24.806	25.071	2.365	14.576	31.9
Age	5,356	11.036	9	8.752	0	40

Notes: *AP/S* is the pre-tax accounting profit reported by FOICs in their Indonesian tax returns (total of commercial net income in the Indonesian tax return 1771-I Section 3 plus Income tax in the Indonesian tax return 1771-I Section 5f) deflated by sales. See Panel A for definitions of other variables.

Overall, the summary statistics show that, on average, FOICs report higher AP than TI in their Indonesian tax returns. This seems to be plausible given (a) book-tax differences and (b) that the average parent's tax rate in the *AP/S* regression model is

slightly higher than that in the *TI/S* regression model. The distribution of the final sample by industry groups for the *AP/S* regression model is similar to that for the *TI/S* regression model in Appendix 6, so it is not separately tabulated.

Table 4.4 presents the Pearson correlation between variables.

Table 4.4

Pearson Correlation Matrix—Study 1

A. TI

	TI/S	***TRdiff***	**ln*Sales***	***Age***
TI/S	1			
TRdiff	0.0955 ***	1		
ln*Sales*	0.1032 ***	0.1248 ***	1	
Age	0.1207 ***	0.1432 ***	0.5854 ***	1

B. AP

	AP/S	***TRdiff***	**ln*Sales***	***Age***
AP/S	1			
TRdiff	0.0443 ***	1		
ln*Sales*	−0.1151 ***	0.1141 ***	1	
Age	0.0025	0.1425 ***	0.5640 ***	1

Note: *, ** and *** indicate significance at the 1%, 5% and 10% levels in a two-tailed test, respectively.

As shown in Panel A, the tax rate difference between the FOIC's parent's country and Indonesia (*TRdiff*) is positively correlated with *TI/S* reported by FOICs in their tax returns and is significant at the 1% level. The Pearson correlation also indicates a significant positive association between FOICs' maturity (*Age*) and *TI/S*, consistent with the prediction.

Panel B shows that *TRdiff* is positively correlated with *AP/S* reported by FOICs in their Indonesian tax returns and is significant at the 1% level. However, unlike with TI, *lnSales* is negatively correlated with AP. In addition, *Age* is not significantly correlated with AP.

To examine whether there is a harmful correlation between independent variables, this study conducts a test of collinearity. Perfect multicollinearity occurs when one of the regressors is a perfect linear function of another regressor. This makes it impossible to compute the OLS estimator. In an OLS regression analysis, the level of multicollinearity can be quantified by the variance inflation factor (VIF). Basically, it is an index that shows how collinearity increases the variance of an estimated regression coefficient. The general rule is that a VIF of greater than 10 indicates that the variable is a linear combination of other independent variables. As shown in Appendix 7, the VIFs are in the range of 1.17–5.66 and 1.18–4.79 for TI/S and AP/S regression models, respectively, which is lower than the general tolerance value of 10, indicating that both regression models are not adversely affected by multicollinearity.

4.4.2 Regression Results

Regression analyses in this study are analyses of pooled cross-sectional data. Panel data analyses such as fixed-effects models are not used for the following reasons. First, the data in this study are unbalanced panel data, as reported in Appendix 9,[68] and the missing years in the dataset result from losses reported by companies, so the missing years are more systemic than random. Second, and more importantly, the statutory tax rates of most parents' countries did not vary over the study period (see Appendix 5). This means that the within-firm variation in *TRdiff*, which is the key explanatory variable, is mostly

[68] Appendix 9 reports only the unbalanced panel data for the *TI/S* regression model because the unbalanced panel data for the *AP/S* regression shows a similar pattern.

zero. As the fixed-effects estimator requires a within-firm variation of the independent variable, which is absent in this study, fixed-effects models are not appropriate.

Unlike cross-sectional data,[69] regression models that use pooled cross-sectional data may violate the independent error assumption of the OLS regression. To adjust for the potential correlation of errors within clusters of data (firms), this study runs regressions by clustering the errors by firm for both *TI/S* and *AP/S* models.[70] Table 4.5 presents the results of the regressions with cluster-robust standard errors.

The tax rate difference between the parent's country and Indonesia is found to be positively associated with the level of *TI/S* and *AP/S* reported by FOICs. The findings support hypotheses H1 and H2. The estimates of the coefficient for *TRdiff* are 0.099 and 0.087 for the TI and AP models, respectively, and both are significant at the 1% level. Thus, a parent's STR that is one percentage point lower than the Indonesian tax rate is associated with a nearly 0.1 (0.09) percentage point decrease in the TI (AP) to sales ratio reported by FOICs in their Indonesian tax returns. These results provide evidence consistent with FOICs shifting profit out of Indonesia to low-tax countries.

The coefficient of ln*Sales* is insignificant in the TI model, suggesting that firm size does not affect the magnitude of TI reported by the company. The coefficient of ln*Sales* is negatively significant at the 1% level in the AP model, suggesting that the larger the firm size, the lower the AP as a ratio of sales that the company reports.

The coefficients of *Age* are positively significant at the 5% level in both models, suggesting that the more mature the company, the higher *TI/S* and *AP/S* they report.

[69] Cross-sectional data is defined as data consisting of different entities in a single period.
[70] This thesis uses STATA14 as the statistical data analysis software. In STATA, the standard error estimates are robust to disturbance being heteroscedastic and autocorrelated when the option 'cluster ()' is used (Hoechle, 2007).

Table 4.5

Regression Results—Effect of Tax Rate Differences on Profit Reported by FOICs in Indonesian Tax Return—Using Clustered Standard Errors

TI/S_{it} or $AP/S_{it} = \beta_0 + \beta_1 TRdiff_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-64} Industry_{it} + \beta_{65-70} Year_t + \varepsilon_{it}$

	Expected sign	Dependent variable: *TI/S*	Dependent variable: *AP/S*
TRdiff	+	0.099 ***	0.087 ***
		(3.57)	(2.67)
ln*Sales*	?	0.002	−0.010 ***
		(1.39)	(−3.50)
Age	+	0.001 **	0.001 **
		(2.23)	(2.36)
Industry#	?		
Year			
2010	?	−0.009 **	−0.008 *
		(−2.24)	(−1.81)
2011	?	−0.013 ***	−0.013 ***
		(−3.33)	(−2.81)
2012	?	−0.011 **	−0.013 **
		(−2.53)	(−2.48)
2013	?	−0.016 ***	−0.000
		(−3.47)	(−0.07)
2014	?	−0.033 ***	0.005
		(−7.23)	(0.82)
2015	?	−0.043 ***	−0.003
		(−9.25)	(−0.40)
Constant		0.062	0.350
		(1.93)	(4.74)
R^2		0.153	0.156
n		5,949	5,356

Notes: *t*-statistics appear in parentheses. *, ** and *** indicate significance at the 1%, 5% and 10% levels in a two-tailed test, respectively. See Table 4.3 for variables definitions.

Regression result for *Industry* for the *TI/S* regression is presented in Appendix 8.

The regression results for the industry indicators can be found in Appendix 8. There are 62 industry groups in the final sample. Industry group 10 (food manufacturing industry) is the base industry. Of the 61 industry groups represented by indicators or

dummy variables, there are 17 and 13 industry groups with significantly negative and positive coefficients, respectively. The coefficients of the remaining 31 industry groups are insignificantly different from zero.

In the regression models, 2009 is used as the base year to compare with other years. The coefficients for *Year* from 2010 to 2015 are negative and significant at the 1% and 5% levels, suggesting that FOICs reported a lower *TI/S* ratio during 2010–2015 than what they reported in 2009, and the magnitude of the gaps between 2009 and later years shows an increasing trend. The coefficients for *Year* in the AP model are mostly insignificant and do not show similar patterns.

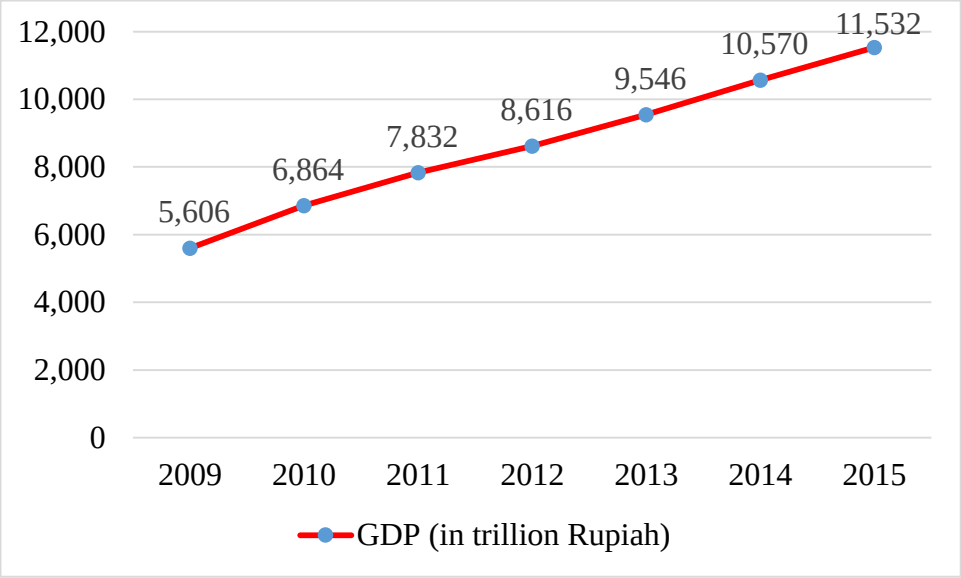
As mentioned in Section 4.3.2, *Year* is expected to control for annual fluctuations in profit that may not be explained by any of the explanatory variables other than *Year*, including macroeconomic conditions that may differ from year to year. Figure 4.1 shows that Indonesian GDP was consistently increasing at a double-digit rate during the period 2009–2015. The increasing trend of GDP cannot explain the decreasing trend of TI reported by FOICs in the same period.

Further, as explained in Chapter 2, there have been no significant changes in the Indonesian tax system since the DGT completed the tax administration reform in 2008. Therefore, changes in the tax system also cannot explain the decreasing trend in the magnitude of TI reported by FOICs during 2010–2015 compared with the base year of 2009.

As shown in Figure 2.4 (Chapter 2, p.40), the contribution of CIT revenue to the total tax revenue collected by DGT decreased from 22.09% in 2009 to 15.1% in 2014. The decreasing trend of CIT revenue contribution is consistent with FOICs reported lower and lower *TI/S* in 2010–2015 compared with 2009, and may indicate a general rise in tax avoidance and/or tax evasion in the Indonesian corporate sector during this period.

Figure 4.1

Indonesian GDP at Current Prices, 2009–2015



Source: Key Statistics, 2007–2016 (Badan Pusat Statistik, 2017b)

As foreign MNEs can legally avoid Indonesian CIT by shifting profits, it is less likely that they engage in illegal tax evasion activities. A rise in tax avoidance by FOICs as indicated by the coefficients of the year dummies means that foreign MNEs might expand their profit shifting activities in Indonesia during the study period. As a member of the G20 countries, Indonesia took part in the OECD/G20 BEPS project. However, up to 2015, the Indonesian government did not take sufficient effective action to fight BEPS, so FOICs might increase their profit shifting activities as a result.

4.4.3 Further Analyses

The descriptive statistics of the main variables presented in Table 4.3 indicate that the distributions of the dependent variables (*TI/S* or *AP/S*) are likely skewed. To address this issue, the dependent variables are log-transformed. Table 4.6 shows the descriptive statistics of the main variables after the log-transformation procedure.

Table 4.6

Descriptive Statistics After Log-transforming the Dependent Variable

A. TI

Variable	No.	Mean	Median	Standard Deviation	Minimum	Maximum
ln*TI/S*	5,007	−2.9	−2.707	1.37	−21.154	0
TRdiff	5,007	0.015	0	0.093	−0.28	0.3
ln*Sales*	5,007	24.942	25.158	2.25	14.576	31.9
Age	5,007	11.363	9	8.602	0	40

B. AP

Variable	No.	Mean	Median	Standard Deviation	Minimum	Maximum
ln*AP/S*	5,347	−2.851	−2.696	1.276	−11.004	0
TRdiff	5, 347	0.015	0	0.092	−0.28	0.3
ln*Sales*	5, 347	24.814	25.077	2.358	14.576	31.9
Age	5, 347	11.05	9	8.753	0	40

Note: ln*TI/S* is the natural log of *TI/S*. ln*AP/S* is the natural log of *AP/S*. See Table 4.3 for definitions of other variables.

The difference between the means and medians is now much smaller than before, indicating that the dependent variables are more normally distributed. The number of final samples is further reduced because of firms that have zero dependent variables (942 and nine for *TI/S* and *AP/S*, respectively). The results after log-transforming the dependent variables (and clustering the errors by firm) are shown in Table 4.7.

Table 4.7

Regression Results—Effect of Tax Rate Differences on Profit Reported by FOICs in Indonesian Tax Returns—Using Clustered Standard Errors and Log-transforming the Dependent Variable

$\ln TI/S_{it}$ or $\ln AP/S_{it}$ = $\beta_0 + \beta_1 TRdiff_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-64} Industry_{it} + \beta_{65-70} Year_t + \varepsilon_{it}$

	Expected sign	Dependent variable: Natural log of TI scaled by sales	Dependent variable: Natural log of AP scaled by sales
TRdiff	+	1.682 ***	1.268 ***
		(4.95)	(6.69)
ln*Sales*	?	−0.048 **	−0.071 ***
		(−2.53)	(−7.62)
Age	+	0.011 **	0.016 ***
		(2.44)	(6.56)
Industry #	?		
Year			
2010	?	−0.088 **	−0.100
		(−2.02)	(−1.51)
2011	?	−0.155 ***	−0.167 **
		(−3.22)	(−2.56)
2012	?	−0.125 ***	−0.173 ***
		(−2.60)	(−2.71)
2013	?	−0.222 ***	−0.116 *
		(−4.06)	(−1.84)
2014	?	−0.077	−0.025
		(−1.37)	(−0.40)
2015	?	−0.234 **	−0.100
		(−2.54)	(−1.57)
Constant		−1.548	−1.229
		(−3.06)	(−4.83)
R^2		0.136	0.163
n		5,007	5,347

Notes: *t*-statistics appear in parentheses. *, ** and *** indicate significance at the 1%, 5% and 10% levels in a two-tailed test, respectively. See Table 4.3 for variables definitions.
Regression results for *Industry* are not presented because they have a similar pattern to the results reported in Appendix 8.

Consistent with hypotheses H1 and H2, *TRdiff* is found to be significantly positively associated with the level of *TI/S* and *AP/S*. The coefficients indicate that, on average, one

percentage point lower tax rate of the parent's country relative to Indonesia is associated with a 1.68% (1.27%) decrease in the TI (AP) scaled by sales reported by FOICs. This result is consistent with the findings reported in Table 4.5.

The coefficients of ln*sales* are now negative in both models and significant at the 5% and 1% levels for TI and AP models, respectively. The coefficients of *Age* remain positive and are significant at the 5% level in the TI model but are now significant at the 1% level for the AP model.

The coefficients for the *Year* dummy variables in the TI model are similar to those before log-transforming *TI/S*, except in 2014. For 2014, the coefficient of *Year* is negative but insignificant. The results suggest that FOICs report a lower *TI/S* ratio for most later years compared with 2009 (the base year). Similarly to the results reported in Table 4.5, the magnitudes of the gaps between 2009 and later years show an increasing trend.

Another test of collinearity is conducted to detect whether, after log-transforming the dependent variables and clustering the standard errors, the regression models contain any significant collinearity among the regressors. The results of the test (as shown in Appendix 7) indicate no harmful collinearity.

4.5 Chapter Summary

Developing countries heavily rely on revenue from CIT. Therefore, developing countries will be hit more severely than developed countries if MNEs shift profits out of the country. Prior studies and international organisations suggest that developing countries also suffer from profit shifting strategies by MNEs. However, these studies base their suggestions on observations rather than analysing data that are directly collected from the developing countries. In short, few empirical studies have investigated the

presence of cross-border profit shifting in developing countries using data collected from developing countries—particularly tax return data.

This study fills the gap in the literature by providing empirical evidence of cross-border profit shifting from the perspective of a developing country. It uses confidential Indonesian tax return data of FOICs during 2009–2015 to investigate the relation between tax rate difference (i.e., FOIC's parent country's STR – Indonesian STR) and *TI/S* (*AP/S*) reported by Indonesian affiliates of foreign MNEs. If the relation is found to be positive, that is, a negative tax rate difference (i.e., when the corporate tax rate of the parent's country is lower than the Indonesian corporate tax rate) is associated with lower TI and AP reported by FOICs, then the evidence is consistent with cross-border profit shifting by MNEs out of Indonesia.

After controlling for the size of firms, the age of firms, industry groups and years, the regression results show that the relation between profit and tax rate difference is strong and positive, providing evidence consistent with BEPS occurring in Indonesia. FOICs are likely to shift profits out of Indonesia when the tax rates in the parent's country are lower than the tax rate in Indonesia.

The regression results for the *Year* dummy variables are consistent with the decreasing trend of CIT revenue contribution to total tax revenue and suggest an increase in the level of tax avoidance and/or tax evasion in the corporate sector in general. FOICs might have increased profit shifting from Indonesia because of the lack of regulations and resources to tackle BEPS in Indonesia even though the BEPS program was introduced in 2013 by the OECD and the G20. Log-transforming the independent variables prove that the results of the OLS estimates are robust.

Overall, the results of Study 1 of this thesis indicate the presence of cross-border profit shifting in Indonesia. Arguably, this is the first study that focuses on profit shifting

from a developing country using tax return data. Therefore, further studies are needed to test the robustness of the evidence provided in this chapter. Chapter 5 further examines the existence of profit shifting in Indonesia by adopting the HRA, which is a widely accepted approach for detecting the occurrence of cross-border profit shifting.

CHAPTER 5:
DETECTING PROFIT SHIFTING IN INDONESIA USING THE HINES AND RICE APPROACH

5.1 Introduction

The incidence of profit shifting by MNEs in developed countries has been confirmed by many empirical studies over several decades. In contrast, similar studies that focus on developing countries have only emerged in the past few years. Fuest and Riedel (2012) argue that the reason why knowledge on profit shifting in developing countries is limited is because the data and method used to measure profit shifting are not reliable.

This chapter extends Chapter 4 and investigates whether FOICs shift profits out of Indonesia using the HRA, which is an approach introduced by Hines and Rice (1994) with some modifications. Hines and Rice (1994) pioneer study on profit shifting by MNEs 'established a conceptual framework that continues to be highly influential' (Dharmapala, 2014a, p. 424).[71] Dowd, Landefeld, and Moore (2017) suggest that the HRA has become a standard in the literature.

As in Chapter 4, this chapter measures profit in two ways: (1) TI based on tax law and (2) AP based on financial reporting rules. However, unlike Chapter 4, this chapter reports AP first because the study in this chapter adopts Hines and Rice (1994), which uses AP as the dependent variable. However, both AP and TI will be discussed equally given that TI is the key feature in this thesis because it directly reflects the loss of tax revenue (CIT is based on TI).

[71] As reviewed in Chapter 3, Grubert and Mutti (1991) also published a widely cited study.

Despite the fact that the results in studies that adopt the HRA vary, they are consistent with the hypothesis that there is a negative relation between the level of CIT rates in the host countries and the magnitude of profits reported by MNEs in different host countries. However, few studies have adopted the HRA to measure the extent to which the tax rate of the parent's country of a foreign-owned company operating in a developing country influences the profits reported by the foreign-owned company. This study is one of the early studies that uses the HRA to examine the existence of profit shifting by MNEs in a developing country using tax return data.

The rest of this chapter is organised as follows. The next section briefly describes the HRA, reviews some prior studies that use the HRA and develops the hypothesis to be tested in this study. Section 5.3 describes the research design of the study. Section 5.4 reports the empirical results. Section 5.5 summarises the chapter.

5.2 Literature Review and Hypothesis Development

5.2.1 Hines and Rice's Approach to Detecting Cross-border Profit Shifting

According to the basic tax competition model, governments commit to a tax system and capital owners choose where to invest their capital (Wilson, 1999). However, once location decisions are made, firms or capital become partially immobile. Some firms may leave a region after the initial tax break has expired and choose to seek tax breaks in other regions (Wilson, 1999). From an international tax avoidance perspective, moving to other regions may not be necessary if MNEs have an opportunity to reallocate TI from countries with high tax rates to countries with low tax rates (Hines Jr, 1999). This international tax avoidance strategy is known as profit shifting.

In their seminal paper, Hines and Rice (1994) develop an economic approach to investigate the effect of tax rate variation on profits reported by MNEs. As Dharmapala

(2014a) explains, the basic premise of the HRA is that pre-tax income consists of two elements: (1) 'true' income (i.e., income produced using capital and labour inputs); and (2) 'shifted' income (i.e., income shifted across borders because of a tax incentive in the form of a tax rate difference between the parent and the affiliate). Equation (5.1) represents the original HRA:

$$\log\pi_i = \beta_0 + \beta_1\tau_i + \beta_2 \log K_i + \beta_3 \log L_i + \beta_4 \log A + \varepsilon_i \quad (5.1)$$

where:

$\log\pi_i$ the dependent variable, is the logarithm of the pre-tax income of all US MNEs' foreign affiliates in host country *i* calculated based on confidential US Department of Commerce survey data;

τ_i the independent variable, is the average tax rate in host country *i*; the HRA bases the average tax rate on the effective tax rate or the statutory tax rate whichever is lower. The effective tax rate is CIT paid by all US affiliates in the local country *i* divided by their total net income before tax;

K_i is the capital input in host country *i*;

L_i is the labour input in host country *i*;

A is the level of productivity in host country *i* (proxied by income per capita);

ε_i is the error term.

Using country-level aggregate data on US-owned MNE affiliates operating in 59 countries in 1982, Hines and Rice (1994) use Equation (5.1) to estimate the effect of tax rate variation in the host countries on the reported profits by MNEs in those countries. In calculating K_i, the HRA includes real/economic capital and excludes financial capital. For π_i, the HRA removes financial earnings (i.e., interest received and interest paid) from reported profits because available financial data are not as reliable or as comprehensive as the data used to estimate K_i (Hines & Rice, 1994, p. 161). Hines and Rice (1994) find

a negative effect of tax rates of host countries on measures of the profitability of US MNEs' affiliates. The effect is considerably large—that is, a tax rate in a host country that is one percentage point higher is associated with a 2.83% reduction in the before-tax profitability reported in that host country.

The HRA has been widely adopted by numerous subsequent studies that examine the existence of profit shifting activities by MNEs. Despite the results showing some deviations from the original study, the subsequent studies prove that the HRA is a vigorous method for investigating how tax rate disparities can influence MNEs' behaviour in reporting profits in different countries. Three studies that adopt the HRA are reviewed below.

Swenson (2001) studies how import tariff variations across products give other countries' MNEs operating in the US an incentive to shift profits by means of transfer pricing (i.e., by deliberately underpricing or overpricing affiliated firm transactions) over the period 1981–1988. The source countries of the investments are Canada, France, Germany, Japan and the UK. Swenson (2001) adopts some existing approaches—one of which is the HRA—to build a model of transfer pricing incentives with some modifications. While she finds significant evidence that the tariff variation creates incentives for underpricing or overpricing affiliated firm transactions, she concludes that the manipulation of product transfer prices is not the main channel used to shift profits.

Using micro-level data relating to the operations of Europe-based MNEs in many European countries, Huizinga and Laeven (2008) adopt the HRA to investigate the opportunities and incentives created by cross-border profit shifting. They find that the effect of a tax rate variation of one percentage point higher on pre-tax profit is 1.08%, which is much lower than the 2.83% obtained by Hines and Rice (1994). They argue that the much higher percentage found by Hines and Rice (1994) is because they included

THCs outside Europe that presumably do not have effective cross-border profit shifting regulations.

A recent study by Dowd, et al. (2017) not only adopts the HRA, but also states that the semi-log specification introduced by Hines and Rice (1994) has become a standard in the literature. Using a panel dataset of US tax returns, Dowd et al. (2017) scrutinise the profit shifting behaviour of US MNEs over the period 2002–2012 and suggest the consideration of a nonlinear relation between the tax rate and reported profits.

5.2.2 Empirical Evidence of Profit Shifting in Developing Countries and Hypothesis

In contrast to the considerable empirical evidence available from developed countries, there is limited empirical evidence from developing countries regarding the extent to which multinational tax evasion and tax avoidance cause tax revenue losses (Fuest & Riedel, 2009; Crivelli, et al., 2015). The limited empirical evidence of profit shifting strategies used by MNEs in developing countries is extensively discussed by Fuest and Riedel (2012), who review the literature on income shifting in developing countries and conclude that while developing countries suffer from profit shifting strategies, there is inadequate knowledge regarding the extent of the revenue losses. The outcomes of most of the existing studies are difficult to interpret, mainly because of problems regarding the reliability of the data and method used to measure income shifting (Fuest & Riedel, 2012). This argument is reasonable given that the extant literature on developing countries mostly consists of unrefereed reports that have not been exposed to critical peer review (e.g. Christian Aid, 2009; Oxfam, 2000; Baker, 2005).[72] In addition,

[72] For example, Cobham (2005) estimates that developing countries lose USD50 billion per year because the corporate sector shifts profits to lower-tax jurisdictions. However, as Fuest and Riedel (2009) suggest, this claim is not based on rigorous empirical analysis. Cobham (2005) based his estimation on an Oxfam (2000) report that contains several issues. A major drawback is that its estimation is based on an average

poor data availability—both in terms of quality and quantity—has led to limited empirical research into profit shifting in developing countries (OECD, 2015a).

In the past few years, the number of empirical studies that focus on finding evidence of profit shifting by MNEs in developing countries has increased. However, none of these studies have adopted the HRA, despite the fact that the HRA has been identified as a primary approach to the empirical estimation of cross-border profit shifting (Dharmapala, 2014a).

A study that includes developing countries in its analysis is that of Crivelli, et al. (2015), who use panel data for 173 developed and developing countries to determine whether profit shifting is an important issue for developing countries. The results of the study suggest that profit shifting disadvantages developing countries at least as much as it disadvantages developed countries. However, the authors acknowledge that the conclusion may not be robust to some extent because there is scarce firm-level data for developing countries. This suggests that recent research that focuses on developing countries still encounters data-related issues.

Johannesen, Tørsløv, and Wier (2016) use a global dataset of 102 countries and find that less developed economies are more sensitive to profit shifting by MNEs than more developed economies. A brief summary is presented below of two recent studies that attempt to find evidence of profit shifting by MNEs in a particular developing country.

Janský and Prats (2015) examine whether more than 1,500 MNEs operating in India[73] shifted profits in 2010 and find that MNEs associated with THCs reported lower profits and paid less Indian income taxes than MNEs with no such association. The

corporate tax rate of 30%, while in fact many developing countries offer low or zero tax rates as incentives for corporate investment (Fuest & Riedel, 2009). As Oxfam's (2000) estimation ignores the incentives, its claim on the magnitude of the tax losses due to profit shifting in developing countries is likely to be overestimated (Fuest & Riedel, 2009).

[73] According to the WB's economy classifications (as explained in Section 3.1.1), similar to Indonesia, India and Malaysia have consistently been categorised as developing countries.

authors conclude that MNEs have incentives to shift profits to THCs because of lower tax rates and the secrecy provisions offered by those countries.

Using financial data for 100 Malaysian-listed corporations for 2009–2011, Salihu, et al. (2015) examine the relationships between foreign investors' interests and tax avoidance by means of profit shifting in Malaysia. Using a generalised method of moment (GMM) estimator, they demonstrate that the relationship between foreign investors' interests and tax avoidance is significantly positive among large Malaysian corporations.

Despite differences in the quantity and quality of the evidence, the four studies discussed above demonstrate that MNE affiliates operating in developing countries that have a parent country with a lower tax rate tend to shift profits. This suggests that MNEs in developing countries shift profits similarly to developed countries. Applying the findings of the prior studies to the case of Indonesia, it is likely that FOICs with parents located in countries with higher tax rates will report higher profits in their Indonesian tax returns than FOICs that have parents located in countries with lower tax rates. This leads to the following hypothesis stated in the alternative form:

H1: The parent's tax rate of an FOIC is positively associated with the FOICs' reported AP in their Indonesian tax returns after controlling for capital and labour inputs.

As mentioned earlier, profit shifting is a book-tax conforming tax avoidance strategy: profit shifting lowers AP as well as TI. Therefore, if FOICs report lower AP, they should also report lower TI in their Indonesian tax returns. As in Study 1, profit in this study is represented by both TI and AP. This leads to another hypothesis stated in the alternative form:

H2: The parent's tax rate of an FOIC is positively associated with the FOICs' reported TI in their Indonesian tax returns after controlling for capital and labour inputs.

5.3 Research Design

5.3.1 Sample Selection and Period of Study

This study uses a sample that includes all foreign-owned Indonesian companies with tax return data supplied by the DGT under a data nondisclosure agreement. For privacy protection, firms are anonymised. The study period covers the seven years from 2009 to 2015. The final sample consists of 3,361 (3,188) observations for the regression model using AP (TI) as the dependent variable—most of which (about 73% for both models) are registered in tax offices located on the island of Java. Table 5.1 presents the final sample derivation for both dependent variables.

As in Study 1, Study 2 excludes FOICs that reported a loss in their tax returns. Although losses reported in tax returns may have resulted from profit shifting activities, it is impossible to distinguish a genuine business loss from a loss caused by profit shifting. Moreover, it is a common practice in the literature to exclude loss-making firms from the sample (Dharmapala, 2014a). There is a significant number of missing data (or zero) for the calculations of the natural logarithm of capital and labour and, to a lesser extent, for the calculations of the natural logarithm of the two profit measurements.

The reason for starting the study from 2009 is because the DGT's data recording and administration have been more reliable since 2009, after the completion of a thorough tax administration reform in Indonesia in 2008 (DGT, 2009). The reason for ending the period of study in 2015 is simply because that is the latest year for which data are available from the DGT when this study is conducted. The distribution of countries in which the parents of FOICs are located can be found in Appendix 10.

Table 5.1

Derivation of the Final Sample of Firm-Year Observations—Study 2

	AP	TI
Number of firm-years between 2009–2015 for which the dependent variable is available	11,281	11,281
Less:		
Number of firm-years that report loss (AP < 0 or TI < 0)	4,514	3,351
Number of firm-years of which natural log of capital cannot be calculated (i.e., zero or missing)	2,193	2,596
Number of firm-years of which natural log of labour cannot be calculated	1,175	1,285
Number of firm-years of which natural log of AP or TI cannot be calculated	9	861
Final sample of firm-year observations	3,390	3,188

5.3.2 Measurement of Variables and Regression Model

This study investigates whether FOICs shift profits out of Indonesia in response to variations in their parents' tax rates (see Appendix 5 for STRs of the countries in which the parents of FOICs are located over the study period). This study examines whether MNEs from various countries operating in Indonesia shift profits out of Indonesia to low-tax jurisdictions. It is different from the study of Hines and Rice (1994) which examines whether US MNEs operating in various host countries shift profits to low-tax jurisdictions. The HRA is suitable for this study for the following reasons.[74] First, the

[74] In fact, the HRA is likely to be more suitable for examining profit shifting by MNEs based in different countries that have affiliates operating in a single country because a single-country study does not need to consider the real price of capital and labour, which may differ between countries. This is one concern of the HRA (Hines & Rice, 1994).

model of Hines and Rice (1994) is based on the Cobb–Douglas production function, which represents the relationship between output (in terms of income or profit) and input (mainly in terms of capital and labour). Therefore, the HRA is suitable for both firm- and country-level studies. Second, the basic premise of the HRA is that the observed profit consists of two components: the 'true' profit and the 'shifted' profit. This premise is applicable to all MNE affiliates, either in many countries or in a single country.

However, this study modifies the original HRA in Equation (5.1) in several ways. The first modification is related to the dependent variable. This study uses pre-tax profit (both AP and TI)[75] rather than pre-tax nonfinancial income (i.e., earnings before interest and taxes (EBIT)) as the dependent variable because it focuses on finding indirect evidence of cross-border profit shifting in Indonesia by investigating the effect of the parents' tax rate variation on the profits reported by FOICs in their Indonesian tax returns. The estimated effect is expected to capture potential cross-border profit shifting activities through all possible channels, including transfer pricing and high debt financing. Employing earnings before interest and taxes is likely to be necessary when one tries to disentangle the transfer pricing and debt shifting channels (Dharmapala & Riedel, 2013).[76] Therefore, as in prior studies (e.g. Markle, 2015; Huizinga & Laeven, 2008; Dharmapala & Riedel, 2013), this study uses pre-tax profit as the dependent variable to detect the existence of cross-border profit shifting in Indonesia.

The second modification is related to the independent variable. This study uses the parent's tax rate (*PTR*) rather than the average tax rate in the host country (τ in Equation

[75] The explanation in Section 4.3.2 of the usage of both TI and AP to measure profit in Study 1 of this thesis applies to the current study. In their seminal paper, Hines and Rice (1994) use reported EBIT (i.e., an accounting profit measure) as the dependent variable. Therefore, unlike Study 1 of this thesis, in the current study, AP comes before TI, and both AP and TI are discussed equally. Nevertheless, as in Study 1 of this thesis, the current study considers TI as the most important measure of profit because, as mentioned in Section 1.1, any reduction in TI is a direct measurement of income tax base erosion.

[76] As mentioned in Section 5.2.1, Hines and Rice (1994) exclude interest because they do not have reliable data.

(5.1)) as the independent variable because this study focuses on incoming investment as opposed to Hines and Rice's study, which focuses on outgoing investment. Using *PTR* as the independent variable is expected to provide evidence of the effect of the parent's tax rate on the AP and TI reported by FOICs in their Indonesian tax returns. This study predicts that the coefficient of *PTR* is positive—that is, the higher (lower) the tax rate of the parent's country, the higher (lower) the AP and TI reported in Indonesia. This study uses STR instead of ETR as the *PTR.* As discussed in Section 4.2, while there has been a debate regarding which one is a better proxy for tax incentives to shift profits, STR may act as a better proxy for an incentive to shift profits because it is set by the government and is therefore exogenous to firms' choice (Dharmapala, 2014a).

The third modification concerns the control variables for the level of productivity in the local country (*A*), which is excluded from this study. This variable is excluded because the data used in this study are about MNE affiliates in only one host country (i.e., Indonesia) as opposed to affiliates in multiple host countries as in the study by Hines and Rice (1994).

These modifications lead to the two regression models presented in Equations (5.2) and (5.3), which this study uses to examine the effect of the parent's tax rate variation on AP and TI, respectively, reported by the FOICs in their Indonesian tax returns.

$$\ln AP_{it} = \beta_0 + \beta_1 PTR_{it} + \beta_2 \ln K_{it} + \beta_3 \ln L_{it} + \beta_{4-9} Year_t + \varepsilon_{it} \quad (5.2)$$

$$\ln TI_{it} = \beta_0 + \beta_1 PTR_{it} + \beta_2 \ln K_{it} + \beta_3 \ln L_{it} + \beta_{4-9} Year_t + \varepsilon_{it} \quad (5.3)$$

where:

AP_{it} is the pre-tax AP reported by FOIC *i* for year *t*;

TI_{it} is the TI reported by FOIC *i* for year *t*;

PTR_{it} is the parent's STR of FOIC *i* for year *t*;

K_{it} is the capital input of FOIC *i* in year *t*, proxied by fixed tangible assets;

L_{it} is the labour input of FOIC i in year t, proxied by employment compensation;

$Year_t$ is a set of six dummy variables that is expected to account for annual fluctuations in ln*AP* or ln*TI* (the dependent variable) that were not caused by *PTR* (the independent variable) and *K* and *L* (the control variables);

ε_i is the error term.

As discussed in Section 4.4.3, pooled OLS regressions may contain a bias because of the heterogeneity issue. Unfortunately, as in Study 1 presented in Chapter 4, the panel data for Study 2 in this chapter are also highly unbalanced.[77] For example, only 61 firms of 1,229 (about 5%) have data for all seven years and the missing years may not be random. More importantly, the key independent variable, *PTR*, tends to be constant over the study period. Therefore, panel data analysis may not be appropriate.

As Section 4.4.3 explains, regressions of pooled cross-sectional data should be run by clustering the errors by firm to allow the regression errors to have heteroscedasticity across firms and correlation within a firm. Therefore, as in Study 1, this study reports regressions that include adjustments for errors clustered by firms.[78] *Year* dummies are again included to control for changes in profitability reported by FOICs across years (e.g. general macroeconomic conditions) that are not covered by other explanatory variables.

5.4 Empirical Results

5.4.1 Summary Statistics

Table 5.2 presents descriptive statistics for the sample used in this study.

[77] See Appendix 11 for a summary of the distribution of the unbalanced panel data for Study 2 of this thesis.
[78] In STATA software, using the option 'cluster ()' will generate standard error estimates that are robust to disturbances being heteroskedastic and autocorrelated (Hoechle, 2007).

Table 5.2

Descriptive Statistics—Study 2

A. AP

Variable	No.	Mean	Median	Standard Deviation	Minimum	Maximum
ln*AP*	3,390	22.073	22.123	2.566	11.967	29.948
PTR	3,390	0.267	0.25	0.092	0	0.55
ln*K*	3,390	23.498	23.807	2.651	9.821	30.359
ln*L*	3,390	22.669	22.885	2.008	13.160	28.438

Notes: ln*AP* is the natural log of AP reported by FOICs in Indonesian tax returns (total of commercial net income in the Indonesian tax return 1771-I Section 3 plus Income tax in the Indonesian tax return 1771-I Section 5f). *PTR* is the parent's STR. ln*K* is the natural log of tangible fixed assets reported in Indonesian tax returns (Indonesian tax return 1771, Special attachment, Transcript of elements citation of financial statement Sections I13—land and buildings and I14—other fixed assets). ln*L* is the natural log of compensation reported in Indonesian tax returns (Indonesian tax return 1771 Section II2.6—total salaries, wages, bonuses, gratifications, honorariums and other compensations).

B. TI

Variable	No.	Mean	Median	Standard Deviation	Minimum	Maximum
ln*TI*	3,188	22.095	22.132	2.620	0	33.170
PTR	3,188	0.267	0.25	0.092	0	0.55
ln*K*	3,188	23.599	23.868	2.551	9.821	30.359
ln*L*	3,188	22.750	22.960	1.947	13.160	28.438

Notes: ln*TI* is the natural log of TI reported in Indonesian tax returns (Indonesian tax return 1771 Section A1—fiscal net income. Fiscal net income is TI before loss carried forward). See Panel A for definitions of other variables.

The mean value of ln*AP* (ln*TI*) is 22.073 (22.095), suggesting that the sample of FOICs reported AP (TI) of almost Rp4 billion, which is equivalent to approximately USD300,000 using 2015 exchange rates for tax purposes. The *PTR* ranges from zero to 55%. Examples of countries in the sample that have zero STR are the British Virgin

Islands, Cayman Islands, Channel Islands and Marshall Islands. A country in the sample that has STR of 55% is the United Arab Emirates.

Table 5.3 shows the Pearson correlation between variables. Parent's tax rate (*PTR*) is positively correlated with both the natural log of AP (ln*AP*) and the natural log of TI (ln*TI*) and is significant at the 1% level, consistent with the prediction.

Table 5.3

Pearson Correlation Matrix—Study 2

A. AP

	ln*AP*		***PTR***		**ln*K***		**ln*L***
ln*AP*	1						
PTR	0.192	***	1				
ln*K*	0.726	***	0.098	***	1		
ln*L*	0.761	***	0.134	***	0.773	***	1

B. TI

	ln*TI*		***PTR***		**ln*K***		**ln*L***
ln*TI*	1						
PTR	0.211	***	1				
ln*K*	0.709	***	0.121	***	1		
ln*L*	0.746	***	0.138	***	0.777	***	1

Note: *, ** and *** indicate significance at the 1%, 5% and 10% levels in a two-tailed test, respectively.

A test of collinearity is conducted by regressing both dependent variables on all of the independent variables and calculating the VIFs for each variable. Appendix 12 shows the VIFs when using both AP and TI as the dependent variables. The result shows that

VIFs are in the range of 1.02–2.59, which is much lower than the general tolerance value of 10, suggesting the absence of the multicollinearity issue (i.e., no variable is considered a linear combination of other variables). In conclusion, all VIFs are fine for both AP and TI regression models.

5.4.2 Regression Results

After controlling for capital and labour inputs, the regressions display a positive relationship between the parent's tax rate and both AP and TI, consistent with the hypotheses H1 and H2. The regression results are presented in Table 5.4.

Table 5.4

Regression Results—Effect of Parent's Tax Rate on Reported AP and TI

$$\ln AP_{it}/\ln TI_{it} = \beta_0 + \beta_1 PTR_{it} + \beta_2 \ln K_{it} + \beta_3 \ln L_{it} + \beta_{4-9} Year_t + \varepsilon_{it}$$

	Expected sign	Dependent variable: Natural log of AP	Dependent variable: Natural log of TI
PTR (parent's tax rate)	+	2.555 ***	2.894 ***
		(4.97)	(5.80)
ln*K* (nat. log of capital)	+	0.329 ***	0.326 ***
		(11.00)	(10.11)
ln*L* (nat. log of labour)	+	0.615 ***	0.651 ***
		(14.76)	(14.30)
Year			
2010	?	−0.158 **	−0.104
		(−2.14)	(−1.47)
2011	?	−0.214 ***	−0.153 **
		(−2.79)	(−2.16)
2012	?	−0.281 ***	−0.234 ***
		(−3.33)	(−2.94)
2013	?	−0.062	−0.102
		(−0.60)	(−1.00)
2014	?	−0.110	−0.092
		(−1.16)	(−0.97)
2015	?	−0.345 ***	−0.471 ***
		(−3.77)	(−3.74)
Constant		−0.090	−1.005
		(−0.17)	(−1.70)
R^2		0.637	0.612
n		3,390	3,188

Notes: *t*-statistics appear in parentheses. *, ** and *** indicate significance at the 1%, 5% and 10% levels in a two-tailed test, respectively. See Table 5.2 for definitions of variables.

The coefficients of *PTR* are significant at the 1% level in both regressions, suggesting that the parent's tax rate is a significant incentive for FOICs to report a higher or lower profit in their Indonesian tax returns. The estimated coefficients indicate that one percentage point lower tax rate of the parent's country is associated with 2.56% (2.89%) decrease in the AP (TI) reported by FOICs in their Indonesian tax returns. This figure is similar to Hines and Rice's finding that the tax rate of the host country that is one

percentage point higher is associated with a 2.83% decrease in reported profits by US MNEs in that host country.

The results are consistent with the hypotheses H1 and H2 which predict that the parent's tax rate of an FOIC is positively associated with the profit reported by the FOIC in its Indonesian tax return. The empirical results are consistent with, and reinforce, the findings from Study 1.

The coefficients of ln*K* and ln*L* are both positive and significant at the 1% level. Moreover, the regression model represented by Equations (5.2) and (5.3) have an adjusted R-squared of 63.7% and 61.2%, respectively. The high explanatory power of the regression models is consistent with the notion that capital and labour are the inputs to generate the 'true' profits, and tax incentives determine the direction and magnitude of profit shifting.

All coefficients for the *Year* dummy variables are negative, but only the coefficients for the years 2010 (for AP model only), 2011, 2012 and 2015 are significantly different from zero at the 1% or 5% level, suggesting that FOICs report significantly lower AP and TI in the said years compared with 2009 which is the base year. With the exception of 2013 and 2014, the increasing magnitudes of the year fixed effects in Study 2 are similar to the pattern of year fixed effect found in the TI model of Study 1 which has been discussed in detail in subsection 4.4.2, so the interpretation is not repeated here.

5.5 Chapter Summary

Profit shifting by MNEs is a global concern because many large MNEs are accused of using profit shifting strategies to avoid taxes worldwide. This chapter examines the existence of profit shifting by foreign MNEs in Indonesia. In particular, it uses the HRA with some modifications to examine the effect of the parent's tax rate variation on the AP

and TI reported by FOICs from 2009 to 2015. The HRA is adopted because it is one of the most-recognised approaches for detecting the presence of tax-motivated profit shifting. This study uses the AP and TI reported by FOICs in their confidential Indonesian tax returns rather than the financial statement data.

The regression results indicate that one percentage point lower tax rate of the parent's country reduces the AP and TI reported by FOICs in their Indonesian tax returns by 2.56% and 2.89%, respectively. The findings are similar to that of Hines and Rice (1994). The coefficients for the *Year* dummies seem suggest that before the OECD introduced the BEPS project in 2013, FOICs demonstrated an increasing trend of shifting profits out of the country. However, once Indonesia joined the BEPS project, the magnitude of profit shifting was held back for two years, 2013 and 2014. In 2015, the size of profit shifting resumed its upwards trajectory. This phenomenon might be due to the lack of effective actions taken by the Indonesian government to fight profit shifting by foreign MNEs after joining the BEPS project.

Overall, the results of this study reinforce the empirical evidence found in Study 1 by providing more evidence to show that profit shifting is occurring in Indonesia. Therefore, it is expected that the two studies reported in Chapters 4 and 5 have provided sufficient empirical evidence indicating that FOICs use profit shifting strategies to avoid Indonesian CIT, consistent with the suggestion in prior studies that developing countries also suffer from profit shifting by MNEs. The next question is: How do FOICs—the Indonesian affiliates of foreign MNEs—shift profits? Study 3 reported in the following chapter is conducted to address this question.

CHAPTER 6:

HOW DO FOREIGN-OWNED INDONESIAN COMPANIES SHIFT PROFITS OUT OF INDONESIA?

6.1 Introduction

The empirical identification of the existence and magnitude of cross-border profit shifting is inherently characterised by difficulty (Dharmapala & Riedel, 2013). As a result, most existing studies focus on finding an indirect identification strategy that measures the effect of corporate tax rate differences on the profitability reported by subsidiaries of MNEs in different countries, and only a small number of studies attempt to find more direct evidence, such as the channels used by MNEs to shift profits.

MNEs can use several channels to shift profits to lower their income tax liabilities. The two most common channels used are cross-border transfer pricing arrangements and high debt financing. Most prior studies (e.g. Clausing, 2003; Swenson, 2001; Buettner & Wamser, 2007, 2013; Vicard, 2015) investigate profit shifting channels used by MNEs by relying on corporate tax rate variations between the country in which the parent company is located and the country in which the subsidiary operates. Moreover, most prior studies use data from developed countries to examine profit shifting channels used by MNEs. Few studies use data from developing countries.

This chapter investigates whether FOICs (i.e., Indonesian affiliates of foreign MNEs) use intra-firm transfer pricing and/or debt financing by related parties to shift profits out of Indonesia—a major developing country—using a different approach. The analysis includes comparisons between FOICs and comparable DOICs in terms of two indicators that are expected to capture the two profit shifting channels. Specifically, this

study compares earnings before interest and taxes scaled by total sales (*EBIT/S*) and long-term liabilities with related parties[79] scaled by total assets (*LTL_RP/TA*) to capture the transfer pricing and high debt financing channels, respectively.

This study uses tax return data provided by the DGT, which is the tax authority of Indonesia, rather than data from financial reports.[80] Analysis using paired *t*-tests and OLS regressions on the matched samples of FOICs and DOICs obtained from the PSM procedure find that FOICs shift profits out of Indonesia primarily by means of transfer pricing and, to a lesser extent, debt financing.

The remainder of this chapter is organised as follows. Section 6.2 discusses prior research and develops the hypotheses. Section 6.3 describes the research design, while Section 6.4 reports the empirical results. Section 6.5 presents some concluding remarks.

6.2 Literature Review and Hypotheses Development

6.2.1 Definitions of Transfer Pricing, Arm's-length Principle and Debt Financing

As discussed in Section 3.1.2, internalisation is the most decisive factor for many MNEs to establish foreign subsidiaries in different host countries. Cross-border profit shifting is a good example of the benefits of internalisation. MNEs can use various channels to shift profits from one subsidiary to others that are located in different tax jurisdictions. Two profit shifting channels are extensively studied in the literature. The first channel is intra-group transfer pricing, whereby MNEs set the prices for cross-border transactions between affiliates within the same group to shift profits to avoid taxes. Given that MNEs often misuse transfer prices by setting prices that do not satisfy the 'arm's-

[79] See Appendix 13 for definitions of related parties according to Indonesian Income Tax Law.

[80] Unlike countries such as Australia, in which a dividend imputation system is adopted to integrate CIT and personal income tax, Indonesia adopts a classical tax system whereby income tax is payable on both corporate profits and the dividend income of shareholders. Further, consolidation only applies to financial reporting and is not adopted for tax purposes in Indonesia. Appendix 14 describe the way of identifying whether a business entity needs to lodge a tax return in practice.

length principle' to lower the tax liability, a number of studies refer to it as transfer mispricing (e.g. Spencer, 2012; Bastin, 2014), abusive transfer pricing (e.g. Schindler & Schjelderup, 2013; Wickham, 1991) or transfer price management (e.g. Jacob, 1996; Pendse, 2012, October). The widely accepted definitions of 'transfer pricing' and 'arm's-length principle' are presented below:

> 'Transfer pricing' is the general term for the pricing of cross-border, intra-firm transactions between related parties. Transfer pricing therefore refers to the setting of prices for transactions between associated enterprises involving the transfer of property or services. These transactions are also referred to as 'controlled' transactions, as distinct from 'uncontrolled' transactions between companies that are not associated and can be assumed to operate independently ('on an arm's length basis') in setting terms for such transactions. (UN, 2013c, p. 2)

Based on the above definition, transfer pricing appears to have negative associations: MNEs are likely to use transfer pricing as a strategy to avoid income taxes by arranging the prices used for intra-firm cross-border transactions.

The 'arm's-length principle' refers to prices used for transactions between independent or non-related parties. Tax convention models such as the OECD Model Tax Convention on Income and on Capital (OECD Model) and the UN Model Double Taxation Convention between Developed and Developing Countries (UN Model) require MNEs to use the 'arm's-length principle' for pricing intra-firm transactions (UN, 2013c).[81] Both tax conventions place the authoritative statement about the arm's-length principle in paragraph 1 of Article 9 in relation to 'Associated Enterprises', as follows:

> Where:
>
> (a) an enterprise of a Contracting State participates directly or indirectly in the management, control or capital of an enterprise of the other Contracting State, or

[81] The UN Model and the OECD Model are the two tax convention models that are adopted by most countries in the world. Thus, they have a profound influence on international tax treaty practice. Both models define the 'arm's-length principle' in a similar way. Indeed, other similarities can be found in most articles of the two models. According to the UN (2011, p. vi), 'the similarities between these two leading Models reflect the importance of achieving consistency where possible.'

(b) the same persons participate directly or indirectly in the management, control or capital of an enterprise of a Contracting State and an enterprise of the other Contracting State,

and in either case conditions are made or imposed between the two enterprises in their commercial or financial relations which differ from those which would be made between independent enterprises, then any profits which would, but for those conditions, have accrued to one of the enterprises, but, by reason of those conditions, have not so accrued, may be included in the profits of that enterprise and taxed accordingly (UN, 2011; OECD, 2014c).

The 'arm's-length principle' treats the members of an MNE group 'as separate entities rather than as inseparable parts of a single unified business' (OECD, 2009, p. 33) and it 'essentially is an approximation of market-based pricing' (UN, 2013c, p. iii). That is, the arm's-length principle requires MNEs to use market prices for intra-firm transactions rather than arranging or managing the transfer prices to avoid income taxes in high-tax jurisdictions. However, in the real world, there are difficulties in applying the arm's-length principle, especially in situations where the goods or services involved are unique and where market-based prices in transactions between independent parties are absent.

The second channel that MNEs use to shift profits is high debt financing, especially financing by loans from related parties.[82] A company may deliberately finance its business activities by debt rather than by equity. For instance, companies may deliberately restructure their financing arrangement of capital so it is recognised as debt under the tax rules. This is often referred to as 'thin capitalisation' in the tax literature. From a taxation point of view, the reason why companies tend to do so is that debt financing (also known as leveraging) is more beneficial than equity financing because the payment of interest

[82] From the viewpoint of the country from which profit is shifted away (e.g., Indonesia), the practice is high debt financing. From the viewpoint of the MNE headquarters, the practice is debt shifting within the group or debt management (i.e., high debt financing for affiliates in high-tax countries and low debt financing or even acting as lenders for affiliates in low-tax countries), as can be found in some studies that focus on the viewpoint of MNE headquarters (e.g. Riedel, 2014; Schindler & Schjelderup, 2012).

on debt is deductible for tax purposes, whereas the payment of dividends on equity is not (UN, 2013c).

Both FOICs and DOICs can use transfer pricing and debt financing as the channels to shift profits between related parties. However, when DOICs shift profits between related parties, the group as a whole will likely end up with indifferent tax liability because the members of the group are taxed under Indonesian tax rules. In contrast, FOICs can shift profits out of Indonesia because their parent and affiliates are located in different tax jurisdictions. For example, an FOIC that requires substantial capital to finance its operations, such as a mining FOIC, has incentives to be financed by intra-group debts from its parent or an affiliate located in a low-tax jurisdiction. Accordingly, the interest expense paid on the intra-group debt by the FOIC will lead to higher tax benefits in Indonesia[83] than the tax cost associated with the interest income in the low-tax country where the lender is located. Cross-border profit shifting out of Indonesia by foreign MNEs—either by transfer pricing or debt financing—can lower the total tax payable by the group as a whole.

6.2.2 Prior Studies and Hypotheses Development

Some prior studies focus on transfer pricing arrangements, some focus on debt financing and some examine both. This section presents three examples of studies that focus on transfer pricing. Bartelsman and Beetsma (2003) examine whether MNEs shifted profits among OECD countries during the period 1979–1997. Unlike prior studies that examine income shifting from developed countries to low-tax jurisdictions, the authors focus on profit shifting by MNEs among OECD countries and base their empirical analysis solely on the manufacturing sector. They control for the effects of taxes and

[83] This study covers the period 2009–2015. During this period, the statutory CIT rate in Indonesia was 28% in 2009, decreased to 25% in 2010, and remains unchanged ever since.

unobserved productivity on the scale of real economic activity by regressing the ratio of total value added to wage payments on tax rate differences and claim that this novel method can isolate the pure effects of income shifting. They find significant tax-motivated transfer price arrangements by MNEs. Specifically, they find that a unilateral tax increase decreases the reported income tax base, and they estimate that the decrease is more than 65% of the additional revenue expected from the unilateral tax increase.

Bernard, Jensen, and Schott (2006) examine how US-based MNEs set prices that differ across related and unrelated party buyers. Using US international trade transaction data provided by the US Census Bureau and the US Customs Bureau between 1992 and 2000, the authors find that US exporters set substantially higher prices for their arm's-length customers than for related parties. These differences exist even for the same transaction characteristics (i.e., same product, same exporter, same time of shipping and same mode of shipment). This finding suggests that US-based MNEs have used transfer pricing arrangements as a channel for shifting profits out of the US.

Using firm-level trade data for France in 2008, Vicard (2015) examines whether MNEs in France avoid French income tax by means of transfer pricing in trade with related parties, as well as documents that the MNEs use to manipulate their transfer prices to shift profits to affiliates located in low-tax jurisdictions to reduce their tax expenses. The author finds that if France has a corporate tax rate that is one percentage point higher than that of its trade partner, intra-firm export prices reduce by 0.22% and intra-firm import prices increase by 0.24%. Therefore, consistent with the findings of the previous studies, French-based MNEs also use the transfer pricing strategy.

The next three studies examine whether MNEs shift profits by means of debt financing. Mills and Newberry (2004) investigate how tax rate differences affect income reporting by MNEs and examine whether tax incentives affect the debt policy of foreign

MNEs. They use two different measures of foreign tax incentives. First, they define tax incentives as the difference between the US STR and the foreign MNE parent's ETR. Second, they refer to tax incentives as the difference between the US STR and the foreign MNE parent's STR. They find that the use of debts in US affiliates is higher for foreign MNEs with lower foreign tax rates than for foreign MNEs with higher foreign tax rates for both measures of tax incentives, suggesting that MNEs finance their US affiliates with higher debt only when the parent's country of the US affiliate has a lower income tax rate than that of the US.

Huizinga, et al. (2008) use firm-level data for European MNEs and their affiliates over the period 1994–2003 to examine whether MNEs' indebtedness in a country depends on tax rate differences. They find that a subsidiary increases debt financing by 2.4% in response to a 10% increase in the tax rate in that country, relative to a subsidiary that does not experience a tax increase. This finding suggests that European MNEs use high debt financing to shift profits out of high-tax host countries.

Buettner and Wamser (2013) confirm that MNEs use debt financing to shift profits. Using panel data on German MNEs, they examine whether tax rate differences in 145 countries have been used to facilitate internal debt financing by MNEs to shift profits to low-tax jurisdictions during 1996–2005. They find that a foreign affiliate tends to use more internal debt financing if (1) the parent controls another affiliate that operates in a low-tax jurisdiction and (2) if the tax rate difference between the foreign affiliate and the affiliate with the lowest tax rate within the group is significant. While the effect is small (partly, they find, because of the German CFC rules), this result suggests that German MNEs shift profits out of high-tax countries by means of intra-group debt financing.

The studies mentioned above investigate the channels (either transfer pricing or high debt financing) used by MNEs to shift profits by relying on the effect of tax rate

differences. In a different study, Egger, et al. (2010) examine both channels by comparing foreign-owned companies with comparable domestic-owned companies. Specifically, the authors use data on more than 500,000 plants in 31 European economies between 1999 and 2004 to identify causal effects of foreign ownership on profit tax savings compared with domestic firms. Egger, et al. (2010) argue that comparing foreign-owned corporations with comparable domestic-owned corporations will not only help them to estimate tax savings through foreign ownership, but will also enable them to appropriately identify the important channels used by foreign-owned corporations to avoid income taxes. Two such channels that they explore are 'the direct shifting of profits from high-tax to low-tax countries (e.g., by transfer pricing, royalty and license fee payments, and other measures) and the indirect shifting of the tax base by shifting debt to countries where corporate tax rates are relatively high' (Egger, et al., 2010, p. 100). The authors find that profit shifting through transfer pricing or royalty and license payments is much more significant and is therefore more important than that of debt shifting in European economies.

While all prior studies discussed in this section focus on channels used by MNEs to shift profits from the perspective of a developed country, cross-border profit shifting by means of transfer pricing and debt financing is also likely to occur in Indonesia—a developing country—for the following two reasons. First, FOICs have a competitive advantage over DOICs because, as explained in Section 2.1, FOICs are affiliates of foreign MNEs and therefore can use the international network of affiliates (the internalisation factor) to avoid Indonesian CIT. Second, prior studies (e.g. Crivelli, et al., 2015; Fuest & Riedel, 2010; OECD, 2013b) allege that developing countries also suffer from profit shifting by MNEs. While these studies do not specifically investigate how MNEs shift profits out of developing countries, the allegation appears to be plausible. In

the case of Indonesia, as discussed in Section 3.4, two statements from two different finance ministers indicate that thousands of FOICs have not paid CIT for many years, and that companies have used transfer pricing and intra-group debt financing to avoid Indonesian CIT. While the two statements are not empirical evidence of the existence of cross-border profit shifting in Indonesia per se, they are statements made by authoritative persons.

This study attempts to provide empirical evidence of the channels used by FOICs to shift profits out of Indonesia by comparing FOICs and DOICs. Specifically, this study uses two measures to detect the channels used by FOICs to shift profits out of Indonesia. First, earnings before interest and taxes (EBIT) to sales ratio (*EBIT/S*) is expected to capture profit shifting through transfer pricing arrangements. If foreign MNEs arrange FOICs to artificially suppress selling prices, inflate purchase costs, management fees, royalties and licence fees paid to affiliates overseas, their *EBIT/S* will be lower than comparable DOICs (in terms of industry sector, firm size and maturity). Thus, the lower *EBIT/S* of FOICs relative to comparable DOICs indicates the incidence of profit shifting by means of transfer mispricing of goods and services.

Second, long-term liability to related parties to total assets ratio (*LTL_RP/TA*) is expected to capture profit shifting through intra-group debt financing. The higher *LTL_RP/TA* of FOICs relative to comparable DOICs indicates the incidence of profit shifting by means of intra-group debt financing. Transfer pricing and debt financing can be complementary to, or a substitute for, each other as channels to shift profits (Saunders-Scott, 2015).

Therefore, this study predicts a negative relation between *FOIC* (an indicator variable that takes the value of '1' if the Indonesian company is an FOIC, and '0' for a

DOIC) and *EBIT/S*, and a positive relation between *FOIC* and *LTL_RP/TA*. These lead to the two hypotheses stated in the alternative form as follows:

H1: FOICs report lower *EBIT/S* than comparable DOICs.

H2: FOICs report higher *LTL_RP/TA* than comparable DOICs.

6.3 Research Design

6.3.1 Sample Selection and Period of Study

This study uses confidential tax return data obtained from the DGT under a data nondisclosure agreement. However, the DGT only supplies tax return data for DOICs registered in the Jakarta tax offices. Given the variation in the quality of tax return data processed by the Jakarta tax offices and regional tax offices, this study only includes companies (FOICs and DOICs) registered in Jakarta tax offices to ensure a consistent quality of data. This study uses data reported in company tax returns because, according to the OECD (2015a), tax return data can better capture the existence of profit shifting by MNEs compared with financial data. As in Study 1 and Study 2, all firms in the current study are anonymised for privacy protection.

The period of the study is 2009–2015. A key reason for starting the study from 2009 is related to the Indonesian tax administrative reform, better known as ‘modernisasi’ (modernisation), which began in July 2002. Completed at the end of 2008, the reform claimed to equip Indonesian tax office units nationwide with ‘more efficient, simplified and transparent business process, more advanced system and information technology, better human resources, improved good governance and more efficient structure of organisation’ (DGT, 2009, p. 38). As a result, the tax return data recording is expected to be more accurate than before, which will in turn provide more reliable data for research purposes from 2009. The reason for ending the period of study in 2015 is simply because

that is the latest year for which data are available from the DGT when this study is conducted.

Table 6.1 presents the derivation of the final samples used in this study for the two dependent variables.

Table 6.1

Final Sample Size—Study 3

	EBIT/S	***LTL_RP/TA***
Number of firm-years between 2009–2015 with data available for propensity score matching (PSM) procedure	31,596	33,099
Number of firm-years between 2009–2015 in the matched sample available for paired *t*-tests and OLS regressions	5,272	7,458
Consisting of:[84]		
FOICs	2,636	3,729
DOICs	2,636	3,729

The top five parent's countries of FOICs in both samples are Japan, Republic of Korea, Singapore, Malaysia and the US. The distribution of countries in which the parents of FOICs are located can be found in Appendix 15.

6.3.2 Measurement of Variables and Statistical Procedures

This study examines whether FOICs use transfer pricing and debt financing to shift profits out of Indonesia by comparing their profitability and the extent of intra-group debt financing with those of comparable DOICs. Following Egger et al. (2010), it is important

[84] As a result of the PSM procedure, the final samples have equal numbers of FOICs and DOICs.

to compare foreign-owned companies (as the treatment group) with comparable domestic-owned companies (as the control group) to identify the channels used to shift profits. This is done in two stages, as outlined below.

Stage 1

In the first stage, OLS regressions are used to investigate whether FOICs reported significantly lower *EBIT/S* and significantly higher *LTL_RP* than DOICs. More precisely, the two profit shifting channel indicators used in this study are:

1. *EBIT/S* (earnings before interest and taxes scaled by total sales) to detect profit shifting by transfer pricing. The difference between the *EBIT/S* of FOICs and comparable DOICs captures suppressed selling prices, inflated purchase prices and inflated rent, royalties and management fees paid to associates overseas.
2. *LTR_RP/TA* (long-term liabilities to related parties scaled by total assets) to detect profit shifting by intra-group debt financing.

Equations (6.1) and (6.2) are the two OLS regression models used to analyse the differences between FOICs and comparable DOICs in terms of the two intra-group profit shifting indicators:

$$EBIT/S_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-76} Industry_{it} + \beta_{77-82} Year_t + \varepsilon_{it} \quad (6.1)$$

$$LTL\_RP/TA_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_3 CapInt_{it} + \beta_4 Age_{it} + \beta_{5-77} Industry_{it} + \beta_{78-83} Year_t + \varepsilon_{it} \quad (6.2)$$

where:

$EBIT/S_{it}$ is earnings before interest and taxes divided by sales for firm *i* and year *t*;

LTL_RP/TA_{it} is long-term liability to related parties divided by total assets for firm *i* and year *t*;

$FOIC$ is a dummy variable that equals 1 if the company in the sample is an FOIC, or 0 if the company in the sample is a DOIC;

ln $Sales_{it}$ is the natural logarithm of total sales for firm *i* in year *t*;

$CapInt_{it}$ is capital intensity, measured by net property, plant and equipment scaled by total assets for firm *i* and year *t*;

Age_{it} is the number of years the company has been registered in an Indonesian tax office for firm *i* and year *t*;

$Industry_{it}$ is a set of 61 dummy variables indicating the DGT industry classification of firm *i* and year *t*;

$Year_t$ is a set of six dummy variables that is expected to account for annual fluctuations in *EBIT/S* or *LTL_RP/TA* (the dependent variable) that were not because of *FOIC* (the independent variable) and any of the above control variables;

ε_i is the error term.

Equations (6.1) and (6.2) control for firm size by using total sales as a proxy. Total sales are in a natural logarithmic form (ln*Sales*) to transform total sales that are likely skewed into a more approximately normal variable. An advantage of using sales rather than assets as a proxy for firm size is that sales might capture firm size better than assets for companies that have large sales but only a small quantity of assets. Firm size effects reported in the literature are not consistent; thus, following prior studies (e.g., Mills & Newberry, 2004), no sign is predicted for ln*Sales*.

Another control variable, *Age*, is the number of years since a taxpayer registered in a tax office in Indonesia until it lodges its tax return for the respective year in the study period. Prior studies (e.g., Mills & Newberry, 2004; Grubert, 1998) provide evidence of the so-called maturation effect, which theorises that mature companies report higher

levels of income. Accordingly, this study predicts a positive relation between *EBIT/S* and *Age*, but it does not predict any relation between *LTL_RP/TA* and *Age*.

Equations (6.1) and (6.2) also control for *Industry* and *Year*. *Industry* is a series of indicator variables to control for industry effects. This study uses the two-digit industry classifications for Indonesian taxpayers set by the DGT. The *Year* dummy variables are included to provide a control for annual variations in the magnitude of *EBIT* and *LTL_RP* reported by company taxpayers due to factors other than *FOIC* and the other control variables, such as macroeconomic conditions, that may differ from year to year.

This study follows prior studies (e.g. Mills & Newberry, 2004; Myers, 1977) and includes capital intensity (*CapInt*) as a control variable when examining whether FOICs shift profits by means of intra-group debt financing in Equation (6.2). As explained by Mills and Newberry (2004, p. 98), 'capital structure theory suggests that debt usage is higher when firms have more assets–in–place (capital intensity)'. Consistent with the two prior studies, this study predicts a positive sign of the coefficient of *CapInt*.

A company is defined as an FOIC if more than 50% of the equity in the company is held by non-residents for tax purposes. Conversely, a company in which the majority shares are owned by residents for tax purposes is defined as a DOIC. Consistent with hypotheses H1 and H2, the coefficients of *FOIC* for the *EBIT/S* and *LTL_RP/TA* models are predicted to be negative and positive, respectively.

Stage 2

In the second stage, the PSM technique is used to ensure that FOICs and DOICs are comparable in terms of firm size (proxied by ln*Sales*), maturity (proxied by *Age*), industry (using the DGT two-digit industry classification) and year. For the debt financing model, in addition to the four variables mentioned above, this study also includes capital intensity

(*CapInt*, proxied by net property, plant and equipment scaled by total assets) as one of the matching criteria. Using the above matching criteria as the independent variables to compute the propensity scores, an FOIC is matched to a DOIC with the nearest propensity score for comparison. This study follows the PSM procedure presented below (using the Stata statistical package) to match an FOIC to a DOIC before running paired *t*-tests and OLS regressions again:

1. Run a regression with *EBIT/S* (*LTL_RP/TA*) as the dependent variable, and *FOIC*, ln*Sales*, *Age*, *Industry* indicators, *Year* indicators (and *CapInt* when *LTL_RP/TA* is the dependent variable) as independent variables to set the e(sample).
2. Use *pstest* to test the differences in means between the independent variables across the treatment group (FOICs) and the control group (DOICs).
3. Use *psmatch2* and logit regression to compute propensity scores using *FOIC* as the dependent variable, ln*Sales*, *Age*, *Industry* indicators, *Year* indicators (and *CapInt*) as the independent variables, and match each FOIC to the DOIC with the nearest propensity score, without replacement.
4. Use *pstest* to test the differences in terms of firm size, age (and capital intensity) between FOICs and the matched DOICs. If there is any significant difference between the two groups, specify a caliper (see Step 5).
5. Set a caliper initially as 0.25 of the standard deviation of the generated propensity scores.
6. Run *psmatch2* to match treatment firms to their nearest neighbour control firms subject to the requirement that the propensity scores of the matched pairs are within the specified caliper, without replacement.
7. Use *pstest* again to examine whether there remain any significant differences in terms of firm size, age (and capital intensity) between the two groups. If so, reduce the

caliper and repeat Step 6 until no significant differences in terms of firm size, age (and capital intensity) are found between the two groups.

8. Run paired *t*-tests and the OLS regressions on the propensity score-matched sample.

The matched samples obtained from the PSM techniques ensure that the FOICs and the DOICs are comparable in firm size, maturity, capital intensity, industry affiliation and year. Paired *t*-tests are run to examine whether the two groups (FOICs and the matched DOICs) are significantly different from each other in terms of the two outcome variables, *EBIT/S* and *LTL_RP/TA*. OLS regression models are run again on the matched sample to further investigate the channels used by FOICs to avoid Indonesian CIT.

As in Study 1 and Study 2 (presented in Chapters 4 and 5, respectively), the current study runs all regressions by clustering the errors by firms to allow for heteroscedasticity and autocorrelation within a firm. A set of *Year* dummy variables is also included to capture some of the annual variations that cannot be controlled by the other explanatory variables. As in the previous two studies of this thesis, panel data analyses are not appropriate. For the current study, the main reason is simply because *FOIC*—the test variable—is an indicator variable (i.e., equals 1 if the firm is a foreign-owned Indonesian company, and 0 otherwise) and therefore does not vary across years for a firm.

6.4 Empirical Results

6.4.1 Summary Statistics

Table 6.2 shows the descriptive statistics of the key variables for the *EBIT/S* and *LTL_RP/TA* models in Panels A and B, respectively, after the matching procedure.

Table 6.2

Descriptive Statistics—Study 3

A. EBIT/S

Variable	No.	Mean	Median	Standard Deviation	Minimum	Maximum
EBIT/S	5,272	0.068	0.058	0.208	−0.997	1
ln*Sales*	5,272	24.902	25.022	2.130	13.996	31.901
Age	5,272	12.231	10	8.436	0	40

Notes: *EBIT/S* is earnings before interests and taxes scaled by total sales reported by firms in their Indonesian tax returns. Specifically, from the Indonesian annual tax return (form 1771), EBIT is derived from net book income domestic (1771-I 1.h) + income tax (1771-I 5.f) + interest expense (1771-II 6.6). ln*Sales* is a natural log of the total sales reported in Indonesian tax returns (Indonesian tax return Form 1771-I 1.a: Gross Income). *Age* is the number of years from the year the company is registered to the year of the observation.

B. LTL_RP/TA

Variable	No.	Mean	Median	Standard Deviation	Minimum	Maximum
LTL_RP/TA	7,458	0.027	0	0.115	0	0.999
ln*Sales*	7,458	25.074	25.228	2.258	9.955	31.901
CapInt	7,458	0.254	0.195	0.230	0	0.999
Age	7,458	13.353	11	8.572	0	40

Notes: *LTL_RP/TA* is long-term liabilities to related parties scaled by total assets reported by firms in their Indonesian tax returns. *CapInt* is capital intensity proxied by net property, plant and equipment (PPE) scaled by total assets. Specifically, from the Indonesian annual tax return (Form 1771), PPE is derived from Land and Buildings (1771 Transcript of Financial Statement I.13) + other fixed assets (1771 Transcript of Financial Statement I.14) – accumulated depreciation (1771 Transcript of Financial Statement I.15). See Panel A for definitions of other variables.

Panel A shows that *EBIT/S* has a mean of 0.068, suggesting that, on average, companies in the sample report an EBIT of 6.8% of their total sales. The mean of ln*Sales* is 24.9, indicating that, on average, the companies in the sample report have annual sales

of around Rp75 billion, which is equivalent to approximately USD4.8 million using the 31 December 2015 exchange rate for tax purposes.[85] The age of companies in the final sample ranges from 0 (companies that are registered in the same year as the year of observation) to 40 years. The average *Age* is 12 years, indicating that, on average, companies in the sample are relatively mature.

From Panel B, *LTL_RP/TA* has a mean of 0.027, suggesting that, on average, companies in the sample recorded long-term liability to related parties of 2.7% of their total assets. The mean of ln*Sales* is 25.1, similar to that of *EBIT/S*. The age of companies in the *LTL_RP/TA* final sample shows a similar level of maturity as for *EBIT/S*. The mean of *CapInt* is 0.25, indicating that, on average, companies in the sample have 25% of their assets in the form of net PPE. *CapInt* ranges from zero to nearly one, demonstrating that some companies in the final sample have negligible PPE in their assets, and some have total assets almost entirely consisting of PPE.

Table 6.3 shows the Pearson correlation between the main variables in this study. FOICs are negatively (positively) correlated *EBIT/S* (*LTL_RP/TA*) and are significant at the 1% level, which is consistent with the prediction. Firm size is positively correlated with *EBIT/S* but is not significantly correlated with *LTL_RP/TA*. *Age* has a significantly positive (negative) correlation with *EBIT/S* (*LTL_RP/TA*). As predicted, capital intensity is positively correlated with long-term liabilities to related parties.

[85] As shown in Appendix 4, for 31 December 2015, the exchange rate for USD1 is Rp13,640.

Table 6.3

Pearson Correlation Matrix—Study 3

A. EBIT/S

	FOIC	***EBIT/S***	**ln*Sales***	***Age***
FOIC	1			
EBIT/S	−0.065 ***	1		
ln*Sales*	−0.008	0.132 ***	1	
Age	−0.009	0.088 ***	0.331 ***	1

B. LTL_RP/TA

	FOIC	*LTL_RP/TA*	ln*Sales*	*CapInt*	*Age*
FOIC	1				
LTL_RP/TA	0.043 ***	1			
ln*Sales*	0.004	0.008	1		
CapInt	−0.013	0.122 ***	0.133 ***	1	
Age	−0.014	−0.035 ***	0.321 ***	0.044 ***	1

Note: ***, ** and * indicate significance at 1%, 5% and 10% levels in a two-tailed test, respectively.

As in Study 1 and Study 2, the current study runs a test of collinearity that calculates the VIFs for each variable to examine whether one of the regressors is a perfect linear function of another regressor. Appendix 16 shows that the VIFs are in the range of 1.01–3.59 and 1.01–4.14 for the *EBIT/S* model and the *LTL_RP/TA* model, respectively. The VIFs are lower than the general tolerance value of 10, indicating the absence of collinearity issue in both models.

6.4.2 Results of Statistical Analyses

Table 6.4 shows the key regression results for both profit shifting indicators of Stage 1 (i.e., using the available dataset before matching an FOIC with a DOIC).

The results show that FOICs report *EBIT/S* of around 4.4 percentage points lower and *LTL_RP/TA* of 1.6 percentage points higher than those of DOICs. The directions of both coefficients are consistent with the prediction and are significant at the 1% level, suggesting that the results support hypotheses H1 and H2.

The coefficient for ln*Sales* is positively significant at the 1% level in the *EBIT/S* regression model but is negatively insignificant in the *LTL_RP/TA* regression model, suggesting that firm size is significantly associated with profitability, but not long-term liability to related parties.

The coefficient for *CapInt* is positive and significant at the 1% level, suggesting that the more capital-intensive the company, the higher the level of long-term borrowings from related parties.

The coefficient for *Age* is insignificant in the *EBIT/S* regression model, and only significant at the 10% level in the *LTL_RP/TA* regression model, indicating that the maturity level of the companies is not associated with the magnitude of the profitability they report and the level of long-term borrowings from related parties.

The coefficients of *Year* for the *EBIT/S* model suggest that Indonesian companies reported significantly less profits (before interest and tax) for 2011 to 2015 compared with 2009. The magnitude of the gaps between 2009 and later years show an increasing trend except 2014. The coefficients of *Year* for the *LTL_RP/TA* model do not show similar pattern.

Table 6.4

Results of Regression Estimations before the Matching Procedure—How FOICs Differ from DOICs in Terms of EBIT and Long-term Liabilities to Related Parties

$$EBIT/S_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-76} Industry_{it} + \beta_{77-82} Year_t + \varepsilon_{it}$$

$$LTL\_RP/TA_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_3 CapInt_{it} + \beta_4 Age_{it} + \beta_{5-77} Industry_{it} + \beta_{78-83} Year_t + \varepsilon_{it}$$

	Expected Sign		Dependent variable: *EBIT/S*		Dependent variable: *LTL_RP/TA*	
FOIC	−	+	−0.044	***	0.016	***
			(−7.60)		(4.63)	
ln*Sales*			0.010	***	−0.001	
			(7.87)		(−1.36)	
CapInt		+			0.040	***
					(7.24)	
Age	+		0.000		−0.000	*
			(1.43)		(−1.65)	
Industry#	?	?				
Year	?	?				
2010			0.001		0.000	
			(0.37)		(0.24)	
2011			−0.011	***	−0.003	
			(−3.30)		(−1.58)	
2012			−0.013	***	−0.002	
			(−3.86)		(−1.17)	
2013			−0.021	***	−0.003	*
			(−4.86)		(−1.80)	
2014			−0.015	***	−0.003	*
			(−3.70)		(−1.93)	
2015			−0.047	***	−0.003	*
			(−10.67)		(−1.81)	
Constant			−0.127		0.050	
			(−3.43)		(4.15)	
R^2			0.243		0.042	
n			31,596		33,099	

Notes: *t*-statistics appear in parentheses. ***, ** and * indicate significance at the 1%, 5% and 10% levels in a two-tailed test, respectively. See Table 6.3 for definitions of variables.

Regression result for *Industry* is presented in Appendix 17.

The regression results for the industry dummy variables can be found in Appendix 17. There are 74 industry groups in the final sample of both regression models. Industry group 10 (food manufacturing industry) is the base industry. Of the 73 industry groups represented by indicators or dummy variables, there are 35 (54) and 12 (1) industry groups with significantly negative and positive coefficients, respectively for *EBIT/S* (*LTL_RP/TA*) model. The coefficients of the remaining 26 (18) industry groups are insignificantly different from zero.

Before the matching procedure, FOICs may concentrate in some industries, while DOICs may concentrate in other industries. Different industries may have different *EBIT/S* and different levels of capital intensity hence different degrees of reliance on debts. Also, FOICs and DOICs may have different firm sizes and ages. Even though the regression models before the matching procedure control for the effect of industry, firm size and age, the coefficients for *FOIC* in the two regression models may still not be reliable. Therefore, in Stage 2, the matching procedure described on pages 151 to 152 is carried out to match an FOIC with a DOIC to derive a final sample of FOICs and DOICs that are comparable in terms of industry, firm size, age (for both models) and capital intensity (for the *LTL_RP/TA* model only) for paired *t*-tests and further regression analyses.

Table 6.5 presents the key results of Stage 2 (i.e. after the matching procedure) using the paired *t*-tests for both the *EBIT/S* and *LTL_RP/TA* models.

Table 6.5

Results of Paired *t*-tests after the Matching Procedure—How FOICs Differ from DOICs in Terms of EBIT and Long-term Liabilities to Related Parties

	Expected Sign	Dependent variable: *EBIT/S*	Dependent variable: *LTL_RP/TA*
ATE—*FOIC* (1 vs 0)	− | +	−0.022 ***	0.009 ***
n: FOICs (treatment)		2,636	3,729
n: DOICs (control)		2,636	3,729

Notes: ***, ** and * indicate significance at the 1%, 5% and 10% levels in a two-tailed test, respectively. ATE is the average treatment effect.

The paired *t*-tests compare 2,636 FOICs with 2,636 matched DOICs and show that FOICs significantly report lower *EBIT/S*, which is consistent with hypothesis H1. The result of the paired *t*-test for *LTL_RP/TA* also confirms that FOICs use greater long-term liabilities to related parties after comparing 3,729 FOICs with 3,729 matched DOICs, which is consistent with hypothesis H2. All results are significant at the 1% level.

Table 6.6 presents the key results of the OLS regressions for both the *EBIT/S* and *LTL_RP/TA* models after the matching procedure.

Table 6.6

Results of Regression Estimations after the Matching Procedure—How FOICs Differ from DOICs in Terms of EBIT and Long-term Liabilities to Related Parties

$$EBIT/S_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-53} Industry_{it} + \beta_{54-59} Year_t + \varepsilon_{it}$$

$$LTL\_RP/TA_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_2 CapInt_{it} + \beta_4 Age_{it} + \beta_{5-61} Industry_{it} + \beta_{62-67} Year_t + \varepsilon_{it}$$

FOIC	−	|	+	−0.027	***	0.009	**
				(−3.85)		(2.27)	
ln*Sales*		|		0.012	***	0.000	
				(4.97)		(0.41)	
CapInt		|	+			0.054	***
						(4.99)	
Age	+	|		0.002	***	−0.000	
				(3.16)		(−1.48)	
Industry#	?	|	?				
Year	?	|	?				
2010				−0.020	**	−0.002	
				(−2.23)		(−0.52)	
2011				−0.024	***	−0.003	
				(−2.91)		(−0.69)	
2012				−0.027	***	−0.004	
				(−2.91)		(−0.93)	
2013				−0.023	**	−0.005	
				(−2.29)		(−0.94)	
2014				−0.031	***	−0.005	
				(−3.23)		(−1.06)	
2015				−0.062	***	−0.004	
				(−5.92)		(−0.86)	
Constant				−0.184		0.047	
				(−2.76)		(1.72)	
R^2				0.085		0.050	
n				5,272		7,458	

Notes: *t*-statistics appear in parentheses. ***, ** and * indicate significance at the 1%, 5% and 10% levels in a two-tailed test, respectively. See Table 6.3 for definitions of variables.

Regression result for *Industry* is presented in Appendix 18.

The coefficients for *FOIC* after the PSM procedure are relatively consistent with those before the PSM procedure. After the matching procedure, the coefficients indicate that FOICs report *EBIT/S* of around 2.7 percentage points lower and *LTL_RP/TA* of nearly one percentage point higher than those of their matched DOICs. The negative relationship between *FOIC* and *EBIT/S* and the positive relationship between *FOIC* and *LTL_RP/TA* indicate that FOICs use both transfer pricing and debt financing strategies to shift profits out of Indonesia, which is consistent with the hypotheses and the results of Stage 1.

The coefficients of *FOIC* are significant at the 1% level and the 5% level for the *EBIT/S* model and the *LTL_RP/TA* model, respectively. The fact that the significance level of the *EBIT/S* model is higher than that of the *LTL_RP/TA* model suggests that FOICs use transfer pricing more than debt financing as the main channel to shift profits from Indonesia.

The coefficient for ln*Sales* is positively significant at the 1% level in the *EBIT/S* regression model but is insignificant in the *LTL_RP/TA* regression model, suggesting that firm size is significantly associated with profitability, but not long-term liability to related parties.

The coefficient for *CapInt* is positive and significant at the 1% level, which is consistent with the prediction that the more capital-intensive the company, the higher the level of long-term borrowings from related parties.

Consistent with the prediction, the coefficient for *Age* is positive and significant at the 1% level in the *EBIT/S* regression model, indicating that more mature companies tend to report higher profitability. The coefficient for *Age* is insignificant in the *LTL_RP/TA* regression model, suggesting that the level of maturity is not associated with the level of long-term borrowings from related parties.

After the matching procedure, there are 51 (58) industry groups in the final sample of *EBIT/S* (*LTL_RP/TA*) model. Industry group 10 (food manufacturing industry) is the base industry. Of the 50 (57) industry groups represented by indicators or dummy variables, there are 21 (38) and 5 (0) industry groups with significantly negative and positive coefficients, respectively for *EBIT/S* (*LTL_RP/TA*) model. The coefficients of the remaining 24 (19) industry groups are insignificantly different from zero.

Finally, the coefficients of *Year* for the *EBIT/S* model suggest that Indonesian companies reported less profits (before interest and tax) in later years compared with 2009, and the gaps between 2009 and the later years show an increasing trend except 2013. These results are consistent with the results of the previous two studies of this thesis as well as the decreasing trend of CIT contribution to total tax revenue depicted in Figure 2.4. As discussed in subsection 4.4.2, in the case of FOICs, decreasing EBIT to sales ratio may indicate increasing profit shifting by transfer pricing. These results provide further evidence that a lack of effective action taken by the Indonesian government after joining the BEPS project in 2013 may have led to an escalation of transfer pricing activities by FOICs.

The coefficients of *Year* for the *LTL_RP/TA* model do not show similar pattern.

6.5 Chapter Summary

In an attempt to identify the channels used by FOICs (i.e., Indonesian affiliates of foreign MNEs) to shift profits, this study compares the FOICs with comparable DOICs in terms of two indicators. First, it uses *EBIT/S* to examine whether FOICs use transfer pricing to shift profits from Indonesia resulting in a lower EBIT to sales ratio compared to DOICs. By using *EBIT/S* as the proxy, this study examines transfer pricing in a broad sense to cover not only purchases and sales of goods, but also services (e.g., management

services and technical advice) and the right or licence to use associates' properties (e.g., land and building—rent, intellectual properties—royalties). Second, it uses *LTL_RP/TA* to assess whether FOICs use intra-group debt financing to shift profits out of Indonesia. Restricting long-term liabilities to related parties only is in line with this study's aim to investigate profit shifting by Indonesian affiliates of foreign MNEs.

Using the PSM technique to generate a sample that contains a matched DOIC for each FOIC, this study conducts paired *t*-tests and OLS regressions and finds that FOICs report significantly lower *EBIT/S* and significantly higher *LTL_RP/TA* relative to comparable DOICs, indicating that FOICs use both transfer pricing and debt financing as their profit shifting strategies to avoid Indonesian income tax. The results also indicate that FOICs use transfer pricing as the primary strategy rather than debt financing to avoid Indonesian CIT, similarly to the findings of Egger, et al. (2010).

This study is arguably the first study to use information reported by Indonesian companies in their tax returns to investigate profit shifting channels used by MNEs operating in Indonesia—a developing country—using domestic-owned companies as a control group. Therefore, the results of this study not only corroborate the suggestion of prior studies that developing countries may suffer from profit shifting strategies adopted by foreign MNEs, but they also fill a gap in the literature by providing empirical evidence of how MNEs shift profits out of a developing country.

The results of this study indicate that the Indonesian government may need to improve its transfer pricing and debt financing regulations to curtail the profit shifting activities of FOICs that have been ongoing since the completion of the Indonesian tax administration reform in 2009.

CHAPTER 7:
SUMMARY AND CONCLUSION

7.1 Overview and Conclusions of the Thesis

The more globally integrated economy, aggravated by the escalating expertise of tax planners in recognising and exploiting legal arbitrage opportunities and boundaries of acceptable tax planning, gives MNEs more confidence in taking aggressive tax positions (OECD, 2013c). Tax rules that do not keep pace with today's business environment exacerbate the circumstances. In particular, MNEs are alleged to avoid taxes by shifting their profits to low-tax jurisdictions. For example, in the past few years, media around the world have alleged that giant MNEs such as Google, Starbucks, McDonalds, Amazon and Apple have used cross-border profit shifting strategies to reduce their tax burdens. These tax avoidance strategies are known as BEPS.

The issue of profit shifting to low-tax jurisdictions by MNEs has been discussed in profit shifting literature for decades. In particular, in the past few years, the issue has attracted considerable global attention. Financial media, tax authorities, international institutions—notably the OECD—and global forums—notably the G20—have expressed their concerns about tax avoidance strategies used by MNEs as a means of shifting profits (Kelley, Koontz, & Kadet, 2016). According to Beuselinck, et al. (2015), the reason behind these concerns is that people now better understand that MNEs operate internationally and that cross-border business operations allow them to exploit tax system differences between countries to decrease their overall corporate tax burden.

A theory that explains why MNEs establish subsidiaries overseas is the OLI framework introduced by Dunning (1977). According to the OLI framework, MNEs have advantages over companies that operate at the domestic level because MNEs have more

power, such as patents, trademarks, international reputation (ownership), more flexibility to choose locations for better access to customers, lower tariffs (location) and, most importantly, more opportunities to set up intra-firm prices and processes (internalisation).

Many empirical studies have discussed the cross-border profit shifting phenomenon from the perspective of developed countries. Most of these studies find that MNEs avoid income tax in the host country by shifting their profits to low-tax jurisdictions. Some studies have focused on finding the ways in which MNEs shift their profits. These studies have identified two main channels that are most commonly used: transfer pricing and debt financing. Profit shifting by means of transfer pricing and debt financing are two good examples of internalisation of the OLI framework.

Transfer pricing is a tax avoidance strategy that allows MNEs to suppress revenue and/or inflate expenses in a high-tax country by setting certain prices for intra-firm transactions. Debt financing is another tax avoidance strategy that allows MNEs to record high interest expense in a high-tax country by financing their business activities using debt rather than equity. The final goal of these cross-border tax avoidance strategies is to reduce the MNEs' global tax liability.

Indonesia has undertaken two major tax reforms. First, the 1983 tax reform successfully transformed the taxation system in Indonesia from a complicated and old-fashioned structure into a simpler, technology-based system. Second, the 2002 tax administration reform drastically improved the taxation business process from slow and error-prone tax file recording and inefficient human resources into more reliable data provisions and more professional tax officials. Nevertheless, taxation in Indonesia has still been overshadowed by a low tax-to-GDP ratio (i.e., the proportion of GDP collected by the government as tax revenue) and low tax compliance (i.e., many people do not follow the law). Moreover, Indonesian tax law does not have effective provisions for

dealing with international taxation—particularly transfer pricing and debt financing provisions.

The fact that the Indonesian taxation system appears to suffer from a lack of capability—both institutionally and legally—makes the country vulnerable to tax avoidance attacks, including cross-border profit shifting strategies. In fact, there is a strong indication that Indonesia is suffering from MNEs' profit shifting strategies. For example, two Indonesian finance ministers stated that thousands of FOICs (i.e., entities through which foreign MNEs operate in Indonesia) have not paid income tax for many years and that those companies have used transfer pricing to avoid paying tax.

However, only a few empirical studies on profit shifting by MNEs have used data from developing countries. Moreover, existing studies that focus on developing countries are deemed to have a doubtful quality because they are not peer-reviewed. In the case of Indonesia, while there have been strong allegations that Indonesian affiliates of foreign MNEs have been using cross-border profit shifting strategies to avoid Indonesian CIT for many years, there are no peer-reviewed studies about the existence of profit shifting by MNEs in the country.

This thesis attempts to fill this gap in the literature by choosing Indonesia as the focus of the study. In addition to the strong allegations that FOICs shift profits out of Indonesia, the fact that Indonesia is a major developing economy makes it suitable to be the focus of this thesis. Further, none of the few existing studies that focus on developing countries have used tax return data which is deemed to help tax researchers provide more reliable evidence of the presence of BEPS. This thesis uses confidential income tax return data for the period 2009–2015 from the DGT (the Indonesian tax authority) to investigate the issue of profit shifting in Indonesia.

Through BEPS, MNEs reduce their TI and book/accounting income simultaneously, which makes BEPS a book-tax conforming tax avoidance strategy (Hanlon & Heitzman, 2010). Therefore, profit in this thesis is represented by two measurements. In addition to TI as the main measurement of profit based on tax law reported by FOICs in their Indonesian tax returns, this thesis uses AP based on financial reporting standards, which is also reported by FOICs in their Indonesian tax returns.

The empirical evidence provided by this thesis is expected to fill the gap in the literature. Specifically, this thesis attempts to detect the existence of profit shifting by FOICs and identify how FOICs shift their profits out of Indonesia by conducting three related studies.

Study 1 tests whether FOICs shift profits out of Indonesia by examining the effect of the difference in STR between the source country of investment and Indonesia (i.e., the STR of the parent's country of the FOIC minus Indonesian STR) on TI and AP (both scaled by total sales) reported by FOICs in their Indonesian tax returns. The regression results show that the lower the parent's STR, the lower the TI and AP reported by FOICs. This provides evidence that is consistent with FOICs shifting profits to low-tax countries. This empirical result is consistent with profit shifting occurring in Indonesia.

Study 2 further investigates whether FOICs shift profits out of the country by following an approach introduced by Hines and Rice (1994) based on the Cobb–Douglas production function with some modifications. The HRA has been widely used by studies that focus on detecting the presence of cross-border profit shifting by MNEs. Again, this study uses both AP and TI reported by FOICs in their Indonesian confidential tax return data supplied by the Indonesian tax authority. After analysing a final sample of more than 3,000 firm-year observations, this study finds that one percentage point lower tax rate of

the parent's country is associated with a 2.56% decrease in the AP and a 2.89% decrease in the TI reported by FOICs to the Indonesian tax authority.

Study 3 attempts to provide more direct evidence of the existence of cross-border profit shifting in Indonesia by investigating whether FOICs use the two most commonly used channels to shift profits: transfer pricing and intra-group debt financing. This can be done by comparing FOICs with comparable DOICs using two profit shifting indicators: (1) EBIT scaled by total sales as the proxy to capture profit shifting using the transfer pricing channel; and (2) long-term debt to related parties scaled by total assets as the proxy to capture profit shifting using the intra-group debt financing channel. Study 3 uses the PSM technique to match a DOIC to an FOIC. The final sample that contains the matched FOICs and DOICs is then analysed using paired *t*-tests and OLS regressions. The results show that while FOICs use both channels to shift profits, transfer pricing plays a more significant role than that of debt financing.

The results for the year fixed effects that are included in the regression models of the three studies in this thesis suggest some changes in the behaviour of FOICs in reporting their TI to the Indonesian tax authority during the study period. Compared with 2009, FOICs reported significantly less TI up to 2012, similar TI in 2013 and 2014, and the lowest TI in 2015. In the absence of any downturn of macroeconomic conditions and significant changes in the tax system during 2009–2015, a possible explanation for the changes in the behaviour of FOICs is because Indonesia, as one of the G20 countries, took part in the OECD/G20 BEPS project from 2013, so in 2013 and 2014 FOICs held back their trend of reporting less and less TI. FOICs resumed their trend of reporting less TI in Indonesia in 2015 because the Indonesian government did not take effective action after joining the BEPS project in 2013.

In conclusion, this thesis provides empirical evidence consistent with the profit shifting occurring in Indonesia. Moreover, this thesis finds that FOICs use transfer pricing and, to a lesser extent, debt financing as the channels to shift profits out of Indonesia. Therefore, Indonesia needs to take effective action to fight profit shifting by FOICs to reduce the revenue erosion from the CIT sector.

7.2 Contributions of the Study

This thesis is one of the first empirical studies to examine the incidence of profit shifting in a developing country by analysing the corporate tax return data obtained from the tax authority of Indonesia. The empirical results provided by this thesis are therefore expected to contribute to the knowledge of international tax avoidance and tax administration practice. Specifically, this thesis is expected to fill the gap in the BEPS literature in at least two ways. First, this thesis is one of the first studies to use firm-level data to examine the existence of profit shifting tax avoidance strategies by MNEs in a developing economy. Dharmapala (2014a) argues that using a firm-year dataset rather than an aggregate country-level dataset enhances the credibility of BEPS estimation. Consistent with Dharmapala (2014a), the Organisation for Economic Co-operation and Development (2015a, p. 28) states that using firm-level data is important because 'firm-level data is needed for the best analysis of BEPS'. Therefore, this thesis not only fills the gap in the literature, but is also expected to provide more reliable evidence of BEPS from the perspective of Indonesia.

Second, this thesis uses Indonesian confidential tax return data supplied by the DGT. The OECD (2015a) states that, unlike publicly available financial databases that can only capture the presence of BEPS indirectly, tax return data can provide more

reliable information about the incidence of BEPS.[86] By using tax return data, the findings of this thesis are expected to provide more reliable results and facilitate a deeper understanding of the BEPS issue, especially from the perspective of a developing country. The data used in this thesis are expected to be reliable because they are related to the years 2009–2015 and were recorded after the completion of the 2002 tax administration reform.

This thesis also contributes to tax administration practices in Indonesia by providing evidence of the characteristics of profit shifting in this developing country. The empirical evidence provided by this thesis is expected to help policymakers improve the tax system in general and profit shifting supervision in particular.

7.3 Limitations of the Study

This thesis contains at least two limitations. The first limitation concerns determinants other than tax rate differences that may encourage MNEs to shift profits. Dharmapala and Riedel (2013) note that cross-border profit shifting activities are perceived to be the main threat to the tax base of high-tax economies around the world. However, they observe that the existing literature generally employs indirect identification methods to evaluate profit shifting behaviour by assessing firm responses (e.g., adjustments in reported pre-tax profitability, intra-firm transfer prices, debt–equity structure) to changes in the corporate tax rate or the difference in tax rates between home and host countries. Identification is therefore based on rather infrequent changes in STRs, which are difficult to differentiate from contemporaneous fluctuations of other dynamics in the home and/or host country, such as political, social and economic environments. Dharmapala and Riedel (2013) also underline that changes in tax rates may confound the

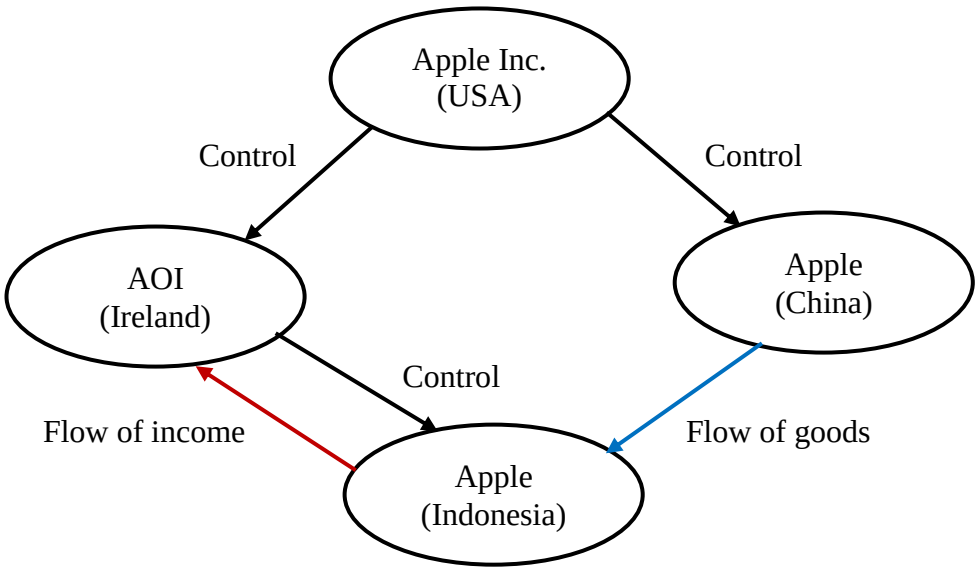
[86] However, the OECD (2015a, p. 22) observes that tax return data 'is not a panacea for all the problems facing an analysis of BEPS'.

profit shifting estimation because such changes can influence other profitability factors such as management efforts. This study potentially contains the above weaknesses.

Second, this thesis does not capture profit shifting to a third country. Let us take Apple, a giant multinational information technology company, as an example. Apple Inc. (US) owns Apple (China) and Apple Operations International (AOI, Ireland). AOI (Ireland) controls Apple (Indonesia). Therefore, the immediate parent of Apple Indonesia is AOI (Ireland) and the ultimate parent is Apple Inc. (US). While the US (i.e., the third country) may play an important role in shifting profits from Indonesia to Ireland, comparing the tax rates between Ireland and Indonesia is more appropriate than comparing the tax rates between the US and Indonesia. Thus, this study uses the tax rate differences between the ultimate parent's country and Indonesia. In the case of Apple, this thesis uses the tax rate differences between Ireland and Indonesia to detect whether Apple (Indonesia) shifts profits out of Indonesia to Ireland. Figure 7.1 uses Apple to illustrate the scope of Study 1.

Figure 7.1

Scope of the Study



In profit shifting strategies, the ultimate parent establishes an immediate parent to be used as an SPV to shift profits from a host country by exploiting the low tax rate in the country of the immediate parent. For example, the CIT rate in Ireland is 12.5%, which is much lower than the CIT rate in the US and Indonesia (40% and 25%, respectively). In the case of Apple, AOI does not pay any tax because the company is not a resident of Ireland, as the Irish definition of corporate tax residence is determined solely by the location of a company's central management and control. Further, AOI is not a resident of the US because US tax law defines the residence of a company solely in terms of the place of incorporation (Ting, 2014). Therefore, while the possibility of shifting profits to a third country exists, focusing on the STR differences between the immediate parent's country (Ireland) and the host country (Indonesia) to examine whether FOICs (Apple Indonesia) shift profits is reasonable and will cover profit shifting in most cases.

7.4 Future Research

This thesis provides empirical evidence that Indonesia suffers from profit shifting by foreign MNE affiliates operating in Indonesia by analysing tax return data from 2009 to 2015. Since 2016, Indonesia has taken action to fight profit shifting activities. In addition, according to some experts, Indonesia is likely to adopt a general anti-avoidance rule soon (Shelepov, 2017). Among other actions, Indonesia has made two major improvements. First, Indonesia introduced Finance Minister Regulation No. 169 (PMK 169), which came into effect on 1 January 2016. The new rule partially reflects the recommendations of the OECD BEPS Action 4 (interest deductions). The word 'partially' is used because PMK 169 is basically a thin capitalisation rule based on a debt-to-equity approach rather than the fixed or group ratio endorsed by BEPS Action 4. Second, following PMK 169, Finance Minister Regulation No. 213 (PMK 213) was introduced

and came into effect on 30 December 2016. PMK 213, which regulates transfer pricing documentation, is in line with BEPS Action 13 (Viray, 2017), which requires (1) taxpayers to keep the three-tiered transfer pricing documentation—namely the master file, the local file and the country-by-country report; and (2) the tax authority to specify the types of additional documents and information regarding related party transactions that taxpayers must keep.

These developments are examples of how the Indonesian government is trying to keep pace with today's business environment, which is characterised with progressive development, and to catch up with the rapid tax avoidance strategies used by FOICs. The newly introduced regulations are important events subsequent to the period of study covered in this thesis because they came into effect after 2015. It has been a typical issue in Indonesia that most regulations are implemented without adequate research. Therefore, ongoing research is needed to further examine whether the newly introduced profit shifting regulations will reduce the magnitude of profit shifting in Indonesia. The results of the research will provide insights into whether the government should fully or partially implement the recommendations listed in the BEPS Action Plan given that it partially adopted the recommendations advocated by BEPS Action 4 (interest deductions), but fully adopted BEPS Action 13 (transfer pricing documentation).

7.5 Concluding Remarks

This thesis confirms that Indonesia—a developing country—suffers from profit shifting strategies by foreign MNEs. Further, this thesis provides empirical evidence of how FOICs shift profits from Indonesia. Previous studies suggest that MNEs use two channels to shift profits: transfer pricing and debt financing. Indonesia is not an exception. This thesis indicates that FOICs (i.e., Indonesian affiliates of foreign MNEs) also use

transfer pricing and debt financing as the channels to shift profits from Indonesia. However, in the case of Indonesia, transfer pricing plays a more important role than debt financing. By focusing on a developing country, the empirical evidence provided by this thesis is expected to contribute to efforts to provide a clear picture of cross-border profit shifting by MNEs operating in developing countries.

Similarly to policymakers in other developing countries, the Indonesian government appears to encounter difficulties in controlling profit shifting by foreign MNE affiliates. According to Dourado (2015), developing countries face difficulties in addressing profit shifting issues and joining tax cooperation because they lack technical and human resources. This is likely to be the source of the problem in Indonesia, and the country should start taking action to overcome the problem; otherwise, profit shifting by MNEs will continue to erode the government's revenue from the CIT sector.

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Appendices

Appendix 1

Indonesian Corporate Tax Return Form

FORM **1771**

MINISTRY OF FINANCE
DIRECTORATE GENERAL OF TAXES

CORPORATE ANNUAL INCOME TAX RETURN

ATTENTION
- FOLLOW INSTRUCTION IN THE MANUAL
- PRINT OR TYPE WITH CAPITAL LETTER OR BLACK INK
- MARK "X" ☐ IN THE APPROPRIATE BOX

TAXABLE YEAR 20☐☐

☐ AMENDED RETURN

IDENTITY

T I N	:
TAXPAYER'S NAME	:
BUSINESS CLASIFICATION	: KLU :
TELEPHONE NUMBER	: - FACSIMILE NO. -
ACCOUNTING PERIOD	: to
FOREIGN DOMICILE OF HEAD OFFICE (Permanent Establisment only)	:

FINANCIAL STATEMENT	: ☐ AUDITED ☐ AUDIT OPINION ☐ UNAUDITED
NAME OF PUBLIC ACCOUNTANT FIRM	:
TIN OF PUBLIC ACCOUNTANT FIRM	:
NAME OF CPA	:
TIN OF CPA	:
NAME OF TAX CONSULTANT FIRM	:
TIN OF TAX CONSULTANT FIRM	:
NAME OF TAX CONSULTANT	:
TIN OF TAX CONSULTANT	:

*) The filling of coloumns of Rupiahs must be without decimal value (see example in the manual book page.3)

(1)	(2)	IDR *) (3)
A. TAXABLE INCOME	1. FISCAL NET INCOME (Copy from Form 1771-1 line 8 column 3).....	1
	2. FISCAL LOSS CARRIED FORWARD (Copy from Special Attachment 2A Total of Column B)	2
	3. TAXABLE INCOME (1 - 2)	3
B. INCOME TAX DUE	4. INCOME TAX DUE (Choose one of these Rates according to Taxpayer criteria. See manual book) a. ☐ Tax Rate Article 17 paragraph (1) letter b X line 3) ..... b. ☐ Tax Rate Article 17 paragraph (2b) X line 3..... c. ☐ Tax Rate Article 31E paragraph (1)	4
	5. ADJUSTMENT FOR FOREIGN TAX CREDIT REFUNDED THAT HAD BEEN CREDITED IN THE PREVIOUS YEAR'S RETURN (Income Tax Art.24)	5
	6. TOTAL TAX DUE (4 + 5)	6
C. TAX CREDITS	7. INCOME TAX BORNE BY THE GOVERNMENT (Foreign Aid Project)	7
	8. a. DOMESTIC TAX CREDIT (Copy from Form 1771-III Total of Column 5)	8a
	b. FOREIGN TAX CREDIT (Copy from Special Attachment 7A Total of column 7)	8b
	c. TOTAL (8a + 8b)	8c
	9. a. ☐ TAX DUE AFTER CREDIT (6 - 7 - 8c) b. ☐ TAX OVERLY WITHHELD	9
	10. PREPAID TAX : a. MONTHLY INSTALLMENT TAX ARTICLE 25.....	10a
	b. NOTICE OF TAX COLLECTION (Principal only)	10b
	c. TAX ARTICLE POINT 8 / DEPARTURE TAX	10c
	d. TOTAL (10a + 10b + 10c)	10d
D. INCOME TAX UNDER/OVER PAID	11. a. ☐ UNDERPAID TAX (INCOME TAX ARTICLE 29) (9 - 10d) b. ☐ OVERPAID TAX (INCOME TAX ARTICLE 28A)	11
	12. UNDERPAID TAX ON NUMBER 11.a SETTLED ON..... DATE ☐☐ MONTH ☐☐ YEAR ☐☐☐☐	
	13. OVERPAID AMOUNT STATED IN 11.b WOULD BE : a. ☐ REFUNDED b. ☐ COMPENSATED WITH OUTSTANDING TAX PAYABLE Refund for a Taxpayer with Certain Criteria only : ☐ Preliminary Refund (Tax Law on Article 17C or 17D)	

F.1.1.32.14

FORM 1771

(1)	(2)		IDR (3)
E. MONTHLY INSTALLMENT OF ART.25 FOR CURREN	14. a. INCOME BASE FOR CALCULATION OF MONTHLY TAX INSTALLMENT	14a	
	b. FISCALL LOSS CARRIED FORWARD : (From Special Attachment 2A Total of Column 9)	14b	
	c. TAXABLE INCOME (14a - 14b)	14c	
	d. TAX DUE (Tax Rate from Part B line 4 X 14c)	14d	
	e. WITHOLDING TAX PAID BASED ON NUMBER 14a	14e	
	f. INCOME TAX MUST BE PAID (14d - 14e)	14f	
	g. INCOME TAX ARTICLE 25 : (1/12 x 14f)	14g	
F.FINAL TAX AND NON-TAXABLE INCOME	15. a. FINAL TAX : (From Form 1771-IV Total Part A Column 5)	15a	
	b. NON-TAXABLE INCOME : GROSS INCOME (From Form 1771-IV Total Part B of Column 3)	15b	
G. STATEMENT OF TRANSACTION IN RELATED PARTIES	16. a. ☐ There is a Transaction in Related Parties and/or with Tax Haven Country Resident (Compulsory to submit Special Attachment 3A, 3A-1. and 3A-2 Manual Book of Annual Return)*		
	b. ☐ There is not a Transaction in Related Parties and/or with Tax Heaven Country Resident.		
H. ATTACHMENTS	17. OTHER THAN FORM OF 1771-I, 1771-II, 1771-III, 1771-IV, 1771-V, AND 1771-VI WITH THIS ALSO ATTACHED :		
	a. ☐ THIRD COPY OF TAX PAYMENT RECEIPT OF INCOME TAX ARTICLE 29		
	b. ☐ FINANCIAL STATEMENTS		
	c. ☐ TRANSCRIPT OF ELEMENTS FROM FINANCIAL STATEMENT (Special Attachment 8A-1 /8A-2 /8A-3 /8A-4 /8A-5 /8A-6)*		
	d. ☐ DEPRECIATION AND AMORTIZATION TABLES (Special Attachment 1A of the Annual Income Tax Return Manual)*		
	e. ☐ CALCULATION OF FISCAL LOSS CARRIED FORWARD (Special Attachment 2A of Income Tax Return Manual)*		
	f. ☐ INVESTMENT FACILITIES PROVIDED (Special Attachment 4A of the Income Tax Return Manual)		
	g. ☐ LIST OF MAJOR BRANCHES (Special Attachment 5A of the Income Tax Return Manual)		
	h. ☐ THIRD COPY OF PAYMENT RECEIPT OF INCOME TAX ARTICLE 26 PARAGRAPH (4) (For Permanent Establishment only)		
	i. ☐ CALCULATION OF INCOME TAX ART.26 PARAGRAPH (4) (Permanent Establishment only) (Special Attachment 6A of Income Tax Return Manua		
	j. ☐ FOREIGN TAX CREDITS (Special Attachment 7A Income Tax Return Manual)*		
	k. ☐ POWER OF ATTORNEY (if needed)		
	l. ☐		
	m. ☐		
	n. ☐		

DECLARATION

Understanding All The Sanctions Provided by The Law and Regulations, I Hereby Declare that The Information Stated in this Return, Including All Attachments Provided, are True, Complete, Clear, and Under No Circumstances Wharsoever.

a. ☐ TAX PAYER b. ☐ AUTHORIZED REPRESENTATIVE c. _____ (place) d. ☐☐ date ☐☐ month ☐☐☐☐ year

SIGNATURE AND COMPANY SEAL

FULL NAME MANAGEMENT/ REPRESENTATI VE : e.

T I N : f.

F.1.1.32.14

FORM

1771 - I

MINISTRY OF FINANCE
DIRECTORATE GENERAL OF TAXES

ATTACHMENT-I

CORPORATE ANNUAL INCOME TAX RETURN

CALCULATION OF FISCAL NET INCOME

TAXABLE YEAR 2 0 _ _

IDENTITY

TIN : _ _ _ _ _ _ _ _ _ _ _ _

TAXPAYER'S NAME : _____

ACCOUNTING PERIOD : _ _ _ _ to _ _ _ _

NO	DESCRIPTIONS		IDR
(1)	(2)		(3)
1.	**DOMESTIC COMMERCIAL NET INCOME :**		
	a. GROSS INCOME	1a	
	b. COST OF GOOD SOLD	1b	
	c. OTHER EXPENSE	1c	
	d. NET INCOME FROM BUSINESS (1a - 1b - 1c)	1d	
	e. INCOME FROM SIDE BUSINESS	1e	
	f. EXPENSE FROM SIDE BUSINESS	1f	
	g. NET INCOME FROM SIDE BUSINESS (1e - 1f)	1g	
	h. TOTAL (1d + 1g)	1h	
2.	**FOREIGN COMMERCIAL NET INCOME** (From Special Attachment 7A Column 4)	2	
3.	TOTAL OF COMMERCIAL NET INCOME (1h + 2)	3	
4.	**INCOME SUBJECT TO FINAL TAX AND NON-TAXABLE INCOME**	4	
5.	**POSITIVE FISCAL ADJUSTMENT :**		
	a. EXPENSE CHARGED OR INCURRED FOR THE PERSONAL BENEFIT OF SHAREHOLDERS, PARTNERSHIP OR MEMBERS	5a	
	b. FORMATION OR ACCUMULATION OF ALLOWANCES	5b	
	c. CONSIDERATION OR REMUNERATION RELATED TO EMPLOYMENT OR SERVICES GIVEN IN THE FORM OF A BENEFIT IN KIND	5c	
	d. EXCESSIVE COMPENSATION PAID TO SHAREHOLDERS OR OTHER ASSOCIATED PARTIES AS A CONSIDERATION OF WORK PERFOMED	5d	
	e. GIFTS, AIDS, OR DONATION	5e	
	f. INCOME TAX	5f	
	g. SALARIES PAID TO A MEMBER OF AN ASSOCIATION, FIRMA, OR LIMITED PARTNERSHIP WHICH CAPTAL DOES NOT CONSIST OF STOCKS	5g	
	h. ADMINISTRATION SANCTION	5h	
	i. LESS COMMERCIAL DEPRECIATION OVER FISCAL DEPRECIATION	5i	
	j. LESS COMMERCIAL AMORTIZATION OVER FISCAL AMORTIZATION	5j	
	k. DEFERRED EXPENSES	5k	
	l. OTHER POSITIVE FISCAL ADJUSTMENTS	5l	
	m. TOTAL 5a s.d. 5l	5m	
6.	**NEGATIVE FISCAL ADJUSTMENT :**		
	a. LESS COMMERCIAL DEPRECIATION UNDER FISCAL DEPRECIATION	6a	
	b. ESS COMMERCIAL AMORTIZATION UNDER FISCAL AMORTIZATION	6b	
	c. DEFERRED INCOME	6c	
	d. OTHER NEGATIVE FISCAL ADJUSTMENTS	6d	
	e. TOTAL 6a s.d. 6d	6e	
7.	**FACILITIES OF INVESTMENT ALLOWANCES** ..... YEAR 7a [ ] (From Special Attachment 4A line 5b)	7b	
8.	**FISCAL NET INCOME** (3 - 4 + 5m - 6e - 7b)	8	

NOTES : Copy Total of Line 8 to Form 1771 Letter A Line 1.

D.1.1.32.31

FORM **1771 - II**

MINISTRY OF FINANCE
DIRECTORATE GENERAL OF TAXES

ATTACHMENT-II

CORPORATE ANNUAL INCOME TAX RETURN

DETAILS OF COST OF GOOD SOLD, OTHER OPERATING EXPENSE AND COMMERCIAL NON-OPERATING EXPENSE

TAXABLE YEAR: 2 0 _ _

IDENTITY

T I N :

TAXPAYER'S NAME :

ACCOUNTING PERIOD : s.d.

NO	DETAILS	COST OF GOOD SOLD (IDR)	OTHER OPERATING EXPENSE (IDR)	NON-OPERATING EXPENSE (IDR)	TOTAL (IDR)
(1)	(2)	(3)	(4)	(5)	(6) = (3) + (4) + (5)
1.	PURCHASE OF MATERIAL/MERCHANDISE				
2.	SALARIES, WAGES, BONUSES, GRATIFICATION, HONORARIUM, AND OTHERS				
3.	TRANSPORTATION EXPENSE				
4.	DEPRECIATION AND AMORTIZATION EXPENSE				
5.	RENT EXPENSES				
6.	INTEREST EXPENSES				
7.	EXPENSE RELATED TO SERVICE				
8.	BAD DEBT EXPENSE				
9.	ROYALTIES EXPENSE				
10.	MARKETING AND PROMOTION EXPENSE				
11.	OTHER EXPENSES				
12.	BEGINNING INVENTORY				
13.	ENDING INVENTORY (-/-)				
14.	TOTAL OF LINE 1 TO 12 MINUS LINE 13				

Note :
- Number 1 for Trading Company fill with Inventory, for industry fill with purchase of material, indirect material and finished good.
- Number 7 includes management fee, technical assistance fee, and other services.
- Line 11 includes total expenses not covered in Line 1 to 10.
- Line 12 and 13 for tradingcompanies, filled with beginning/ending balances of merchandise inventory, for industrial companies, filled with beginning/ending balances of raw materials, indirect materials, work in process, and finished goods inventory.

D.1.1.32.54

1771 - III

MINISTRY OF FINANCE
DIRECTORATE GENERAL OF TAXES

ATTACHMENT- III
CORPORATE ANNUAL INCOME TAX RETURN
FOREIGN TAX CREDIT

TAXABLE YEAR 2 0 _ _

T I N : _ _ . _ _ _ . _ _ _ - _ . _ _ _

TAXPAYER'S NAME :

ACCOUNTING PERIOD : _ _ _ _ to _ _ _ _

NAME AND TIN WITHHOLDING AGENT	WITHHOLDING OBJECT		INCOME TAX WITHHELD (IDR)	WITHHOLDING RECEIPT/TAX PAYMENT SLIP (SSP)/SSPCP	
	TYPES OF INCOME/TRANSACTION	(IDR)		NUMBER	DATE
(2)	(3)	(4)	(5)	(6)	(7)
TOTAL	TTL				

Notes :

- Filled with calculation of each Withholding Tax Receipt.
- Copy of Total Income Tax Article 22, Income Tax Article 23 and Income Tax Article 26 column (5) to Form 1771 Letter C Line 8.a.

Page - _ from _ page Attachment-III

IF NEEDED. ADDITIONAL PAGES MAY BE ADDEED

D.1.1.32.32

FORM

1771 - IV

MINISTRY OF FINANCE
DIRECTORATE GENERAL OF TAXES

ATTACHMENT - IV
CORPORATE ANNUAL INCOME TAX RETURN

FINAL INCOME TAX AND NON-TAXABLE INCOME

TAXABLE YEAR: 20__

IDENTITY

T I N :

TAXPAYER'S NAME :

ACCOUNTING PERIOD : ____ to ____

PART A : FINAL INCOME TAX

NO	TYPES OF INCOME	TAX BASE (IDR)	RATE (%)	INCOME TAX PAYABLE (IDR)
(1)	(2)	(3)	(4)	(5)
1.	DEPOSITS/OTHER SAVINGS AND DISCOUNT OF CENTRAL BANK'S SERTIFICATE/SECURITIES STATE			
2.	INTEREST/DISCOUNT OF BOND			
3.	INCOME FROM SALES VALUES OF SHARE TRADED IN STOCK EXCHANGE			
4.	INCOME FROM SALES VALUE OF VENTURE CAPITAL SHARE			
5.	DISTRIBUTOR/DEALER/AGENT OF OIL PRODUCTS			
6.	INCOME FROM TRANSFER VALUE OF RIGHT ON LAND/BUILDING			
7.	INCOME FROM LEASE/RENT VALUE OF LAND/BUILDING			
8.	CONSTRUCTION RELATED FEE :			
	a. CONTRUCTOR			
	b. DESIGNER			
	c. CONSTRUCTION SUPERVISOR			
9.	GROSS SALES OF REPRESENTATIVE OFFICE			
10.	GROSS INCOME OF FOREIGN SHIPPING/AIRLINES COMPANY			
11.	GROSS INCOME OF DOMESTIC SHIPPING COMPANY			
12.	REVALUATION OF FIXED ASSETS\			
13.	DERIVATIVE TRANSACTION TRADE IN CAPITAL MARKET			
14. etc				
	TOTAL PART A		**TPA**	

Copy of Form 1771 letter F line 15 point a

PART B : NON-TAXABLE INCOME

NO	TYPES OF INCOME		GROSS INCOME (IDR)
(1)	(2)		(3)
1.	AID/DONATION		
2.	GRANT		
3.	DIVIDEND FROM INVESTMENT/OWNERSHIP OF SHARES OF THE INDONESIA BUSINESS ENTITIES (Article 4 Paragraph (3) Item f of Income Tax Law)		
4.	CONTRIBUTION AND SPECIFIC INCOME RECEIVED BY A PENSION FUND		
5.	SHARES OF PROFIT RECEIVED BY VENTURE CAPITAL COMPANIES FROM ITS PARTNERS		
6.	EXCESS INCOME RECEIVED BY NONPROFIT AND REGISTERED EDUCATION INSTITUTION OR RESEARCH AND DEVELOPMENT ESTABLISHMENT WHICH ARE REINVESTED IN THE FORM OF FACILITIES AND IN INFRASTRUCTURE FOR EDUCATIONAL AND/OR R&D ACTIVITIES		
7. etc			
	TOTAL PART B	**TPB**	

Copy to Form 1771 letter F line 15 point b

IF NEEDED. ADDITIONAL PAGES MAY BE ADDEED

Page - ____ from ____ page Attachment-IV

D.1.1.32.34

FORM **1771 - V**

MINISTRY OF FINANCE
DIRECTORATE GENERAL OF TAXES

ATTACHMENT - V

CORPORATE ANNUAL INCOME TAX RETURN

- **LIST OF SHAREHOLDERS/CAPITAL OWNERS AND TOTAL DIVIDENDS DISTRIBUTED**
- **LIST OF DIRECTORS AND COMMISSIONERS**

TAXABLE YEAR 2 0 _ _

IDENTITY

T I N :

TAXPAYER'S NAME :

ACCOUNTING PERIOD : to

PART A : LIST OF SHAREHOLDERS/CAPITAL OWNERS AND TOTAL DIVIDENDS DISTRIBUTED

NO	NAME AND ADDRESS	T I N	TOTAL PAID IN SHARES		DIVIDEND (IDR)
			(IDR)	%	
(1)	(2)	(3)	(4)	(5)	(6)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10. dst					
	TOTAL PART A	**TPA**		100%	

PART B : LIST OF DIRECTORS AND COMMISSIONERS

NO	NAME AND ADDRESS	T I N	POSITION
(1)	(2)	(3)	(4)
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10. dst			

IF NEEDED. ADDITIONAL PAGES MAY BE ADDEED

Page - from page Attachment-V

D.1.1.32.35

FORM **1771 - VI**

MINISTRY OF FINANCE

DIRECTORATE GENERAL OF TAXE

ATTACHMENT - VI

CORPORATE ANNUAL INCOME TAX RETURN

- **LIST OF CAPITAL CONTRIBUTION IN AFFILIATION COMPANIES**
- **LIST OF ACCOUNT PAYABLE FROM SHAREHOLDERS AND/OR AFFILIATION COMPANIES**
- **LIST OF ACCOUNT RECEIVABLE TO SHAREHOLDERS AND/OR AFFILIATION COMPANIES**

TAXABLE YEAR 2 0 _ _

IDENTITY

T I N :

TAXPAYER'S NAME :

ACCOUNTING PERIOD : _ _ _ _ to _ _ _ _

PART A : LIST OF CAPITAL CONTRIBUTION IN AFFILIATION COMPANIES

NO	NAME AND ADDRESS	T I N	AMOUNT OF CAPITAL CONTRIBUTION	
			(IDR)	%
(1)	(2)	(3)	(4)	(5)
1.				
2.				
3.				
4.				
5. etc				
	TOTAL	**TTL**		

PART B : LIST OF ACCOUNT PAYABLE FROM SHAREHOLDERS AND/OR AFFILIATION COMPANIES

NO	NAME AND ADDRESS	T I N	TOTAL LOAN (IDR)	YEAR	INTEREST/ YR %
(1)	(2)	(3)	(4)	(5)	(6)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12					
etc					

PART C : LIST OF ACCOUNT RECEIVABLE TO SHAREHOLDERS AND/OR AFFILIATION COMPANIES

NO	NAME AND ADDRESS	T I N	TOTAL LOAN (IDR)	YEAR	INTEREST/ YR %
(1)	(2)	(3)	(4)	(5)	(6)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12					
dst					

IF NEEDED. ADDITIONAL PAGES MAY BE ADDEED

Page - _ from _ page Attachment-VI

D.1.1.32.36

8A-1	INDUSTRIAL COMPANIES	SPECIAL ATTACHMENT CORPORATE ANNUAL INCOME TAX RETURN **TRANSCRIPT OF ELEMENTS CITATION OF FINANCIAL STATEMENT**	8A-1 TAXABLE YEAR 2 0	

TIN :

TAXPAYER'S NAME :

I. ELEMENTS FROM BALANCE SHEET

NO.	DESCRIPTION	VALUE (IDR)
1.	CASH AND EQUIVALENT	
2.	TEMPORARY INVESTMENTS	
3.	ACCOUNT RECEIVABLES-THIRD PARTIES	
4.	ACCOUNT RECEIVABLES-RELATED PARTIES	
5.	ACCOUNT RECEIVABLE-THIRD PARTIES	
6.	OTHER RECEIVABLE - RELATED PARTIES	
7.	ALLOWANCE FOR DOUBTFUL ACCOUNTS	
8.	INVENTORIES	
9.	PREPAID EXPENSES	
10.	ADVANCES	
11.	OTHER CURRENT ASSETS	
12.	LONG - TERM RECEIVABLES	
13.	LAND AND BUILDINGS	
14.	OTHER FIXED ASSETS	
15.	LESS : ACCUMULATED DEPRECIATION	
16.	INVESTMENT IN ASSOCIATES	
17.	OTHER LONG -TERM INVESTMENTS	
18.	INTANGIBLE ASSETS	
19.	DEFERRED TAX ASSETS	
20.	OTHER NON-CURRENT ASSETS	
	TOTAL ASSETS	

NO.	DESCRIPTION	VALUE (IDR)
1.	ACCOUNT PAYABLE - THIRD PARTIES	
2.	ACCOUNTS PAYABLE-RELATED PARTIES	
3.	INTEREST PAYABLE	
4.	TAXES PAYABLE	
5.	DIVIDENDS PAYABLE	
6.	ACCRUED EXPENSES	
7.	SHORT-TERM BANK LOANS	
8.	LONG TERM DEBTS-CURRENT MATURITIES	
9.	ADVANCES	
10.	OTHER CURRENT-LIABILITIES	
11.	LONG-TERM DEBT-BANK LOANS	
12.	LONG-TERM DEBT-THIRD PARTIES	
13.	LONG-TERM DEBT-RELATED PARTIES	
14.	DEFERRED TAX LIABILITIES	
15.	OTHER NON-CURRENT LIABILITIES	
16.	CAPITAL STOCK	
17.	ADDITIONAL PAID-IN CAPITAL	
18.	RETAINED EARNING FROM PREVIOUS YEAR	
19.	RETAINED EARNINGS	
20.	OTHER EQUITY	
	TOTAL LIABILITIES AND OWNER'S EQUITY	

II. ELEMENTS FOM INCOME STATEMENT

NO.	DESCRIPTION		VALUE (IDR)
1.	NET SALES		
2.	MATERIALS		
3.	DIRECT LABOUR		
4.	FACTORY OVERHEAD		
5.	MANUFACTURING COST (2 + 3 + 4)		
6.	WORK IN PROCESS-BEGINNING		
7.	WORK IN PROCESS-ENDING		
8.	COST OF GOOD MANUFACTURE (5 + 6 - 7)		
9.	FINISHED GOODS-BEGINNING		
10.	FINISHED GOODS-ENDING		
11.	COST OF GOOD SOLD (8 + 9 - 10)		
12.	**GROSS PROFIT (1 - 11)**		
13.	SELLING EXPENSES		
14.	GENERAL AND ADMINISTRATIVE EXPENSES		
15.	**PROFIT (12 - 13 - 14)**		
16.	OTHERS INCOME (EXPENSES)		
17.	NET EARNINGS OF ASSOCIATES		
18.	**INCOME BEFORE INCOME TAX BENEFIT/(EXPENSE) (15 + 16 + 17)**		
19.	INCOME TAX BENEFIT/(EXPENSE)		
20.	**NET EARNINGS FROM NORMAL ACTIVITIES (18 - 19)**		
21.	EXTRAORDINARY ITEMS		
22.	**INCOME BEFORE MINORITY INTEREST IN NET EARNINGS OF SUBSIDIARIES (20 + 21)**		
23.	MINORITY INTEREST IN NET EARNINGS OF SUBSIDIARIES		
24.	**NET PROFIT (22 - 23)**		

III. TRANSACTION ELEMENTS WITH RELATED PARTIES UNDER FINANCIAL ACCOUNTING STANDARD GUIDELINES (PSAK) NUMBER 7

NO.	PARTIES	TYPES OF TRANSACTION	TRANSACTION VALUE (IDR)

DECLARATION

Understanding All The Sanctions Provided by The Law and Regulations, I Hereby Declare that The Information Stated in this Return, Including All Attachments Provided, are True, Complete, Clear, and Under No Circumstances Whatsoever.

a. ....., (date) (month) (year)

(Place)

b. ☐ TAXPAYER ☐ AUTHORIZED/REPRESENTATIVE

c. FULL NAME OF MANAGEMENT/REPRESENTATIVE

(d. Signature and Company Seal)

Appendix 2

Tax Treaty Network of Indonesia as at 30 June 2018

No.	Partner Countries	Effective Date
1	Algeria	1 January 2001
2	Armenia	1 January 2017
3	Australia	1 July 1993
4	Austria	1 January 1989
5	Bangladesh	1 January 2007
6	Belarus	9 May 2018
7	Belgium	1 January 2002
8	Brunei Darussalam	1 January 2003
9	Bulgaria	1 January 1993
10	Canada	1 January 1980
11	China	1 January 2004
12	Czech	1 January 1997
13	Democratic People's Republic of Korea	1 January 2005
14	Denmark	1 January 1987
15	Egypt	1 January 2003
16	Finland	1 January 1990
17	France	1 January 1981
18	Germany	1 January 1992
19	Hong Kong	1 January 2013
20	Hungary	1 January 1994
21	India	1 January 1988

No.	Partner Countries	Effective Date
22	Iran	1 January 2011
23	Italy	1 January 1996
24	Japan	1 January 1983
25	Jordan	1 January 1999
26	Kingdom of Morocco	1 January 2013
27	Kuwait	1 January 1999
28	Luxembourg	1 January 1995
29	Malaysia	1 January 1987
30	Mexico	1 January 2005
31	Mongolia	1 January 2001
32	Netherlands	1 January 2004
33	New Zealand	1 January 1989
34	Norway	1 January 1991
35	Pakistan	1 January 1991
36	Papua New Guinea	1 January 2015
37	Philippines	1 January 1983
38	Poland	1 January 1994
39	Portuguese	1 January 2008
40	Qatar	1 January 2008
41	Republic of Croatia	1 January 2013
42	Republic of Korea	1 January 1990
43	Republic of Suriname	1 January 2014
44	Romania	1 January 2000

No.	Partner Countries	Effective Date
45	Russia	1 January 2003
46	Saudi Arabia	1 January 1985
47	Seychelles	1 January 2001
48	Singapore	1 January 1992
49	Slovakia	1 January 2002
50	South Africa	1 January 1999
51	Spain	1 January 2000
52	Sri Lanka	1 January 1995
53	Sudan	1 January 2001
54	Sweden	1 January 1990
55	Switzerland	1 January 1990
56	Syria	1 January 1999
57	Taiwan	1 January 1996
58	Thailand	1 January 2004
59	Tunisia	1 January 1994
60	Turkey	1 January 2001
61	Ukraine	1 January 1999
62	United Arab Emirates	1 January 2000
63	United Kingdom	1 January 1995
64	United States	1 February 1997
65	Uzbekistan	1 January 1999
66	Venezuela	1 January 2001
67	Vietnam	1 January 2000

Source: Armenia and Belarus: DGT officials; Other countries: List of Indonesia's Tax Treaty Network (Directorate General of Tax, 2016a, pp. 145-146)

Appendix 3

Final Sample by Country of Parent, 2009–2015 (Study 1—TI Model)

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Japan	173	179	185	207	197	246	148	1,335
Korea, Republic of	111	131	148	171	207	268	261	1,297
Singapore	97	105	109	118	124	137	98	788
Malaysia	29	31	38	43	52	69	50	312
China	15	16	23	33	38	77	75	277
Taiwan	25	25	27	27	29	36	32	201
United States	26	24	26	31	30	37	27	201
Netherlands	27	28	27	25	24	30	29	190
Australia	19	17	18	23	26	36	25	164
British Virgin Islands	21	21	23	24	22	26	17	154
United Kingdom	17	20	23	24	24	24	14	146
Germany	13	15	18	18	17	23	21	125
Hong Kong, SAR	13	13	16	14	19	21	17	113
France	10	11	10	13	19	19	16	98
India	6	10	11	14	18	22	16	97
Switzerland	11	9	10	9	13	12	5	69
Thailand	3	3	5	3	7	10	4	35
Canada	5	4	4	5	4	3	3	28
Luxembourg	4	3	4	4	5	5	3	28
Italy	2	1	3	3	3	7	5	24
Belgium	2	2	3	3	4	6	3	23

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Mauritius	4	4	3	3	2	4	3	23
Spain	0	2	0	4	4	7	4	21
Sweden	3	4	3	4	2	3	2	21
Pakistan	2	2	1	3	2	5	1	16
Austria	2	2	2	2	2	3	2	15
Samoa	0	2	1	2	2	3	2	12
Denmark	1	2	1	1	1	4	1	11
New Zealand	0	1	1	3	2	2	2	11
Philippines	1	0	1	1	2	3	2	10
Guinea	2	2	1	2	1	1	0	9
Finland	1	1	1	1	1	1	1	7
Marshall Islands	1	1	1	1	1	1	1	7
Norway	1	1	1	1	0	1	1	6
Brunei	0	0	0	1	2	2	0	5
Cayman Islands	0	0	0	0	0	3	2	5
Channel Islands	1	1	1	1	1	0	0	5
Liberia	1	1	0	1	1	1	0	5
Panama	1	0	1	1	1	0	1	5
Poland	0	1	1	1	1	1	0	5
Jordan	0	0	1	1	1	0	1	4
Kenya	0	0	1	1	1	1	0	4
Czech Republic	0	0	0	0	0	2	1	3

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Iran	1	0	0	0	1	1	0	3
Liechtenstein	0	1	0	0	1	1	0	3
Argentina	0	0	0	1	1	0	0	2
Egypt	0	0	0	0	0	1	1	2
Estonia	0	0	0	0	0	0	2	2
Iraq	0	0	0	0	1	0	1	2
Lebanon	0	0	0	0	0	1	1	2
Maldives	0	0	0	0	0	1	1	2
Nigeria	0	0	0	1	1	0	0	2
Saudi Arabia	0	0	0	0	0	2	0	2
Seychelles	0	0	0	0	0	1	1	2
Turkey	0	0	0	0	0	0	2	2
United Arab Emirates	1	0	1	0	0	0	0	2
Vietnam	0	0	0	0	1	1	0	2
Congo	0	0	0	0	0	1	0	1
Cyprus	0	0	0	0	0	1	0	1
Mali	0	0	0	0	0	1	0	1
Portugal	0	0	0	0	0	1	0	1
Total	652	696	754	849	918	1,175	905	5,949

Appendix 4

USD—IDR Exchange Rates for Tax Purposes, 2009–2015

Year	Exchange Rate		Finance Minister Decree
	USD1 to IDR	Date	
2009	IDR 9,502	31-Dec-09	1397/KM.1/2009
2010	IDR 9,044	31-Dec-10	1145/KM.1/2010
2011	IDR 9,069	31-Dec-11	1529/KM.1/2011
2012	IDR 9,708	31-Dec-12	27/KM.11/2012
2013	IDR 12,194	31-Dec-13	64/KM.11/2013
2014	IDR 12,441	31-Dec-14	59/KM.11/2014
2015	IDR 13,640	31-Dec-15	61/KM.11/2015

Appendix 5

Statutory Tax Rates, 2009–2015

Location	Tax Rate %						
	2009	2010	2011	2012	2013	2014	2015
Argentina	35	35	35	35	35	35	35
Australia	30	30	30	30	30	30	30
Austria	25	25	25	25	25	25	25
Belgium	33.99	33.99	33.99	33.99	33.99	33.99	33.99
British Virgin Islands	0	0	0	0	0	0	0
Brunei		23.5	22	21	20	20	18.5
Canada	33	31	28	26	26	26.5	26.5
Cayman Islands	0	0	0	0	0	0	0
Channel Islands	0	0	0	0	0	0	0
China	25	25	25	25	25	25	25
Congo				40	35	35	35
Cyprus	10	10	10	10	12.5	12.5	12.5
Czech Republic	20	19	19	19	19	19	19
Denmark	25	25	25	25	25	24.5	23.5
Egypt	20	20	20	25	25	25	25
Estonia	21	21	21	21	21	21	20
Finland	26	26	26	24.5	24.5	20	20
France	33.33	33.33	33.33	33.33	33.33	33.33	33.33
Germany	29.44	29.41	29.37	29.48	29.55	29.58	29.65
Guinea	35	35	35	35	35	35	35
Hong Kong, SAR	16.5	16.5	16.5	16.5	16.5	16.5	16.5

Location	Tax Rate %						
	2009	2010	2011	2012	2013	2014	2015
India	33.99	33.99	32.44	32.45	33.99	33.99	34.61
Indonesia	28	25	25	25	25	25	25
Iran	25	25	25	25	25	25	25
Iraq	15	15	15	15	15	15	15
Italy	31.4	31.4	31.4	31.4	31.4	31.4	31.4
Japan	40.69	40.69	40.69	38.01	38.01	35.64	33.06
Jordan	25	14	14	14	14	14	20
Kenya				30	30	30	30
Korea, Republic of	24.2	24.2	22	24.2	24.2	24.2	24.2
Lebanon	15	15	15	15	15	15	15
Liberia	25	25	25	25	25	25	25
Liechtenstein			12.5	12.5	12.5	12.5	12.5
Luxembourg	28.59	28.59	28.8	28.8	29.22	29.22	29.22
Malaysia	25	25	25	25	25	25	25
Maldives	0	0	0	0	0	0	0
Mali							30
Marshall Islands	0	0	0	0	0	0	0
Mauritius	15	15	15	15	15	15	15
Netherlands	25.5	25.5	25	25	25	25	25
New Zealand	30	30	28	28	28	28	28
Nigeria	30	30	30	30	30	30	30
Norway	28	28	28	28	28	27	27

Location	Tax Rate %						
	2009	2010	2011	2012	2013	2014	2015
Pakistan	35	35	35	35	35	34	33
Panama	30	27.5	25	25	25	25	25
Philippines	30	30	30	30	30	30	30
Poland	19	19	19	19	19	19	19
Portugal	25	25	25	25	25	23	21
Samoa	27	27	27	27	27	27	27
Saudi Arabia	20	20	20	20	20	20	20
Seychelles	40	33	33	33	33	33	33
Singapore	18	17	17	17	17	17	17
Spain	30	30	30	30	30	30	28
Sweden	26.3	26.3	26.3	26.3	22	22	22
Switzerland	18.96	18.75	18.31	18.06	18.01	17.92	17.92
Taiwan	25	17	17	17	17	17	17
Thailand	30	30	30	23	20	20	20
Turkey	20	20	20	20	20	20	20
United Arab Emirates	55	55	55	55	55	55	55
United Kingdom	28	28	26	24	23	21	20
United States	40	40	40	40	40	40	40
Vietnam	25	25	25	25	25	22	22

Sources: British Virgin Islands: http://www.ey.com/Publication/vwLUAssets/Worldwide_corporate_tax_guide_2015/$FILE/Worldwide%20Corporate%20Tax%20Guide%202015.pdf; Brunei (2010–2011): http://www.rd.go.th/publish/fileadmin/user_upload/AEC/AseanTax-Brunei.pdf, (2012–2015): https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-corporate-tax-rates-2012-2016.pdf; Channel Islands: http://taxsummaries.pwc.com/uk/taxsummaries/wwts.nsf/ID/Jersey-Corporate-Taxes-on-corporate-income; Guinea: http://www.tradingeconomics.com/guinea/corporate-tax-rate; Iran: http://www.doingbusiness.org/data/exploreeconomies/iran/paying-taxes/; Iraq (2009–2012): http://www.tradingeconomics.com/iraq/corporate-tax-rate; Lebanon (2009–2012): http://www.tradingeconomics.com/lebanon/corporate-tax-rate; Liberia: http://www.doingbusiness.org/

data/exploreeconomies/liberia/paying-taxes/; Maldives: http://www.tradingeconomics.com/maldives/corporate-tax-rate; Mali: http://www.doingbusiness.org/data/exploreeconomies/guinea/paying-taxes/; Marshall Islands: http://www.doingbusiness.org/data/exploreeconomies/marshall-islands/paying-taxes; Seychelles: http://www.tradingeconomics.com/seychelles/corporate-tax-rate; other locations/year: https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html.

Appendix 6

Final Sample by Two-digit Industry Primary Group, 2009–2015 (TI Model)

Industry Primary Groups	Year							Total
	2009	2010	2011	2012	2013	2014	2015	
10 (food industry)	28	30	27	37	32	28	16	198
11 (beverage industry)	5	5	6	5	8	7	3	39
12 (tobacco industry)	9	8	11	12	9	9	8	66
13 (textile industry)	22	24	23	25	23	26	18	161
14 (confection industry)	23	29	34	34	37	47	40	244
15 (leather and foot-ware)	15	18	20	20	26	30	33	162
16 (wood, non-furniture)	8	9	10	8	9	12	8	64
17 (paper industry)	5	4	5	5	9	8	8	44
18 (printing industry)	3	2	3	5	2	8	6	29
19 (coal and oil refinery)	1	1	1	0	1	4	2	10
20 (chemical industry)	44	49	51	52	57	50	43	346
21 (pharmaceutical)	4	4	4	4	4	4	2	26
22 (rubber industry)	39	42	39	44	43	46	37	290
23 (minerals non-metal)	18	18	15	18	21	22	9	121
24 (basic metal)	18	16	19	21	16	16	4	110
25 (metal goods)	22	27	28	30	27	37	23	194
26 (computers, electronics)	33	36	37	40	34	32	19	231
27 (electrical)	13	13	12	14	14	12	8	86
28 (industrial machinery)	29	29	29	38	38	38	34	235
29 (automobile)	35	39	42	45	39	44	21	265
30 (transport equipment	18	19	18	17	14	17	7	110
31 (furniture)	10	10	11	13	18	23	13	98
32 (processing)	7	7	9	11	11	13	14	72

Industry Primary Groups	Year							Total
	2009	2010	2011	2012	2013	2014	2015	
33 (repair-machinery)	6	5	7	9	10	9	10	56
35 (electricity and gas sup)	0	0	1	1	2	2	1	7
36 (water supply)	2	2	2	2	1	2	2	13
38 (waste management)	0	0	2	1	2	3	2	10
41 (non-civil construction)	7	9	9	12	15	29	22	103
42 (civil construction)	14	13	12	15	19	24	16	113
43 (special construction)	9	8	7	11	10	12	11	68
45 (automobile trading)	6	7	10	10	8	12	4	57
46 (non-automobile trad)	81	89	110	133	158	248	232	1,051
47 (non-automobile retail)	5	8	7	12	10	25	14	81
50 (water transport)	3	3	2	3	3	7	3	24
51 (air transport)	1	2	2	1	1	1	0	8
52 (transportation support)	11	11	15	13	19	23	19	111
55 (accommodation)	7	8	8	12	12	20	9	76
56 (food and beverage)	4	3	4	5	13	23	21	73
58 (publishing)	0	0	0	0	0	2	4	6
61 (telecommunication)	3	3	4	2	2	7	5	26
62 (programming)	6	5	5	5	9	11	14	55
63 (information service)	2	1	3	4	2	11	12	35
66 (supporting financial)	0	0	0	1	1	1	0	3
68 (real estate)	10	12	11	13	12	18	18	94
70 (management consult)	19	27	27	32	50	66	58	279
71(architecture service)	14	9	15	13	14	15	13	93
72 (research and dev)	2	1	1	1	3	1	0	9
73 (adv. and market rese)	0	0	0	0	0	0	1	1

Industry Primary Groups	Year							Total
	2009	2010	2011	2012	2013	2014	2015	
74 (other professional)	4	4	4	5	7	11	7	42
77 (rental services)	3	3	2	2	2	1	1	14
78 (employment services)	1	0	1	2	1	2	2	9
79 (travel agencies)	3	3	3	3	3	4	1	20
81 (bldg. and landscaping)	0	1	1	1	1	1	0	5
82 (administration)	2	2	3	2	5	5	1	20
85 (education services)	1	0	1	1	2	3	3	11
86 (health services)	2	2	1	1	1	5	1	13
89 (other social services)	0	0	1	0	2	2	0	5
91(library and archive)	9	9	11	10	13	20	8	80
93 (sport services)	3	3	4	5	5	6	5	31
95 (repair services)	0	0	0	0	0	1	1	2
96 (other personal services)	0	1	2	4	2	5	3	17
99 (international agencies)	3	3	2	4	6	4	5	27
Total	652	696	754	849	918	1,175	905	5,949

Appendix 7

Variance Inflation Factor—Study 1

Variable	VIF			
	TI		AP	
	Pooled OLS with clustered errors	Pooled OLS after log-transforming the dependent variable + clustering errors	Pooled OLS with clustered errors	Pooled OLS after log-transforming the dependent variable + clustering errors
TRdiff	1.17	1.19	1.18	1.18
ln*Sales*	1.97	1.82	1.88	1.87
Age	1.72	1.62	1.67	1.67
Industry group (max)	5.66	4.60	4.79	4.78
Year (max)	2.31	1.96	2.16	2.15

Appendix 8

Regression Result for Industry Groups: Effect of Tax Rate Difference on TI

$$TI/S_{it} = \beta_0 + \beta_1 TRdiff_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-64} Industry_{it} + \beta_{65-70} Year_t + \varepsilon_{it}$$

Industry Group	Estimated Coefficient	*t*-statistic
11 (beverage industry)	0.141	8.03***
12 (tobacco industry)	0.133	9.37***
13 (textile industry)	−0.033	−3.09***
14 (confection industry)	−0.042	−4.41***
15 (leather goods and foot-ware)	−0.026	−2.48**
16 (wood, non-furniture)	−0.042	−2.92***
17 (paper industry)	−0.030	−1.78*
18 (printing industry)	−0.005	−0.25
19 (coal and oil refinery)	0.046	1.44
20 (chemical industry)	0.011	1.21
21 (pharmaceutical)	−0.030	−1.46
22 (rubber industry)	−0.028	−3.04***
23 (minerals non-metal)	−0.011	−0.93
24 (basic metal)	−0.019	−1.59
25 (metal goods)	0.016	1.57
26 (computers, electronics)	−0.050	−5.21***
27 (electrical)	−0.029	−2.20**
28 (industrial machinery)	0.004	0.46
29 (automobile)	0.008	0.88
30 (transport equipment	0.020	1.68*

Industry Group	Estimated Coefficient	*t*-statistic
31 (furniture)	−0.034	−2.73***
32 (processing)	−0.030	−2.20**
33 (repair-machinery)	0.024	1.56
35 (electricity and gas supply)	0.018	0.47
36 (water supply)	0.119	4.16***
38 (waste management)	0.021	0.65
41 (non-civil construction)	−0.081	−6.70***
42 (civil construction)	−0.054	−4.57***
43 (special construction)	−0.056	−4.00***
45 (automobile trading)	−0.020	−1.36
46 (non-automobile trading)	−0.007	−0.86
47 (non-automobile retail)	−0.037	−2.78***
50 (water transport)	−0.046	−2.12**
51 (air transport)	−0.026	−0.72
52 (transportation support)	0.045	3.81***
55 (accommodation)	−0.013	−0.98
56 (food and beverage service)	−0.014	−0.97
58 (publishing)	−0.063	−1.53
61 (telecommunication)	0.033	1.60
62 (programming)	0.029	1.92*
63 (information service)	−0.014	−0.78
66 (supporting financial services)	−0.013	−0.22
68 (real estate)	−0.022	−1.75

Industry Group	Estimated Coefficient	*t*-statistic
70 (management consulting)	0.047	4.84***
71(architecture service)	−0.003	−0.23
72 (research and development)	0.130	3.83***
73 (advertising and market research)	−0.011	−0.11
74 (other professional services)	0.046	2.72***
77 (rental services)	0.060	2.16**
78 (employment services)	0.055	1.63
79 (travel agencies)	−0.037	−1.59
81 (building and landscaping services)	−0.016	−0.37
82 (administration services)	0.017	0.74
85 (education services)	−0.008	−0.26
86 (health services)	−0.043	−1.49
89 (other social services)	−0.027	−0.60
91(library and archive services)	0.086	6.51***
93 (sport services)	0.042	2.19**
95 (repair-computer and households)	−0.002	−0.03
96 (other personal services)	−0.051	−2.01**
99 (international agencies)	0.042	2.05**

Appendix 9

Unbalanced Panel Data—Study 1 (TI Model)

Frequency	%	Cumulated	Pattern
255	13.81	13.81	 1
214	11.59	25.39	. . . . . 1 .
184	9.96	35.35	 11
158	8.55	43.91	1111111
155	8.39	52.3	111111 .
66	3.57	55.87	11111 . .
56	3.03	58.91	. . . . 11 .
52	2.82	61.72	. . . . 1 . .
52	2.82	64.54	 111
655	35.46	100	(other patterns)
1,847	100		XXXXXXX

Notes: The panel is unbalanced: There are 1,847 firms with 5,973 firm-year observations. On average, a firm has 3.2 yearly observations. Some firms have data for only one year (e.g., 255 firms have data for 2015 only; 214 firms have data for 2014 only). Only 158 firms out of 1,847 (less than 9%) have data for all seven years.

Appendix 10

Final Sample by Country of Parent, 2009–2015 (Study 2)

A. AP

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Japan	98	108	116	125	80	144	116	787
Korea, Republic of	77	91	114	112	44	92	186	716
Singapore	55	59	70	63	37	60	65	409
Malaysia	22	22	29	22	18	27	45	185
China	11	13	19	13	5	14	50	125
Taiwan	18	22	21	21	5	11	25	123
United States	10	17	15	16	17	20	19	114
Netherlands	19	19	14	12	9	15	15	103
Australia	14	11	14	11	15	16	16	97
Germany	10	13	15	15	13	14	17	97
British Virgin Islands	14	16	19	13	8	10	12	92
United Kingdom	12	13	16	13	8	10	10	82
Hong Kong, SAR	11	11	10	9	6	7	14	68
France	10	10	11	10	7	4	13	65
India	6	6	11	6	4	5	14	52
Switzerland	8	7	7	6	7	6	3	44
Thailand	3	3	4	2	7	6	2	27
Mauritius	4	4	4	3	2	4	5	26
Luxembourg	1	2	4	4	3	4	3	21
Spain	0	1	0	4	3	3	3	14

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Italy	2	1	2	3	1	1	2	12
Belgium	1	1	2	2	1	2	2	11
Canada	1	2	3	4	0	0	1	11
Sweden	0	2	1	2	2	1	3	11
Austria	1	2	2	1	1	1	2	10
Samoa	1	1	1	0	2	2	3	10
Denmark	1	1	1	1	0	3	2	9
Marshall Islands	1	1	1	1	1	1	1	7
Pakistan	2	2	0	0	0	1	1	6
Cayman Islands	0	0	1	1	1	1	1	5
Liberia	1	1	0	1	1	1	0	5
Philippines	1	1	1	0	0	0	2	5
Channel Islands	1	0	1	1	1	0	0	4
Panama	0	0	1	1	1	0	1	4
Poland	0	1	1	1	0	1	0	4
Brunei	0	0	0	1	1	1	0	3
Finland	0	0	1	0	1	1	0	3
Jordan	0	0	1	0	1	0	1	3
Argentina	0	0	0	1	0	0	1	2
Liechtenstein	0	0	0	0	1	1	0	2
Norway	1	0	0	0	0	0	1	2
Seychelles	1	0	0	0	0	1	0	2

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
United Arab Emirates	1	0	1	0	0	0	0	2
Bahrain	0	0	0	0	0	0	1	1
Czech Republic	0	0	0	0	0	0	1	1
Egypt	0	0	0	0	0	0	1	1
Estonia	0	0	0	0	0	0	1	1
Guinea	0	1	0	0	0	0	0	1
Iran	1	0	0	0	0	0	0	1
Iraq	0	0	0	0	0	0	1	1
Lebanon	0	0	0	0	0	0	1	1
New Zealand	0	0	0	1	0	0	0	1
Vietnam	0	0	0	0	0	0	1	1
Total	420	465	534	502	314	491	664	3,390

B. TI

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Japan	99	108	120	126	73	129	76	731
Korea, Republic of	89	97	127	118	44	83	150	708
Singapore	62	64	74	69	42	53	41	405
Malaysia	24	22	30	22	16	27	26	167
Taiwan	17	21	22	20	6	10	15	111
United States	12	17	18	18	17	19	10	111

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Netherlands	20	18	14	11	10	11	10	94
China	9	11	16	14	7	12	21	90
Australia	15	11	16	12	12	9	12	87
Germany	10	12	14	15	12	12	12	87
United Kingdom	14	16	17	15	9	6	8	85
British Virgin Islands	15	12	17	12	8	10	10	84
Hong Kong, SAR	11	11	13	10	7	7	11	70
France	9	9	10	9	8	3	5	53
Switzerland	8	6	8	7	10	6	3	48
India	6	7	11	6	5	4	6	45
Thailand	3	3	4	3	6	6	2	27
Mauritius	4	4	4	3	2	3	2	22
Luxembourg	2	2	4	4	3	3	2	20
Sweden	1	3	2	3	2	2	2	15
Italy	2	1	3	3	2	1	2	14
Canada	2	2	3	4	0	0	1	12
Belgium	1	1	2	2	1	2	2	11
Samoa	1	1	1	1	2	2	3	11
Spain	0	1	0	3	2	2	3	11
Austria	1	2	2	1	1	1	1	9
Marshall Islands	1	1	1	1	1	1	1	7
Denmark	1	1	1	1	0	2	0	6

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Pakistan	2	2	1	1	0	0	0	6
Liberia	1	1	0	1	1	1	0	5
Channel Islands	1	0	1	1	1	0	0	4
Panama	0	0	1	1	1	0	1	4
Brunei	0	0	0	1	1	1	0	3
Liechtenstein	0	1	0	0	1	1	0	3
Philippines	1	0	1	0	0	0	1	3
Poland	0	1	1	1	0	0	0	3
Jordan	0	0	1	0	1	0	0	2
Norway	1	0	0	0	0	0	1	2
Seychelles	0	0	0	0	0	1	1	2
United Arab Emirates	1	0	1	0	0	0	0	2
Argentina	0	0	0	1	0	0	0	1
Cayman Islands	0	0	0	0	0	0	1	1
Guinea	0	1	0	0	0	0	0	1
Iran	1	0	0	0	0	0	0	1
Iraq	0	0	0	0	0	0	1	1
Kenya	0	0	1	0	0	0	0	1
Lebanon	0	0	0	0	0	0	1	1
New Zealand	0	0	0	1	0	0	0	1
Total	447	470	562	521	314	430	444	3,188

Appendix 11

Unbalanced Panel Data—Study 2

A. AP

Frequency	%	Cumulated	Pattern
299	24.33	24.33	 1
86	7	31.33	. . . . . 1 .
61	4.96	36.29	1111111
52	4.23	40.52	 11
50	4.07	44.59	1111 . . .
34	2.77	47.36	. . 1 . . . .
33	2.69	50.04	111111 .
32	2.6	52.64	. . . 1 . . .
28	2.28	54.92	11111 . .
554	45.08	100	(other patterns)
1,229	100		XXXXXXX

Notes: The panel is unbalanced: There are 1,229 firms with 3,390 firm-year observations. On average, a firm has 2.8 yearly observations. Some firms have data for only one year (e.g., 299 firms have data for 2015 only; 86 firms have data for 2014 only). Only 61 firms out of 1,229 (about 5%) have data for all seven years.

B. TI

Frequency	%	Cumulated	Pattern
170	15.81	15.81	 1
75	6.98	22.79	. . . . . 1 .
64	5.95	28.74	1111 . . .
51	4.74	33.49	1111111
49	4.56	38.05	111111 .

Frequency	%	Cumulated	Pattern
35	3.26	41.3	. . 1 . . . .
35	3.26	44.56	11111 . .
33	3.07	47.63	. . . 1 . . .
31	2.88	50.51	 11
532	49.49	100	(other patterns)
1,075	100		XXXXXXX

Notes: As in Study 1, the panel is unbalanced: There are 1,075 firms with 3,188 firm-year observations. On average, a firm has three yearly observations. Some firms have data for only one year (e.g., 170 firms have data for 2015 only; 75 firms have data for 2014 only). Only 51 firms out of 1,075 (less than 5%) have data for all seven years.

Appendix 12

Variance Inflation Factor—Study 2

Variable	VIF	
	AP	TI
Parent's tax rate	1.02	1.03
Natural log of capital	2.54	2.56
Natural log of labour	2.53	2.59

Appendix 13

Related Parties under Indonesian Income Tax Law

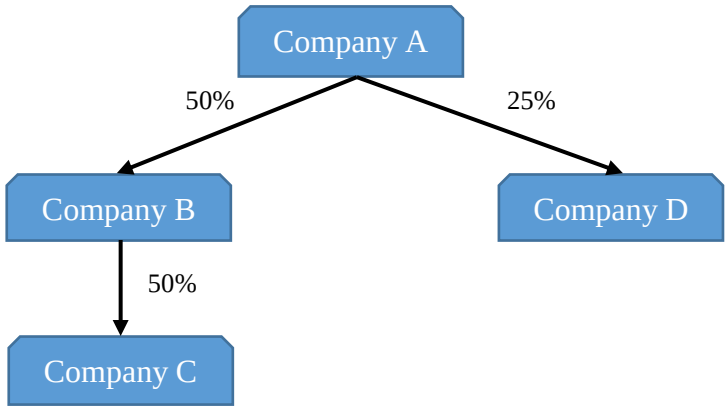
Income Tax Law No. 7/1983 as lastly amended by Law No. 36/2008 ITL Article 18 (4a) refers to related parties as two companies or more that meet at least one of the following two criteria:

a. Ownership

If a taxpayer directly or indirectly owns at least 25% of the equity of another taxpayer, or if a relationship exists between two taxpayers through common ownership of at least 25% of equity by a third taxpayer, all taxpayers involved are related parties. Figure 1 illustrates related parties based on ownership according to the elucidation of ITL Article 18 (4a).

Figure A13.1

Illustration of Related Parties Based on Ownership



As shown in Figure A13.1, Company A directly owns 50% of shares of Company B. Company B owns 50% of shares of Company C. Company A therefore indirectly has ownership of 25% of shares of Company C. Further, Company A also has 25% of shares of Company D. Thus, Company A, Company B, Company C and Company D are considered related parties (e.g., Company A and Company B are related parties because

of direct ownership, Company A and Company C are related parties because of indirect ownership, and Company C and Company D are related parties because of common ownership by Company A.

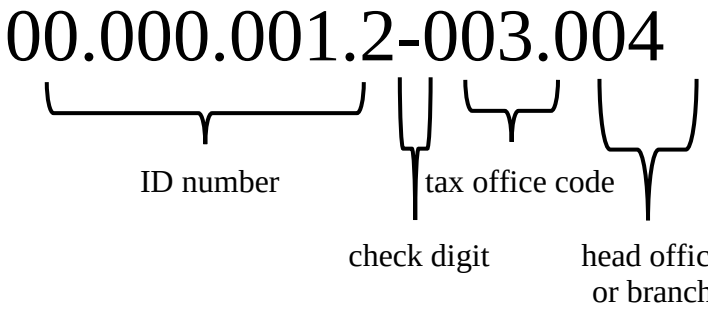
b. Management or technology

Two companies or more are considered related parties if they are under the same management or technology. This provision implies that companies do not have to have ownership to be considered related parties. The presence of control of management and technology in one company by another company are sufficient to indicate that the two companies are related parties for tax purposes.

Appendix 14

Identifying the Obligation to Lodge Annual Tax Return by Looking at the Tax Identification Number

A practical way to determine whether a business establishment is required to lodge an annual tax return is by examining its tax identification number (TIN, known as *nomor pokok wajib pajak* or NPWP in Indonesian). Below is an illustration of the numbering system of a TIN in Indonesia.



The first eight digits are the unique code of the taxpayer. The next digit is the check digit. The following three digits represent the tax office where the taxpayer is registered. The last three digits indicate whether the business establishment is a branch or the head office. If it is the head office, the last three digits will be '000'. If it is a branch, the last three digits will be given the number 001 for branch 1, 002 for branch 2 and so on. The last three digits determine whether the business establishment is obliged to lodge an annual tax return. Head offices (i.e., business establishments with a TIN ending in '000') must lodge an annual tax return. Branches (i.e., those with a TIN ending in three digits other than '000') are not required to lodge an annual tax return.

Unlike branches, subsidiary companies are given TINs that are different from their parent company's TIN. As a result, subsidiaries are required to lodge an annual tax return.[87] The fact that companies do not consolidate for tax purposes allows this thesis to

[87] However, to avoid double taxation, dividend income received by a parent company from its subsidiaries is excluded from dividend income tax under Article 23(4c) of the Indonesian Income Tax Law.

examine whether FOICs shift profits by means of intra-group debt financing by comparing the use of long-term liability to related parties between FOICs and DOICs. Under Indonesian Financial Reporting Standard No. 4 (Pernyataan Standar Akuntansi Keuangan/PSAK No. 4), companies are required to prepare consolidated financial statements for accounting purposes.

Appendix 15

Final Sample by Country of Parent, 2009–2015 (Study 3)

A. *EBIT/S*

Country	Year							Total
	2009	2010	2011	2012	2013	2014	2015	
Japan	81	78	82	82	74	87	86	570
Korea, Republic of	64	61	67	77	59	77	88	493
Singapore	41	42	49	54	54	63	58	361
Malaysia	17	21	21	20	22	30	34	165
United States	15	12	16	14	18	23	15	113
China	8	8	11	21	12	22	19	101
Netherlands	12	13	12	11	13	20	20	101
Taiwan	16	14	13	15	7	13	11	89
Germany	7	11	9	10	9	13	12	71
United Kingdom	8	8	11	7	14	13	9	70
Australia	10	9	10	9	8	11	12	69
British Virgin Islands	7	10	12	7	8	13	10	67
Hong Kong, SAR	5	4	8	9	10	8	10	54
France	9	10	9	7	4	4	6	49
Switzerland	6	7	7	7	8	7	3	45
India	4	4	6	5	5	6	5	35
Thailand	4	5	5	2	6	4	4	30
Mauritius	2	2	4	3	2	2	3	18
Canada	2	2	1	3	2	1	4	15
Luxembourg	1	1	2	1	2	5	3	15

Country	Year							Total
	2009	2010	2011	2012	2013	2014	2015	
Samoa	1	2	2	2	2	1	2	12
Italy	2	1	2	1	2	2	1	11
Spain	0	1	0	0	3	3	3	10
Pakistan	2	1	2	2	1	1	0	9
Liberia	1	1	1	1	1	1	1	7
Seychelles	1	1	1	1	1	1	1	7
Sweden	1	1	1	1	1	1	1	7
Philippines	0	1	1	1	1	1	1	6
Austria	1	1	0	0	1	1	1	5
Guinea	1	1	0	1	1	1	0	5
Norway	1	1	1	1	0	0	1	5
Liechtenstein	1	0	0	0	1	1	1	4
Denmark	1	0	0	0	0	1	1	3
New Zealand	0	0	0	0	0	1	1	2
Panama	1	0	0	0	0	0	1	2
United Arab Emirates	1	0	1	0	0	0	0	2
Vietnam	0	0	0	0	1	1	0	2
Belgium	0	0	0	0	0	1	0	1
Brunei	0	0	0	0	1	0	0	1
Channel Islands	0	0	0	0	0	1	0	1
Estonia	0	0	0	0	0	0	1	1
Nigeria	0	0	0	1	0	0	0	1

Country	Year							Total
	2009	2010	2011	2012	2013	2014	2015	
Portugal	0	0	0	0	0	1	0	1
Total	334	334	367	376	354	442	429	2,636

B. *LTL_RP/TA*

Country	Year							Total
	2009	2010	2011	2012	2013	2014	2015	
Japan	120	133	139	139	135	132	116	914
Korea, Republic of	74	78	88	79	80	86	119	604
Singapore	58	68	72	72	79	89	88	526
Malaysia	20	26	33	26	27	28	50	210
United States	13	20	22	22	24	28	20	149
Netherlands	21	22	20	19	16	25	25	148
China	12	14	18	9	9	11	47	120
Taiwan	12	17	18	16	15	17	20	115
British Virgin Islands	12	13	17	16	14	15	19	106
United Kingdom	13	16	13	16	14	18	13	103
Hong Kong, SAR	11	12	14	12	14	13	22	98
Australia	12	10	14	15	15	12	16	94
Germany	9	13	12	12	13	16	14	89
France	10	11	11	11	12	14	8	77
India	7	7	9	8	7	8	17	63
Switzerland	9	8	8	7	8	8	5	53
Thailand	5	5	4	3	6	5	9	37

Country	Year							Total
	2009	2010	2011	2012	2013	2014	2015	
Luxembourg	3	4	5	4	5	5	3	29
Mauritius	4	4	4	4	4	3	2	25
Canada	2	3	2	2	2	2	3	16
Spain	0	1	1	3	3	3	5	16
Pakistan	3	2	2	2	2	3	1	15
Italy	2	1	2	1	2	2	3	13
Denmark	1	2	1	1	2	2	1	10
Sweden	1	2	2	2	1	1	1	10
Belgium	1	1	1	1	1	2	2	9
Samoa	1	1	1	1	2	1	2	9
New Zealand	0	1	1	1	1	2	2	8
Liberia	1	1	1	1	1	1	1	7
Austria	0	1	1	1	1	1	1	6
Finland	1	1	1	1	1	1	0	6
Channel Islands	1	0	1	1	1	1	0	5
Liechtenstein	1	1	0	1	0	0	1	4
Panama	0	0	1	1	1	0	1	4
Philippines	0	1	1	0	0	1	1	4
Seychelles	1	1	1	0	0	0	1	4
Cayman Islands	0	0	0	0	0	1	2	3
Estonia	0	0	0	0	0	1	2	3
Jordan	0	0	1	0	1	0	1	3

Country	Year							Total
	2009	2010	2011	2012	2013	2014	2015	
Nigeria	0	0	1	0	0	0	1	2
Norway	1	0	0	0	0	0	1	2
Saudi Arabia	0	1	1	0	0	0	0	2
United Arab Emirates	1	0	1	0	0	0	0	2
Bahrain	0	0	0	0	0	0	1	1
Cyprus	0	0	0	0	0	1	0	1
Egypt	0	0	0	0	0	0	1	1
Guinea	0	1	0	0	0	0	0	1
Kenya	0	1	0	0	0	0	0	1
Vietnam	0	0	0	0	0	0	1	1
Total	443	504	545	510	519	559	649	3,729

Appendix 16

Variance Inflation Factor—Study 3

Variable	VIF	
	EBIT/S	*LTL_RP/TA*
FOIC	1.01	1.01
ln*Sales*	1.39	1.31
Age	1.38	1.37
Capital intensity		1.28
Industry group (max)	3.59	4.14
Year (max)	1.93	2.22

Appendix 17

Regression Result before the Matching Procedure for Industry Groups: How FOICs Differ from DOICs in Terms of EBIT and Long-term Liabilities to Related Parties

A. EBIT/S

$$EBIT/S_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-76} Industry_{it} + \beta_{77-82} Year_t + \varepsilon_{it}$$

Industry Group	Estimated Coefficient	*t*-statistic
11 (beverage industry)	-0.008	-0.13
12 (tobacco industry)	0.076	3.22
13 (textile industry)	-0.082	-4.80
14 (confection industry)	-0.086	-6.54
15 (leather goods and foot-ware)	-0.066	-3.48
16 (wood, non-furniture)	-0.105	-4.10
17 (paper industry)	-0.070	-4.31
18 (printing industry)	-0.058	-3.89
19 (coal and oil industry)	-0.088	-4.58
20 (chemical industry)	-0.039	-2.79
21 (pharmaceutical)	-0.032	-1.97
22 (rubber industry)	-0.062	-4.79
23 (minerals non-metal)	-0.037	-2.40
24 (basic metal)	-0.100	-5.63
25 (metal goods)	-0.035	-2.38
26 (computers, electronics)	-0.089	-3.53
27 (electrical)	-0.058	-3.84

Industry Group	Estimated Coefficient	*t*-statistic
28 (industrial machinery)	-0.021	-1.21
29 (automobile)	-0.023	-1.47
30 (transport equipment	-0.045	-2.84
31 (furniture)	-0.059	-4.21
32 (processing)	-0.013	-0.48
33 (repair-machinery)	-0.032	-1.35
35 (electricity and gas supply)	-0.026	-0.80
36 (water supply)	0.105	3.41
37 (industry-waste management)	-0.024	-2.04
38 (waste management)	-0.019	-0.93
41 (non-civil construction)	-0.008	-0.44
42 (civil construction)	-0.017	-1.06
43 (special construction)	-0.011	-0.64
45 (automobile trading)	-0.090	-6.73
46 (non-automobile trading)	-0.066	-5.52
47 (non-automobile retail)	-0.072	-5.36
49 (land transport)	0.020	0.83
50 (water transport)	0.150	4.54
51 (air transport)	-0.123	-4.57
52 (transportation support)	-0.017	-0.96
53 (post and courier)	-0.074	-4.07
55 (accommodation)	0.002	0.07
56 (food and beverage service)	-0.104	-4.88

Industry Group	Estimated Coefficient	*t*-statistic
58 (publishing)	0.033	0.87
59 (audio and video)	-0.063	-2.41
60 (broadcasting)	0.101	2.13
61 (telecommunication)	-0.030	-1.04
62 (programming)	-0.034	-1.83
63 (information service)	0.110	2.89
64 (non-insurance and pension f. services)	0.307	14.30
65 (insurance and pension)	0.250	6.02
66 (supporting financial services)	0.302	13.62
68 (real estate)	0.206	9.86
69 (law and accounting)	0.099	4.62
70 (management consulting)	0.032	1.61
71(architecture service)	-0.032	-1.96
72 (research and development)	0.016	0.24
73 (advertising and market research)	-0.061	-3.43
74 (other professional services)	-0.023	-0.95
77 (rental services)	0.191	5.42
78 (employment services)	-0.070	-5.17
79 (travel agencies)	-0.122	-9.26
80 (security and investigation)	-0.062	-4.96
81 (building and landscaping)	0.047	0.76
82 (administration services)	-0.042	-2.02
85 (education services)	0.001	0.06

Industry Group	Estimated Coefficient	*t*-statistic
86 (health services)	-0.043	-2.19
88 (social service)	0.701	60.30
89 (other social services)	-0.047	-2.18
90 (entertainment and arts)	-0.120	-2.64
91 (entertainment and arts)	-0.032	-1.45
93 (sport services)	-0.015	-0.28
94 (organisation membership)	-0.136	-1.52
95 (repair-computer and households)	0.030	0.80
96 (other personal services)	0.058	0.50
99 (international agencies)	-0.027	-1.11

B. LTL_RP/TA

$$LTL\_RP/TA_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_3 CapInt_{it} + \beta_4 Age_{it} + \beta_{5-77} Industry_{it} + \beta_{78-83} Year_t + \varepsilon_{it}$$

Industry Group	Estimated Coefficient	*t*-statistic
11 (beverage industry)	-0.014	-0.59
12 (tobacco industry)	0.020	1.33
13 (textile industry)	-0.032	-2.12
14 (confection industry)	-0.035	-4.18
15 (leather goods and foot-ware)	-0.005	-0.15
16 (wood, non-furniture)	0.010	0.45
17 (paper industry)	-0.035	-4.06
18 (printing industry)	-0.034	-4.28
19 (coal and oil industry)	-0.019	-1.18

Industry Group	Estimated Coefficient	*t*-statistic
20 (chemical industry)	-0.028	-3.04
21 (pharmaceutical)	-0.016	-1.06
22 (rubber industry)	-0.040	-4.88
23 (minerals non-metal)	-0.021	-1.66
24 (basic metal)	-0.040	-4.88
25 (metal goods)	-0.023	-2.14
26 (computers, electronics)	-0.032	-2.64
27 (electrical)	-0.038	-4.63
28 (industrial machinery)	-0.027	-2.46
29 (automobile)	-0.035	-3.59
30 (transport equipment	-0.048	-5.91
31 (furniture)	-0.032	-3.05
32 (processing)	-0.031	-1.83
33 (repair-machinery)	0.012	0.31
35 (electricity and gas supply)	0.060	1.72
36 (water supply)	-0.042	-2.30
37 (industry-waste management)	-0.054	-7.15
38 (waste management)	-0.043	-5.32
41 (non-civil construction)	-0.031	-3.83
42 (civil construction)	-0.029	-3.54
43 (special construction)	-0.035	-4.44
45 (automobile trading)	-0.027	-3.15
46 (non-automobile trading)	-0.029	-3.88

Industry Group	Estimated Coefficient	*t*-statistic
47 (non-automobile retail)	-0.034	-4.46
49 (land transport)	-0.035	-3.33
50 (water transport)	-0.006	-0.44
51 (air transport)	-0.029	-3.01
52 (transportation support)	-0.026	-2.88
53 (post and courier)	-0.043	-4.76
55 (accommodation)	0.000	0.00
56 (food and beverage service)	-0.023	-1.81
58 (publishing)	-0.022	-1.81
59 (audio and video)	-0.037	-4.57
60 (broadcasting)	0.008	0.40
61 (telecommunication)	-0.021	-1.94
62 (programming)	-0.027	-2.50
63 (information service)	-0.026	-2.47
64 (non-insurance and pension f. services)	-0.017	-1.98
65 (insurance and pension)	0.010	0.97
66 (supporting financial services)	-0.031	-4.03
68 (real estate)	-0.022	-2.64
69 (law and accounting)	-0.023	-1.90
70 (management consulting)	-0.015	-1.47
71(architecture service)	-0.020	-1.90
72 (research and development)	-0.011	-0.50
73 (advertising and market research)	-0.029	-3.43

Industry Group	Estimated Coefficient	*t*-statistic
74 (other professional services)	-0.030	-2.82
77 (rental services)	-0.032	-3.16
78 (employment services)	-0.025	-2.69
79 (travel agencies)	-0.018	-1.04
80 (security and investigation)	-0.035	-4.58
81 (building and landscaping)	-0.041	-5.30
82 (administration services)	-0.042	-4.90
85 (education services)	-0.035	-3.59
86 (health services)	-0.031	-2.10
88 (social service)	-0.035	-4.69
89 (other social services)	-0.032	-3.13
90 (entertainment and arts)	-0.049	-5.99
91 (entertainment and arts)	-0.009	-0.76
93 (sport services)	-0.028	-1.57
94 (organisation membership)	-0.034	-4.58
95 (repair-computer and households)	-0.014	-0.88
96 (other personal services)	-0.049	-4.28
99 (international agencies)	-0.003	-0.20

Appendix 18

Regression Result after the Matching Procedure for Industry Groups: How FOICs Differ from DOICs in Terms of EBIT and Long-term Liabilities to Related Parties

A. EBIT/S

$$EBIT/S_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_3 Age_{it} + \beta_{4-53} Industry_{it} + \beta_{54-59} Year_t + \varepsilon_{it}$$

Industry Group	Estimated Coefficient	*t*-statistic
11 (beverage industry)	0.030	0.46
12 (tobacco industry)	- 0.028	-0.56
13 (textile industry)	- 0.055	-2.24**
14 (confection industry)	- 0.077	-3.60***
15 (leather goods and foot-ware)	- 0.072	-3.20***
16 (wood, non-furniture)	- 0.070	-2.72***
17 (paper industry)	- 0.046	-1.63
18 (printing industry)	- 0.072	-2.30**
20 (chemical industry)	- 0.032	-1.57
21 (pharmaceutical)	- 0.065	-2.17**
22 (rubber industry)	- 0.049	-2.53**
23 (minerals non-metal)	- 0.043	-2.04**
24 (basic metal)	- 0.064	-2.88***
25 (metal goods)	- 0.017	-0.69
26 (computers, electronics)	- 0.101	-3.51***
27 (electrical)	-0.046	-1.91*
28 (industrial machinery)	-0.026	-1.07
29 (automobile)	-0.011	-0.43

Industry Group	Estimated Coefficient	*t*-statistic
30 (transport equipment	-0.040	-1.90*
31 (furniture)	-0.042	-1.64*
32 (processing)	-0.029	-0.96
33 (repair-machinery)	0.038	1.78*
35 (electricity and gas supply)	0.025	0.45
36 (water supply)	0.138	5.91***
41 (non-civil construction)	0.006	0.17
42 (civil construction)	-0.009	-0.24
43 (special construction)	-0.021	-0.63
45 (automobile trading)	-0.051	-2.28**
46 (non-automobile trading)	-0.042	-2.03*
47 (non-automobile retail)	-0.080	-3.12***
50 (water transport)	0.056	0.47
51 (air transport)	-0.213	-2.99***
52 (transportation support)	-0.012	-0.35
55 (accommodation)	-0.027	-0.53
61 (telecommunication)	-0.062	-0.75
62 (programming)	-0.021	-0.78
63 (information service)	0.219	2.49**
68 (real estate)	0.226	4.30***
70 (management consulting)	0.022	0.80
71(architecture service)	-0.028	-1.07
72 (research and development)	0.091	2.00**

Industry Group	Estimated Coefficient	*t*-statistic
73 (advertising and market research)	-0.166	-2.46**
74 (other professional services)	0.035	0.75
78 (employment services)	0.016	0.32
79 (travel agencies)	-0.077	-2.82***
85 (education services)	0.034	0.56
86 (health services)	0.014	0.27
89 (other social services)	-0.069	-3.32***
91 (library and archive services)	-0.010	-0.24
99 (international agencies)	-0.106	-2.35**

B. LTL_RP/TA

$$LTL\_RP/TA_{it} = \beta_0 + \beta_1 FOIC_{it} + \beta_2 \ln Sales_{it} + \beta_3 CapInt_{it} + \beta_4 Age_{it} + \beta_{5-61} Industry_{it} + \beta_{62-67} Year_t + \varepsilon_{it}$$

Industry Group	Estimated Coefficient	*t*-statistic
11 (beverage industry)	-0.024	-0.73
12 (tobacco industry)	0.037	0.92
13 (textile industry)	-0.046	-1.84*
14 (confection industry)	-0.053	-3.11***
15 (leather goods and foot-ware)	0.001	0.01
16 (wood, non-furniture)	0.024	0.60
17 (paper industry)	-0.058	-3.49***
18 (printing industry)	-0.054	-2.73***
20 (chemical industry)	-0.044	-2.50**
21 (pharmaceutical)	-0.032	-1.40

Industry Group	Estimated Coefficient	*t*-statistic
22 (rubber industry)	-0.064	-3.81***
23 (minerals non-metal)	-0.032	-1.41
24 (basic metal)	-0.064	-3.90***
25 (metal goods)	-0.033	-1.50
26 (computers, electronics)	-0.051	-2.77***
27 (electrical)	-0.056	-3.25***
28 (industrial machinery)	-0.047	-2.71***
29 (automobile)	-0.050	-2.84***
30 (transport equipment	-0.070	-4.26***
31 (furniture)	-0.026	-0.89
32 (processing)	-0.049	-2.20**
33 (repair-machinery)	0.005	0.07
35 (electricity and gas supply)	-0.016	-0.39
36 (water supply)	-0.070	-3.91***
38 (waste management)	-0.067	-3.35***
41 (non-civil construction)	-0.043	-2.46***
42 (civil construction)	-0.044	-2.48**
43 (special construction)	-0.059	-3.55***
45 (automobile trading)	-0.048	-2.75***
46 (non-automobile trading)	-0.041	-2.43**
47 (non-automobile retail)	-0.045	-2.40**
50 (water transport)	-0.027	-0.61
51 (air transport)	-0.055	-1.98**

Industry Group	Estimated Coefficient	*t*-statistic
52 (transportation support)	-0.041	-2.04**
55 (accommodation)	-0.013	-0.31
56 (food and beverage service)	-0.045	-2.12**
58 (publishing)	-0.061	-3.39***
61 (telecommunication)	-0.048	-2.55**
62 (programming)	-0.055	-3.30***
63 (information service)	-0.050	-2.50**
68 (real estate)	-0.025	-1.14
70 (management consulting)	-0.033	-1.76*
71(architecture service)	-0.049	-2.75***
72 (research and development)	0.075	1.43
73 (advertising and market research)	-0.040	-1.75*
74 (other professional services)	-0.034	-1.14
77 (rental services)	-0.086	-5.13***
78 (employment services)	-0.065	-3.87***
79 (travel agencies)	-0.009	-0.16
82 (administration services)	-0.066	-3.65***
85 (education services)	-0.049	-2.18**
86 (health services)	-0.066	-3.95***
89 (other social services)	-0.095	-5.09***
91 (library and archive services)	-0.019	-0.73
95 (repair-computer and households)	0.021	0.35
96 (other personal services)	-0.066	-3.64***

Industry Group	Estimated Coefficient	*t*-statistic
99 (international agencies)	-0.019	-0.73