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The 2008 Corporate Income Tax Reform and Its Contribution to Poverty Reduction in Indonesia

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Contents

C	ontents	3
Li	ist of Tables	4
1	Introduction	1
2	The Corporate Tax Reform in Indonesia and Its Effects on the Government Tax Revenue 2.1 The History of Corporate Tax Reform in Indonesia	3 3 5 6
3	Research Methodology 3.1 Indonesian Computable General Equilibrium 3.1.1 Activities/Commodities 3.1.2 Factors of Production 3.1.3 Institution and Household 3.1.4 Elasticity 3.2 Microsimulation 3.3 Endogenous poverty line and poverty calculation 3.4 Simulation Scenarios	8 8 9 9 9 9 10 11 12
4	The 2008 Corporate Tax Reform and Its Implication to Poverty in Indonesia4.1The Macroeconomic Impacts of the 2008 CIT Reform: CGE Results4.2The Poverty Impacts of the 2008 CIT Reform: Microsimulation Results	13 13 14
5	A Sensitivity Analysis	15
6	Concluding Remarks	16
7	Acknowledgments	16

List of Tables

The Corporate Income Tax Rates in ASEAN-6, 1998-2010 (in per cent)	2
The History of Corporate Income Tax Rate in Indonesia	5
The Number of Taxpayers during 2001-2011 (in thousands)	7
Trend of Government Tax Revenues 2005-2011 (in trillion Rupiah)	9
Simulated Changes in Factor Incomes and Demand for Factor Productions under	
the Short Run and Long Run Condition	18
Simulated Changes in Real Value of Macroeconomic Indicators under the Short Run	
and Long Run Condition (in per cent)	19
Simulated Changes in the Headcount Index (per cent) under the Short Run and	
Long Run Condition	20
Simulated Changes in the Poverty Gap Index (per cent) under the Short Run and	
Long Run Condition	21
The Sensitivity Analysis of Simulated Changes in the Head Count Index (per cent)	
of Indonesia under Various Decreases in CIT Rates and Various Elasticity of Sub-	
stitution between Labour and Capital	22
	The Corporate Income Tax Rates in ASEAN-6, 1998-2010 (in per cent) The History of Corporate Income Tax Rate in Indonesia

The 2008 Corporate Income Tax Reform and Its Contribution to Poverty Reduction in Indonesia $\stackrel{\bigstar}{\Rightarrow}$

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Abstract

The CIT reform enacted by Law No.36 of 2008 cuts maximum tax rates from 30 per cent to 25 per cent and offers some incentives for business in Indonesia. This study aims at measuring the impacts of 2008 CIT reform on tax revenue and poverty. The 2008 CIT reform supported with the administrative reforms and the 2008 tax amnesty policy has increased new corporate tax payers by 422,407 and tax revenue by 53.95 per cent during 2009 to 2011. Further, the simulation result of CGE-Microsimulation shows that cutting the CIT rate from 30 per cent to 25 per cent will attract IDR 41.77 trillion of new investments, create 441,910 new job opportunities, boost 1.46 per cent of economic growth, decline 1 per cent of consumer price index, and raise averagely 1.5 per cent of wage rates. These macroeconomic changes contribute significantly to lift 1.88 million people (0.898 per cent) out of poverty.

JEL Classifications: C68, H25, I32, I38

Keywords: Corporate Income Tax Reform, CGE, Microsimulation, Poverty, Indonesia

1. Introduction

In the integrated world economy, foreign capital has become more significant as a financial source of economic development. Broadway (2005) suggested countries that are industrialized, or becoming so, must adopt tax systems that are capable of raising considerable amounts of revenue efficiently, equitably, and with administrative simplicity, while at the same time coping with the competitive features of a globalized world economy. A tax system, therefore, is one of the main tools to attract more investors, both domestic and foreign, to invest more. This condition has intensified a tax competition among countries, particularly developing countries, during the past years.

In the case of ASEAN, Table 1 shows the tax competition identified by the decline in corporate income tax (CIT henceforth) has been observed during the last five years. The average decline of the CIT rate in ASEAN-6 was 5.17 percentage points during 1998 to 2010. All countries except Thailand have reduced CIT rates, ranging from 3 per cent (Malaysia) and 10 per cent (Vietnam), while the CIT rate in Thailand remains unchanged during this period. The lowest CIT rate is in Singapore while the highest is Philippines and Thailand. Most of the countries give additional CIT discount for listed companies and small-medium enterprises (SMEs henceforth).

Indonesia continuously reforms the taxation system by considering changes in both internal factors, i.e. changes in incomes, prices and

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	ne Corp	orate m	come 1a	ix mates	III ASEA	-0, 18	98-2010	(in per cent)
Country	1998	2000	2002	2004	2006	2008	2010	"Percentage Change"
Indonesia	30	30	30	30	30	30	25	-5.00
Malaysia	28	28	28	28	28	26	25	-3.00
Philippines	34	32	32	32	35	35	30	-4.00
Singapore	26	26	24.5	22	20	18	17	-9.00
Thailand	30	30	30	30	30	30	30	0.00
Vietnam	35	32.5	32	28	28	28	25	-10.00
Average ASEAN-6	30.50	29.75	29.42	28.33	28.50	27.83	25.33	-5.17

Table 1: The Corporate Income Tax Rates in ASEAN-6, 1998-2010 (in per cent)

Source: Author's compilation from many sources

economic structure, and external factors, i.e. tax competition among countries to attract investment. The first modern income tax reform in Indonesia was enacted by Law No. 7 of 1983. This law was amended four times by Law No.7 of 1991, Law No. 10 of 1994, Law No. 17 of 2000, and Law No. 36 of 2008. In many respects, the Indonesian income tax known as Pajak Penghasilan (PPh) is progressive and applied to both individual and enterprises. However, Law No.36/2008 introduces a flat CIT rate but still remains the progressiveness of personal income tax.

This law cut maximum tax rates from 30 per cent (2008) to 25 per cent (2010) and offered more incentives to listed companies and SMEs. A 50 per cent discount on the normal rate is granted to SMEs with the turnover up to IDR 50 billion. This discount is imposed on taxable income of IDR 4.8 billion. While listed companies with minimum 40 per cent of shares owned by the public are granted 5 per cent discount of the normal rate. These incentives may encourage large companies to expand their business and SMEs to register their business as a legal entity. The legal entity would benefit SMEs to access capital from financial institutions and to make a contract with other parties, so they would easily expand their business. The expansion of SMEs and large enterprises would create job opportunities, increase household incomes, and support the poverty alleviation in Indonesia.

Many literatures showed that CIT reforms promote higher investments and expanding businesses for SMEs. Djankov et al. (2010) analyzing 85 countries in 2004 found that a 10 per cent decrease in the effective CIT rate increases aggregate investment to GDP ratio by 2 percentage points. Furthermore, a decrease in CIT rates negatively correlated with the size of an informal economy. De Mooij and Ederveen (2005) found that most studies reporting a negative relationship between taxation and foreign direct investment (FDI). One per cent decrease in the CIT will increase 3.72 per cent of FDI. Further, Zariyawati et al. (2010) found that SMEs performance has improved significantly when CIT charges are decreasing in Malaysia. Fazzari (1987) and Diamond (2005) confirmed that firms investment would increase if the cost of capital is taxed deductible. Chang and Doina (2005) conducting a study on corporate tax reform in European Union (EU) countries found that that SMEs appear to be directly affected by the national CIT rather than multinational firms. The CIT reforms create a large number of jobs and enhanced the level of entrepreneurship.

Other literatures, however, showed that the international tax competition not only drives a reduction of CIT rates but also affects negatively the stock of public capital. Lower CIT rates may raise a budget deficit as governments are unable to cover the cost of providing public services (Shinn, 1994). Gomes and Pouget (2008) applying the general equilibrium analysis found that a decrease in the statutory CIT rate from 45 per cent to 30 per cent will reduce public investment by 0.4 per cent of output. More precisely, the econometric estimation of 21 OECD countries confirmed that a decline of 15 per cent of CIT reduces public investment by 0.6 per cent to 1.1 per cent of GDP.

On the contrary, in the case of developing countries like Ghana, the tax reform succeeded in improving revenue generation, enhancing the efficiency of the tax administration, and improving equity in the tax system. This also removed market distortions and strengthened economic incentives (Kusi, 1998). Rao (2000) observed that in spite of significant reductions in the rates of both individual and corporate income taxes in India in the early 1990s the revenues have shown a significant increase. The share of revenue from direct taxes showed a significant increase as a proportion of GDP as well as total tax revenue. Further, Nguyen (2011) showed that tax reforms through a unified taxation system and an introducing of VAT and CIT had substantially increased. Tax revenues in 1996 to 2000 increased by 2.3 times compared with the revenue collected in 1991 to 1995.

In the case of tax reforms and poverty, the poverty impacts of taxation and revenue systems more generally, have remained peripheral topics of research, even though the poverty impacts of social expenditures have received much attention. There are two likely reasons. First, the belief that any effects of taxes on the poor are likely to be small, as in practice the poor pay few taxes directly. Secondly, it has commonly been believed that public social expenditures provide a better means to target the poor and reduce poverty, with taxes viewed as essentially an instrument for revenue raising (van de Walle and Nead, 1995 (in Gemmell and Morrisey, 2005)). However, few studies have actually locked at the impact of specific tax on poverty. Llambi et al. (2009) found that tax reform has a significant effect on reducing poverty in Uruguay. On the contrary, Bird and Zolt (2005) stated that personal income tax has done little to reduce inequality in many developing countries. Bettendorf et al. (2007) analyzing CIT and unemployment in Europe found that the magnitude of the effects depended on the broadness of a tax rate of the country and the strength of international spillover effects through foreign direct investment. The effect on unemployment is smaller if the substitution elasticity between labor and capital is large.

According to the facts and the previous researches, there are two important questions related to the 2008 CIT reform: first, what is the implication of the 2008 CIT reform on the government tax revenue? Second, does the 2008 CIT reform support the poverty reduction? This article, therefore, aims to answer both questions above and also contributes to increase an empirical work addressing an issue on taxation policy and poverty in Indonesia. The discussion of the 2008 CIT reform focuses only on the rate reform.

This article then briefly explains the history of CIT reforms, the administrative tax reforms in Indonesia, and surveys the impact of the 2008 CIT reform on the tax revenue. The next part describes the research methodology of A CGE-Microsimulation used to analyze the poverty impacts of the 2008 CIT reform and then subsequently analyze the findings. The paper will then end with some important findings and policy suggestions.

2. The Corporate Tax Reform in Indonesia and Its Effects on the Government Tax Revenue

2.1. The History of Corporate Tax Reform in Indonesia

Taxes and levies as financing sources of state are enacted on the article 23A of the 1945 Indonesian Constitution. The history of CIT in Indonesia, however, began in the Dutch colonial. The CIT was enacted with the corporate tax ordinance in 1925 (*Ordonantie op deVennootschapsblasting* 1925) that regulated the imposition of material and the procedures for imposing tax on agencies' income. This ordinance was amended by Law No.8 of 1970.

The modern income tax reform in Indonesia was enacted by Law No. 7 of 1983. This law incorporated the corporate income tax (CIT) and the personal income taxes (PIT) that were previously enacted with separated regulations. The major reforms were changing the tax collection system that previously the official assessment system was changed in to the self assessment system. In the new system, taxpayers have an obligation to the process of tax calculation, tax payment, and tax reporting. Further, this reform aimed to: 1) simplify a tax rate and system, a tax collection and a tax calculation; 2) improve fairness and equitable tax burden among tax payers; 3) increase tax compliances; 4) reduce transfer pricings and transfer incomes from a corporate to an individual.

Law No. 7 of 1983 has been amended by Law No. 7 of 1991, Law No.10 of 1994, Law No.17 of 2000, and Law No.36 of 2008 (Table 2). Before the 2008 income tax reform, the income tax rate followed the progressive tax rate by which the tax rate increases as the taxable income increases. According to Law No.7 of 1983, those taxable incomes up to IDR 10 million have to pay 15 per cent; those taxable incomes ranging from IDR 10 million up to IDR 50 million have to pay 25 per cent; while those taxable incomes more than IDR 50 million have to pay 35 per cent. The tariffs remained the same in Law No.7 of 1991. Law No.10 of 1994, however, reduced the tariff rates and increased the taxable incomes. The new tariffs were 10 per cent for taxable income up to 25 million, 15 per cent for taxable income between 25 million to 50 million, and 30 per cent for taxable income more than 50 million. Further, Law No.17 of 2000

again increased the taxable income but the rate remained same. Even though, the CIT rate has three brackets, 10 per cent, 15 per cent, and 30 per cent, virtually all tax is paid by the highest rate. Ikhsan et al. (2005) showed, in 2001, 88.38 per cent of tax payers paid the lowest tax rate while only 7.37 per cent of tax payers paid the highest rate. The 7.37 per cent of tax payers, however, contributed almost 99.49 per cent of the CIT revenue. In addition, more than 60 per cent of tax returns reported no net income and paid nothing in 2000. These have influenced changing the progressive CIT rate to the flat CIT rate and also granting SMEs with a discount tax rate based on turnovers rather than net income.

Law No. 36 of 2008, the Fourth Amendment on Law No. 7 of 1983, has significantly changed the CIT system in Indonesia. The CIT moves from the progressive tax rate into the flat tax rate and also provides more fiscal incentives to develop both listed companies and SMEs. The CIT had been decreased from a maximum 30 per cent at the end of 2008 to 28 per cent in 2009 and then reduced again to 25 per cent in 2010. Listed companies with minimum 40 per cent of shares owned by public could receive the 5 per cent discount of the normal rate. This incentive encourages companies to list its shares in the stock exchange. Listed companies are forced to provide an accountable and transparent financial report to the public; the government, therefore, easily performs tax audits and collects income taxes.

Different to the previous CIT system where there was no specific tariff treatment for SMEs; the new CIT system gives a fiscal incentive to expand and promote SMEs, as mentioned in Article 31E. SMEs with a gross turnover up to IDR 50 billion will receive the 50 per cent discount of the normal rate that is imposed on taxable income of a gross income of IDR 4.8 billion. For instance, SME A with a gross turnover of IDR 4.5 billion and a taxable income of IDR 500 million has to pay an income

Law No.7 of 1983	Law No.7 of 1991	Law No.10 of 1994	Law No.17 of 2000	Law No.36 of 2008
Progressive Tax Bate:	Progressive Tax Bate:	Progressive Tax Bate:	Progressive Tax Bate:	Flat rate:
15 %: taxable in- come \geq IDR 10 mil-	15 %: taxable in- come \geq IDR 10 mil-	10 %: taxable in- come \geq IDR 25 mil-	10 %: taxable in- come \geq IDR 50 mil-	28% in 2009
$\begin{array}{llllllllllllllllllllllllllllllllllll$	lion 25 %: IDR. 10 million <taxable in-<br="">come \leq IDR 50 mil- lion</taxable>	lion 15 %: IDR. 25 million $<$ taxable in- come \leq IDR 50 mil- lion	lion 15 %: IDR. 50 million $<$ taxable in- come \leq IDR 100 million	25% in 2010 and hereafter
35 %: taxable in- come > IDR 50 mil- lion	35 %: taxable in- come > IDR 50 mil- lion	30 %: taxable in- come > IDR 50 mil- lion	30 %: taxable in- come > IDR 100 million	Listed companies with 40% shares owned by public can receive 5% discount lower than the normal tax rate
		The highest rate of 30% could be re- duced to 25% with a government regu- lation	The highest rate of 30% could be re- duced to 25% with a government regu- lation	Companies with turnover up to IDR 50 billion will re- ceive an incentive of 50% discount of the normal rate that is imposed on taxable income of the gross income of IDR 4.8 billion

Table 2: The History of Corporate Income Tax Rate in Indonesia

Source: Author's Compilation

tax of IDR 62.5 million (50 per cent x 25 per cent x IDR 500 million). While, SME B with a gross turnover of IDR 40 billion and a taxable income of IDR 4 billion has to pay an income tax of IDR 940 million. This value is calculated from IDR 60 million (50 per cent x 25 per cent x (IDR 4.8 billion: IDR 40 billion) x IDR 4 billion) plus IDR 880 million (25 per cent x (IDR 4 billion-IDR 480 million)).

The flat tax rate system with the discount tariff granted to SMEs is more beneficial to small businesses compared to the progressive tariff rate. Under the progressive tax rate, SME A should pay the corporate income tax of IDR 147.5 million while SME B should pay the corporate income tax of IDR 1.17 billion. The progressive rate appears less supportive to the development of SMEs since the taxable income is less suited to the definition of SMEs in Law No. 20 of 2008. Regarding the current economic conditions, the progressive rate is beneficial to microenterprises but not to SMEs. The discount tariff will encourage SMEs to expand their business through investing more of the saved money as a result of the reduction in tax payments. The discount tariff might also be able to prevent SMEs from illegal activities of tax evasion.

2.2. The Administrative Tax Reforms in Indonesia

The tax reforms in Indonesia cover both tax rate reforms and administrative reforms. The administrative tax reform began in late 2001 in the Directorate General of Taxation (henceforth DGT). The main reasons for administrative tax reforms are a low yield of the tax system comparing to other countries, a complexity of some features of the tax system, poor legal and government frameworks, outdated information systems, and ineffective taxpayer services and weakness in organizational and staffing arrangements (Brondolo et al., 2008).

The DGT administrative reforms were divided into the short term strategies and the medium term strategies. Three initiatives of short term strategies implemented during 2001 to 2002 are: (i) the revenue generation program through widening the tax base and tightening the enforcement of tax laws; (ii) the establishment of a special tax office within the DGT to administer the largest taxpayers; (iii) the introduction of an electronic system for processing tax payments to replace the existing system, which was slow, costly, and vulnerable to leakage. In early 2003, the DGT designed the ten initiatives of medium-term reforms: (1) increasing the number of taxpayers administered by the large taxpayer office (LTO); (2) establishing model tax offices for administering small and medium-sized taxpayers; (3) continuing the revenue generation initiative; (4) simplifying each major tax, beginning with the value-added tax; (5) revising the legal framework for tax administration; (6) enhancing the capacity of the DGTs audit function; (7) developing a balanced set of performance measures for the DGTs core tax administration processes; (8) introducing new human-resource management policies; (9) designing a comprehensive information technology master plan; (10) creating an internal investigation unit to investigate misconduct by the tax officers.

Brondolo et al. (2008) observed that tax administration improvements had a strong positive impact on the tax yield and a positive effect on the investment climate. The DGT revenues increased from 8.2 per cent of GDP in 2001 to 8.7 per cent of GDP in 2002 and the DGT revenues have been continuously increasing up to 9.6 per cent of GDP. Further, the investment climate, as assessed by the International Country Risk Guides overall country ranking, showed a marked improvement over the past few years. Indonesia ranked at 118 in 2000 and then jumped to 77 in 2007. The DGT reforms have a large contribution to this improvement.

Complementing the administrative tax reforms, in 2008, the DGT implemented a tax amnesty policy, so called the sunset policy of taxation. Tax payers are given the full trust and right to obtain a tax number (NPWP-Nomor Pokok Wajib Pajak), calculate a generated income and a payable tax, deposit the payable tax to the state treasury. There are no sanction and interest charged to unpaid payable tax. The administrative tax reforms had successfully increased almost 173.54 per cent of new tax payers both personal and corporate tax payers during 2001 to 2007. Table 3 shows that the number of tax payers was 4.35 million (2005), 4.80 million (2006), 6.80 million (June 2007), 10.68 million (2008), and 15.05 million (August 2009). The sunset policv implemented in 2008 contributed most to increasing the tax payers in 2009. By February 2011, the number of tax payers was 19,410,178divided into 17,527,771 (individual tax payers) and 1,882,407 (corporate tax payers). The 2008 sunset policy and the 2008 income tax reforms implemented effectively in 2009 have extensively increased the number of tax payers by almost 8.8 million during 2008 to 2011.

2.3. The Impact of 2008 Corporate Tax Reform on the Government Tax Revenues

Reducing the CIT rate, theoretically, will decrease government tax revenues, particularly on developed countries where the tax base and tax potential are optimally collected. Nonetheless, as in most developing countries where the tax base and tax potential are optimally unexplored, CIT reforms supported with administrative reforms might not deteriorate tax revenues. This is because reducing the CIT rate might encourage unregistered taxpayers to

T. Dartanto/The 2008 Corporate Income Tax Reform

1a	ble 5: 11	lie Numi	ber of Ta	ixpayers	during 2	2001-201	1 (m the	Jusanus)			
Category	2001	2002	2003	2004	2005	2006	2007 June	2008	2009 Aug	2010 Sep	2011 Feb
Individual Tax Payer Growth Rate (per cent) Corporate Tax Payer Growth Rate (per cent)	1,690 795	2,020 19.53 879 10.56	2,328 15.21 967 9.94	2,622 12.66 1,048 8.39	3,289 25.44 1,061 1.22	3,718 13.02 1,082 2.06	5,503 48.03 1,296 19.72	9,220 67.54 1,460 12.66	$13,480 \\ 46.20 \\ 1,570 \\ 7.53 \\ 1500 \\ 100$	17,053 26.51 1,721 9.62	17,528 2.78 1,882 9.37
Total	$2,\!486$	2,900	$3,\!294$	$3,\!670$	4,350	4,800	6,799	$10,\!680$	$15,\!050$	18,774	19,410

Table 3: The Number of Taxpayers during 2001-2011 (in thousands)

Source: data collected from Sakti (2006, 2007) and many sources. The 2008 data collected from http://digilib.unimus.ac.id/files/disk1/105/jtptunimus-gdl-salisiinti-5244-1-bab1.pdf; The 2009 data collected from http://kpskr09.wordpress.com/2009/09/29/jumlah-npwp-lampaui-target/; The 2010 data collected from the DGT press release, accessed on 25 October 2011 at http://www.republika.co.id/berita/ breaking-news/ekonomi/10/10/09/139081-tahun-ini-pemiliknpwp-bertambah-2-8-juta; The 2011 data collected from the DGT press release, accessed on 25 October 2011 at

http://us.finance.detik.com/read/2011/04/08/123756/1611721/4/pemegang-npwp-capai-19-juta?nd9911043; The 2005 and 2006 data collected from the DGT press release, accessed on 26 October 2011

http://www.ikpi.or.id/content/jumlah-npwp-kuartal-i2010-tembus-17-juta The 2007 data collected from the DGT press release, accessed on 26 October 2011

http://www.ortax.org/ortax/?mod=berita&page=show&id=2489&q=&hlm=850

be registered taxpayers. As a result, the tax base and tax potential becomes more extensive. This also encourages corporate registered tax payers to report the tax returns actively.

In the case of Indonesia, the 2008 corporate tax reform does not necessarily reduce tax revenues, tax revenues may even increase. Table 4 shows that the CIT revenue grows by 21.7 per cent annually during 2005 to 2011 and the implementation of the new flat tax since 2009 did not shrink the corporate income tax revenues in 2009 and beyond. The corporate income tax revenue increased from IDR 106.4 trillion (2008) to IDR 120.3 trillion (2009) and IDR 126.7 trillion (2010). The increase of CIT revenue in 2009 and beyond, therefore, was mainly collected from new tax payers and also was caused by an improvement of the compliance rate.

There are four main arguments regarding the facts that the CIT revenue did not decrease following a reduction in the tax rate. First, there are significantly increases in the tax base during 2008 to 2011. In 2008, the number of corporate tax payers was 1.46 million while at the end of February 2011 the corporate tax payers are 1.88 million. There are approximately 0.42 million new corporate tax payers. The decrease in the CIT revenue as a consequence of cutting the CIT rate, therefore, could be covered by additional revenue collected from new corporate tax payers.

Second, tax potential in Indonesia is large enough and still unexplored optimally. Only 30 per cent of registered corporate taxpayers actively reported notice of tax returns. Ikhsan et al. (2005) found that the government can still optimize their tax revenue without any changes in a tax rate. Improving tax administrations such as tax audits, supervisions, and expansion of registered tax payers will significantly increase tax revenues. Third, the discount tax rate for SMEs and the reducing tariff rate for large businesses increase tax compliances and reduce illegal activities of tax evasion. Fourth, improvements in tax policy and administrations through several reforms in administrations, regulations and supervision, and potential exploration have increased tax revenues collecting from not only corporate income tax but also personal income tax as well as value-added tax.

The 2008 CIT reform supported with the DGT administrative reforms and the sunset policy did not necessary decline the government tax revenue, so it is not a necessary to worry that there is a fiscal tightening as a response to the decrease in the CIT rate. The Government, therefore, still has enough resources to finance poverty alleviation programs. Further, there is still enough space to continuously increase CIT revenue through optimizing tax administrations. This finding is similar to the India, Ghana, and Vietnam experiences that tax reforms did not deteriorate fiscal balance and even promoted revenue generation (Rao, 2000; Kusi, 1998, Nguyen, 2011).

3. Research Methodology

This research will use the CGE microsimulation approach (CGE-MS) in order to evaluate how the 2008 CIT reform influences poverty in Indonesia. The general idea of the CGE-MS approach is that a CGE model feeds the market and factor price changes into a microsimulated household model. Chen and Ravallion (2004), Dartanto (2010), Dartanto and Usman (2011), and Savard (2003, 2005) used this method and built microsimulation based on economic assumptions that are consistent with the CGE model, notably that households take prices as given and that those prices clear all markets. They also did not attempt to assure full consistency between the micro-analysis and the CGE model's predictions.

There are five steps in calculating the poverty impact of reducing fuel subsidies and reallocation budget policies: firstly, the initial condition of poverty is calculated utilizing the 2005 SUSENAS data (National Socio-Economic Survey) published by BPS, which covers 64,407 households¹. Secondly, using the

CGE model, the impact of reducing the CIT rate on domestic prices is simulated (including factor incomes). Thirdly, the price increases (including factor incomes) obtained from the CGE model are entered into the SUSENAS data set to calculate the impact of reducing CIT rate on household welfare. This step is known as the microsimulation procedure. Fourthly, the poverty line is adjusted using price changes gained from the CGE model in which the poverty line becomes endogenous. Finally, the poverty incidence is recalculated using data from steps three and four and compared with the initial poverty incidence.

3.1. Indonesian Computable General Equilibrium

Computable General Equilibrium (CGE) models are a class of economic models that use actual economic data to estimate how an economy might react to changes in policy, technology, or other external factors. The static CGE model is built based on the extension of the 2005 Indonesian Social Accounting Matrix (SAM) and follows the algorithm of the International Food Policy Research Institute (IF-PRI) standard CGE model developed by Lofgren, Harris, and Robinson (2001). The data used for the extension of SAM refers to the 2005 Input-Output Table, the 2005 National Socio-Economic Survey, the labor force survey, and other sources. The CGE model used in this research is based on the CGE model built by Dartanto (2010) and Dartanto and Usman (2011).

3.1.1. Activities/Commodities

The extended 2005 Indonesian SAM has 26 industry/commodity categories: food crops; soybeans; other crops; livestock; forestry; fishery; oil and metal mining; other mining and quarrying; rice; others food and beverage industry; textile-clothes-leather industry; wood

¹This sample has to be weighted by population

weights in SUSENAS to obtain the national population. Each sample has its own weighted value.

T. Dartanto/The 2008 Corporate Income Tax Reform

innent 1	ax neve	nues 200	05-2011 (in trinio	n nupiai	1)
2005	2006	2007	2008	2009	2010*	2011**
495.2	638	707.8	981.6	848.8	992.4	1086.3
493.2	636.2	706.1	979.3	847.1	990.5	1082.6
347	409.2	491	658.7	619.9	743.3	839.5
331.8	396	470.1	622.4	601.3	720.8	816.4
175.5	208.8	238.4	327.5	317.6	362.2	414.5
35.1	43.2	44	77	50	55.4	54.2
140.4	165.6	194.4	250.5	267.6	306.8	360.3
51.4	65.1	80.8	106.4	120.3	126.7	163.8
89	100.5	113.6	144.1	147.3	180.1	196.5
101.3	123	154.5	209.6	193.1	263	309.3
55	64.2	77.2	85.3	90.6	95.6	92.6
146.2	227	215.1	320.6	227.2	247.2	243.1
15.2	13.2	20.9	36.3	18.6	22.5	23.1
	$\begin{array}{r} 111111111111111111111111111111111111$	$\begin{array}{c ccccc} \hline 1111111111111111111111111111111$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

Table 4: Trend of Government Tax Revenues 2005-2011 (in trillion Rupiah)

Source: Ministry of Finance, 2011

Note: the figures of 2005, 2006, 2007, 2008, and 2009 are the realized budget; * is based on the 2010 revised budget; ** is based on the 2011 proposed budget.

processing industry; pulp-paper and metal industry; chemical industry; electricity-gaswater; construction; trade; restaurant; hotel; land transportation; air-water transportation and telecommunication; warehousing; financial services; real estate; government and private services; and individual/other services.

3.1.2. Factors of Production

The factors production in this SAM is basically classified into five factors: agricultural labor, production-operator-unskilled labor, sales and administration (semi-skilled), skilled labor and non-labor factor included land and capital. However, each factor except non-labor factor is further divided into two categories: rural and urban labor. Hence, the total factors production is nine categories.

3.1.3. Institution and Household

There are three main institutions on the 2005 SAM: government, enterprise and household. The representative household is basically divided in to four categories: agricultural households, non-agricultural household, enterprise and government. The agricultural households are classified into agricultural labor, agricultural household with less than 0.5 hectare of land, agricultural household with land between 0.5 to 1 hectare, and agricultural household with more than 1 hectare of land. Nonagricultural household is separated in to rural and urban household. Each category of household in urban and rural is classified in to lowincome group, non-labor force household and high-income group. Furthermore, other accounts in CGE model are the rest of the world (export-import), saving-investment and taxation. Taxation is divided into indirect tax, subsidy, income tax and import tariff.

3.1.4. Elasticity

The elasticity data used in this CGE refers to sources such as the elasticity in the Indonesian IFPRI CGE Model, Wayang Model, Dartanto (2010), Dartanto and Usman (2011), and other estimations on elasticity. Many CGE studies in Indonesia applied a widely range of Armington elasticity on agricultural food sector that soybeans are included in. The applied Armington elasticities, the elasticity of substitution between imports and domestic output in

T. Dartanto/The 2008 Corporate Income Tax Reform

domestic demand, are 0.5 for all commodities except soybeans (2.0), rice (2.0), agricultural food commodity (1.5) and agricultural food industry (1.5). The constant elasticity of transformation (CET) for domestic marketed output between exports and domestic supplies is set equal to 0.5 for all commodities except rice (2.0), soybeans (1.5), agricultural food commodity (1.5), and agricultural food industry (1.5). The elasticity of substitution (CES) between factors production is 0.25 for all activities. The elasticity of substitution between aggregate factors and intermediate input is 0.5 and the elasticity of output aggregation for commodities is 6. Furthermore, household consumption is modeled under the Linear Expenditure System (LES), in which the elasticities vary between commodities, and the elasticity is less than 1 for food products and more than 1 for industrial products and services.

3.2. Microsimulation

Reducing the CIT rate will influence household welfare through changes in the price of domestic commodities and factor incomes. The microsimulation procedure essentially translates how price changes (factor incomes) from the CGE can influence household welfare. This research modified Chen and Ravallion's work (2004) to calculate the monetary value of household welfare changes in response to changes in prices and factor incomes. Increasing prices would reduce a household's ability to afford an initial bundle of consumption, while increasing factor incomes would increase household incomes. An increase in income means an increase in a household's ability to consume more. The formula for household welfare change is shown below.

$$\Delta W_i = -\sum_{j=1}^m p_j (q_{ij} - s_{ij}) \frac{dp_j}{p_j} + \sum_{k=1}^n \left(w_k L_{ik} \frac{dw_k}{w_k} \right)$$

$$+\sum_{l=1}^{l} \left(r_l K_{il} \frac{dr_l}{r_l} \right) \tag{1}$$

Where,

- ΔW_i is the welfare change of the household-i, i: 1,2,3,...,26;
- q_{ij} is the quantity of product-j consumed by the household-i, j=1,2,3,...,26; productj refers to classification in the CGE model;
- s_{ij} is the quantity of product-j provided/supplied by household-i;
- $(q_{ij} s_{ij})$ is the net consumption of product-j that must be bought by household-i. According to the SUSENAS dataset, the value of household consumption is always larger than or equal to the value of household production $(q_{ij} \ge s_{ij})$;
- p_j is the price of product-j;
- dp_j is the price change of product-j;
- L_{ik} is the labor supply of household-i in sector-k; sector-k refers to a labor category in the CGE model;
- w_k is the wage in sector-k;
- dw_k is the wage change in sector-k;
- $K_i l$ is the non-labor endowment of household-i;
- r_l is the rate of return; and
- dr_l is the change in the rate of return.

The change in household welfare is the sum of the change in household expenditure and household income. The negative sign in the first part of the formula indicates that increasing prices will increase household expenditure and, consequently, lower household welfare. Conversely, the positive signs of the last two parts of the formula indicate that increasing wages and the non-labor rate of return

10

will increase household income, thus increasing household welfare. This study assumes that the consumption pattern of households does not change following price changes.

The model also assumes that the change of household welfare will directly influence household consumption (expenditure) and there is no saving activity, i.e. households are not allowed to save the net welfare. The new expenditure function is shown below.

$$E_i((p_{oj} + dp_j), (y_{0i} + \Delta W_i)) = E_{0i}(p_{0j}, y_{0i}) + \Delta W_i$$
(2)

Where,

- $E_i((p_{oj}+dp_j),(y_{0i}+\Delta W_i))$ is household-is expenditure after simulations of world oil prices and fuel subsidies;
- $E_{0i}(p_{0j}, y_{0i})$ is initial household-is expenditure;
- p_{0j} is the initial vector price;
- y_{0i} is the initial endowment/income of household-i; and

 $E_i((p_{oj}+dp_j), (y_{0i}+\Delta W_i))$ is used to calculate the new poverty incidence.

3.3. Endogenous poverty line and poverty calculation

Increasing commodity prices as a consequence of cutting CIT rate will also increase the money metric of obtaining 2,100 calories. Therefore, the poverty line will become endogenous following a variation in relative prices (Decaluwe, Savard, and Thorbecke, 2005; Dartanto, 2010; Dartanto and Usman, 2011; Dartanto, 2011). Hence, the initial food poverty line should be adjusted with the price change of food products in proportion to the share of those products in the poverty line; it should also be adjusted with the price change of nonfood products. Therefore, the new poverty line that changes following a variation in prices (known as the endogenous poverty line) can be calculated as:

$$z_{pr} = PL_{pr} = FPL_{0pr} \left(1 + \frac{\Delta FP_{pr}}{FP_{0pr}}\right)$$
$$+ NFPL_{0pr} \left(1 + \frac{\Delta NFP_{pr}}{NFP_{0pr}}\right) (3)$$

Where,

- $z_{pr} = PL_{pr}$ is the initial food poverty line in province-p at region-r;
- *FPL*_{0pr} is the change in composite food price in province-p at region-r;
- ΔFP_{pr} is the initial composite food price in province-p at region-r;
- *FP*_{0pr} is the initial non-food poverty line in province-p at region-r;
- *NFPL*_{0pr} is the change in composite non-food price in province-p at region-r; and
- ΔNFP_{pr} is the initial composite non-food price in province-p at region-r.
- *NFP*_{0pr} is the initial composite non-food price in province-p at region-r.

In order to calculate poverty, this study applies the FGT (Foster, Greer, and Thorbecke, 1984) formula. The modified formula is shown as follow:

$$HC_{\alpha} = \frac{1}{n} \sum_{i=1}^{q} \left(\frac{PL_r - E_{ir}}{PL_r} \right)^{\alpha} \tag{4}$$

Where,

- HC_{α} is the headcount index (poverty incidence);
- *n* is the population number;
- *i* is the individual-i;
- PL_r is the poverty line in region-r;
- E_{ir} is the expenditure of individual-i in region-r;

- q is the number of individuals below or at the poverty line; and
- α is the parameter for the FGT.

When α is zero, the poverty measurement is the headcount index, which represents the percentage of the population below the poverty line. The poverty-gap index, PG, which measures the depth of poverty, is calculated by setting α to 1. The squared poverty gap is obtained with α equal to 2.

3.4. Simulation Scenarios

The aim of simulations is to find out how much change in poverty there is under the two scenarios of reducing CIT rates. SIM1 is reducing the CIT rate from 30 per cent to 25 per cent as the condition from 2010 onwards; SIM2 is reducing the CIT rate from 30 per cent to 23.5 per cent due to considering the tax incentives granted to SMEs and listed companies². The basis of the CIT rate refers to the effective CIT rate in SAM 2005 that is 30 per cent. Considering that the 2008 CIT reform did not reduce the CIT revenue, the simulation of decreases in the CIT rate is not followed by decreasing government consumptions. Moreover, following the Harberger (1962)s findings that the effect of CIT on factor incomes depends on the elasticity substitution between capital and labor, then simulations are done under two difference elasticities of substitution. Regarding Dissanayake and Sim (2010), this study chooses 0.250 and 0.375 as the elasticity of substitution between capital and labor.

The simulations are conducted under the following closure rules: 1) labor and capital are unemployed (fully employed) and mobile cross sectors; 2) the value of adjustment adjusts (savings-driven); 3) flexible government saving and fixed direct tax rate; 4) flexible exchange rate and fixed foreign savings; 5) producer price numeraire. The closure of saving-driven investment means fixed marginal saving propensities, flexible investment demand quantity adjustment factors, flexible absorption shares for investment demand, and fixed government demand quantity adjustment factors.

The simulations are done under two situations of the short run (SR henceforth) and long run (LR henceforth) condition. The SR and LR refer to the definition of microeconomic theory that the short run is a period of time in which the quantity of at least one input is fixed and the quantities of the other inputs can be varied. The long run is a period of time in which the quantities of all inputs can be varied. The difference of both conditions lies in the closure rules applied, either capital fully employed (fixed supply) or capital unemployed (flexible supply). The SR condition refers to the closure of labor unemployed (flexible supply) and fixed supply of capital. This is because an unemployment rate is high while a stock of capital is limited in Indonesia. The labor is variable in the amount that is easily adjusted responding to a change in the CIT rate while the capital is fixed in the amount that needs time to adjust. On the contrary, the LR condition refers to the closure of labor unemployed and flexible capital supply. Both capital and labor are mobile across activities. Both capital and labor are variable in the amount that is easily altered responding to a change in the CIT rate. Thus, the 2008 CIT reform should attract both foreign and domestic investors to invest more in Indonesia.

Therefore, there are eight simulation scenarios: SRSIM1a, SRSIM1b, SRSIM2a, SR-SIM2b, LRSIM1a, LRSIM1b, LRSIM2a and

²Listed companies in the Indonesian Stock Exchanges by January 2011 are 426 companies. Registered company tax payers are around 1.7 millions but only 30 per cent of them are actively reporting the annual tax returns. Further, five hundred large tax payers contributed more than 80-82 per cent of CIT revenue in 2008. Due to limited data availability, let us assume that 10 per cent of listed companies with 40 per cent shares owned by public and 8-10 per cent of CIT revenue are collected from SMEs. Thus, the effective CIT rate considering incentives of CIT rate to listed companies and SMEs is approximately 23.5 per cent.

LRSIM2b. SR refers to the short-run condition; LR refers to the long-run condition; SIM1 refers to SIM1 of decrease in the CIT rate from 30 per cent to 25 per cent; a refers to the elasticity of substitution of 0.250; and b refers the elasticity of substitution of 0.375.

4. The 2008 Corporate Tax Reform and Its Implication to Poverty in Indonesia

4.1. The Macroeconomic Impacts of the 2008 CIT Reform: CGE Results

The cut of the CIT rate theoretically decreases the costs of productions that will be reflected on decreases in the price of goods and services in the economy. Appendix 1 shows clearly that all prices of goods and services drop off responding to the 2008 CIT rate. Capital intensive sectors enjoy the highest decrease in prices both in the SR and the LR. However, simulation results show that in the LR price decreases are larger than in the SR condition. This is because in the LR supplies of capital and labor are flexible and enterprises have a flexibility to substitute a relatively expensive factor to a cheaper one, therefore, the decrease of production costs in the LR is larger than in the SR.

CGE simulations generally show that in the short run the 2008 CIT reform appears to favor laborers compared to capital owners. The wage rate for all labor categories except for the unskilled labor increases while the rate of capital return decreases (Table 5). On the contrary, in the long run the 2008 CIT reform is beneficial to both labor suppliers and capital owners. Wage rates of all labor categories increase around 0.6 to 2 per cent while non-labor factor (capital) increases roughly 1 to 1.5 per cent. The largest increase of wage rates is found in the semi-skilled labors while the lowest increase of wage rates is in the skilled labors.

In the SR, the increase in wage rates absorbs unemployed labor in the economy, again forcing down wage rates. The decrease in wage rates as a consequence of entering new labor is not enough to cancel out the previous increase of wage rates. The growth of wage rates, therefore, remains positive. On the contrary, an increase in the capital rate of return pushes an existing capital moving limitedly from big business to SMEs due to an assumption of the fixed capital supply and limited mobility of capital across sector. However, since the share of SMEs on the economy is smaller than of large enterprises, the limited capital flow from large enterprises to SMEs forces down the capital rate of returns.

In the LR, when capital and labor are flexible in the amount, the decrease in the CIT rate decreases the costs of productions to both SMEs and large enterprises. This will force down the price of goods, increase the demand of goods, and rise up returns to wage rates and capital. Increases in demands of goods provided incentives for enterprises to produce more through utilizing unemployed labor and attracting both domestic and foreign investors to invest more. Increases in both labor and capital supplies in the economy depress the returns of factor incomes. These, however, would not be enough to cancel out the previous increases of returns so the growth of returns on factor incomes remains positive. Further, Table 5 shows that in the LR the lower elasticity of substitution between labor and capital is associated with the lower change in returns of factor incomes. In the LR enterprises have a flexibility to substitute a relatively expensive factor with a cheaper one. Thus, enterprises will substitute labor for capital responding to the decrease of the CIT rate in which demands for labors decrease, forcing down wage rates.

The 2008 CIT reform increases demands for factor productions as well (Table 5). Similar to the changes in the returns of wage rates, in the SR the 2008 CIT reform appears to favor labor (except unskilled labor) compared to capital owners. In the LR, however, demands for both labor and capital increase significantly. The 2008 CIT reform creates new job opportunities, roughly 88,010 to 159,730 (SR condition) and roughly 275,580 to 441,910 (LR condition). Further, there is no change in a demand of capital in the SR since the SR conditions assumed capital is already full employed (fixed supply). Whereas, in the LR the 2008 CIT reform can attract new investments around IDR 28 trillion to IDR 44.3 trillion (USD 5 billion). Further, in the LR, a low elasticity of substitution between capital and labor is associated with a higher demand for factor productions. When the elasticity of substitution is 0.250, the demand for labors is 422,210 (LRSIM1a). However, when the elasticity of substitution is 0.375, the demand for labors is 275,580 (LRSIM1b). This is because returns of factor incomes are lower in a higher elasticity of substitution, making disincentives to factors absorbed in the economy.

Turning to macroeconomic indicators, the 2008 CIT rate boosts some macroeconomic indicators such as private consumption, investment, exports, and gross domestic product, especially in the LR (Table 6). The private consumption grows around 1.38 to 2.07 per cent responding to a decrease in the CIT rate. The significant growth of private consumption is caused by decreases in commodity prices and increases in returns of factor productions. A decrease in the CIT rate will be followed by an increase in investment and export as well. The combination of increases in the private consumption, investment, and exports boost the growth of GDP by almost 1 to 1.5 per cent.

4.2. The Poverty Impacts of the 2008 CIT Reform: Microsimulation Results

In the CGE-Microsimulation analysis, the poverty impacts of the 2008 CIT reforms solely depend on how large the effects of this shock are on changing price level and factors income in the economy. However, the extent to which the price and factor income changes can influence the poverty incidence depends on the consumption patterns and source of income of the poor. It also depends on how sensitive the poverty line is in responding to the price change.

Table 7 summarizes the poverty impact of the CIT reform in Indonesia. Generally, the 2008 CIT reform is beneficial to support the poverty reduction in Indonesia. A decrease in the CIT rate reduces goods prices, increases wage rates and return on capital, attracts new investments, and creates new job opportunities. A decreasing of goods prices raises the purchasing power of low-income groups and also maintains the poverty line at a low level, while increases in factor incomes raise an ability of low-income groups to consume more. New job opportunities offer income to unemployed laborers so they have enough resources to support their consumption. All of them significantly support the poverty reduction in Indonesia. LRSIM1a shows cutting five percentages point of the CIT rate can support the poverty reduction by 1,879,868 (0.898 per cent). While considering to discount rates for listed companies and SMEs, LRSIM2a shows cutting five percentage points of the CIT rate can intensively support the poverty reduction by 1,922,462 (0.919 per cent). Generally the 2008 CIT rate contributes to reducing the poverty incidence in agricultural, industrial, and utilities-construction sectors, three sectors that contribute almost 70 per cent of the national poverty.

In the disaggregate level, landless agricultural households benefit most from a decrease in the CIT rate. LRSIM1a shows that decreasing the CIT rate by five percentage points can reduce the poverty incidence by 1.5 per cent (roughly 300 thousand). This is because the 2008 CIT reform increases demands for agricultural labor, approximately 243 thousand (LR-SIM2a), and raises the rural agricultural wage rate by 1.34 per cent. The increasing demand for rural agricultural labor takes almost 55 per cent of the total labor demands resulting from the 2008 CIT reform. On the other hand, it is commonly observed in Indonesia that most landless agricultural households rely on their income of selling labors and that most of them are underemployed as well. Therefore, new job creations and increases of wage rates as results of the CIT rate decrease can absorb underemployed laborers of landless agricultural households and increase household incomes. Both can contribute extensively the poverty reduction of this household category.

Moreover, households working in utilities (electricity, water, and gas) and construction and industrial sectors acquire the second largest benefit of the 2008 CIT reform while households working in industrial sectors obtain the third largest benefit of the CIT reform. The poverty rate of both household categories declines by 1.54 per cent (LRSIM2a) and 0.99 per cent (LRSIM2a) respectively. The 2008 CIT reform would attract new investments on manufacturers and constructions, demanding more unskilled laborers and forcing up their wage rates. Table 5 shows a decrease in the CIT rate from 30 per cent to 23.5 per cent increases demands roughly 40.54 thousand of rural unskilled labors and 51.18 thousand of urban unskilled labors (LRSIM2a). Increases in labor demands push up the wage rates of unskilled labor by almost 1.6 per cent in an urban area and 1.57 per cent in a rural area. Both new job creations and increases in wage rates contribute greatly to reducing the poverty rate of households working in industrial and construction sectors.

In order to complement the head count index analysis, this study provides the poverty gap index in Table 8. This index represents the gap between poor peoples standard of living and the poverty line, which shows the shortfall of the poors expenditure from the poverty line expressed as an average of all people in the population. The pattern of changes in the poverty gap index responding to the decrease in the CIT rate is not different from the changes in the head count index. The higher decrease in the CIT rate narrowed in the poverty gap index. LRSIM1a and LRSIM2a decrease the poverty gap index by 0.203 per cent and 0.205 per cent respectively. This is because both increases in factor incomes and decreases in goods prices significantly increase household welfares, so that the expenditure of low income households initially below the poverty line jumps above the line and the expenditure of the poor that has previously been far below the line increases narrowly to the poverty line.

5. A Sensitivity Analysis

The CGE estimation results are known to be sensitive to the values of the Armington elasticities. However, there have been few empirical studies on estimating these elasticities. According to several studies, the resulting estimates of these elasticities varied widely. Mc-Daniel and Balistreri (2003) confirmed that the wide-range estimates of Armington elasticities depend on the data used, disaggregating sector, and methodology applied.

The sensitivity analysis, therefore, is important to be conducted in order to ascertain the sensitivity of poverty in respect to changes in the elasticity of substitution between labor and capital. Table 9 consistently confirms Table 7, that the poverty impacts of the 2008 CIT reform increases as the elasticity substitution between labor and capital decreases. Further, the lower the CIT rate the greater the poverty impacts. According to Table 9, the 2008 CIT reform appears to be insignificantly reducing the poverty incidence in Indonesia. This is because the applied closure rules in Table 9 are absolutely different from those applied in Table 7. Table 9 assumed that both labor and capital are fully employed (fixed supply), thus the decreasing CIT rate could not create job opportunities and attract new investments; as such, both of them are main factors of the poverty reduction.

6. Concluding Remarks

The CIT tax reform enacted by Law No.36 of 2008 cuts maximum tax rates from 30 per cent to 25 per cent and offers some incentives for business. These incentives encourage SMEs and large enterprises to expand their business, create job opportunities, and reduce in the poverty. The 2008 CIT reform supported by the administrative reforms and the 2008 tax amnesty called as the sunset policy has significantly increased new individual tax payers by 8.3 million and corporate tax payers by 422,407 during 2009 to 2011. Expanding the tax base is able to cover the decrease of CIT revenue as a consequence of cutting the CIT rate. Even the CIT revenue increased averagely 16 per cent during 2009 to 2011. The 2008 CIT reform did not reduce the CIT revenue, so there is no concern that the government will cut poverty reduction programs.

In terms of the poverty impacts, CGE-Microsimulation shows that cutting five percentage point of the CIT rate will attract IDR 41.77 trillion of new investments, create 441,910 new job opportunities, boost 1.46 per cent of economic growth, decline 1 per cent of consumer price index, and raise 1.5 per cent of wage rates. These macroeconomic changes contribute significantly to lift 1.88 million people (0.898 per cent) out of poverty. Moreover, reducing poverty was observed mainly in households working in agricultural, industrial, and construction sectors, three sectors that contribute almost 70 per cent of the national poverty.

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			0001 1 10000	TOTAL CALL	10 011010 1000	0	0010 00101010	
	SRSIM1a	SRSIM1b	SRSIM2a	SRSIM2b	LRSIM1a	LRSIM1b	LRSIM2a	LRSIM2b
Changes in Return of Factor Incomes (in per cent)								
Rural Agricultural Labor	0.224	0.245	0.306	0.322	1.282	0.837	1.338	0.891
Urban Agricultural Labor	0.204	0.227	0.282	0.298	1.274	0.833	1.330	0.887
Rural Production-Operator-Unskilled Labor	-0.242	-0.192	-0.287	-0.245	1.486	0.992	1.568	1.071
Urban Production-Operator-Unskilled Labor	-0.192	-0.148	-0.224	-0.187	1.511	1.009	1.595	1.091
Rural sales and administration (semi-skilled) Labor	0.145	0.167	0.206	0.221	2.076	1.372	2.178	1.471
Urban sales and administration (semi-skilled) La-	0.103	0.127	0.153	0.169	1.958	1.298	2.059	1.395
bor								
Rural skilled Labor	0.099	0.127	0.147	0.169	0.990	0.653	1.044	0.705
Urban skilled Labor	0.030	0.060	0.059	0.082	1.072	0.710	1.133	0.768
Non Labor Factor (Capital)	-0.295	-0.123	-0.307	-0.149	1.472	0.989	1.560	1.075
Changes in Supply (Demand) of Factor Produc- tions (thousand of labor)								
Rural Agricultural Labor	111.282	122.629	151.101	160.643	232.906	151.262	243.095	161.039
Urban Agricultural Labor	12.445	13.736	16.918	18.001	26.388	17.155	27.549	18.269
Rural Production-Operator-Unskilled Labor	-31.525	-24.503	-36.716	-31.064	38.533	25.423	40.540	27.357
Urban Production-Operator-Unskilled Labor	-26.500	-19.539	-30.102	-24.571	48.634	32.088	51.171	34.532
Rural sales and administration (semi-skilled) Labor	4.734	5.530	6.631	7.288	13.553	8.863	14.207	9.490
Urban sales and administration (semi-skilled) La-	12.715	15.559	18.279	20.593	43.608	28.588	45.799	30.686
bor								
Rural skilled Labor	2.240	2.788	3.222	3.682	6.006	3.941	6.331	4.252
Urban skilled Labor	2.615	3.858	4.135	5.156	12.577	8.264	13.264	8.921
Non Labor Factor (Capital) (in IDR trilion)	0.000	0.000	0.000	0.000	41.771	27.886	44.294	30.307
Source: CGE Simulation Results								
Source: CGE Simulation Results								

Table 5: Simulated Changes in Factor Incomes and Demand for Factor Productions under the Short Run and Long Run Condition

Note: SR=short run; LR=longrun; for SIM1 CIT Decreases from 30% to 25%; for SIM2 CIT Decreases from 30% to 23.5.%

Table 6: Simulated Changes in Real Value of Macroeconomic Indicators under the Short Run and Long Run Condition (in per cent)

	SRSIM1a	SRSIM1b	SRSIM2a	SRSIM2b	LRSIM1a	LRSIM1b	LRSIM2a	LRSIM2b
Private Cons.	0.396	0.380	0.515	0.495	2.072	1.382	2.184	1.491
Fixed Invest.	-0.705	-0.641	-0.888	-0.829	0.771	0.506	0.812	0.545
Export	-0.044	-0.025	-0.047	-0.031	1.151	0.780	1.227	0.853
Import	-0.048	-0.027	-0.050	-0.033	1.677	1.139	1.787	1.246
Net Ind. Taxes	0.023	0.049	0.045	0.066	2.420	1.584	2.519	1.680
GDP	0.000	0.014	0.009	0.020	1.455	0.968	1.534	1.045
CPI	-0.152	-0.062	-0.159	-0.076	-1.006	-0.611	-1.006	-0.610

Source: CGE Simulation Results

Note: SR=short run; LR=longrun; for SIM1 CIT Decreases from 30% to 25%; for SIM2 CIT Decreases from 30% to 23.5.%.

Government consumption does not appear in Table 7 since the real value of changes in government consumption is fixed. This is related to the closure rule of flexible government saving and fixed direct tax rate.

Sector	Population	Initial Pov. 2005	SRSIM1a	SRSIM1b	SRSIM2a	SRSIM2b	LRSIM1a	LRSIM1b	LRSIM2a	LRSIN
Ι	57,332,312	23.810	-0.129	-0.061	-0.132	-0.077	-0.969	-0.580	-0.972	-0.
II	$20,\!443,\!674$	25.710	-0.207	-0.097	-0.252	-0.154	-1.500	-0.877	-1.535	-0.
III	19,916,155	11.250	0.004	0.026	0.004	0.033	-0.949	-0.560	-0.989	-0.
$_{\rm IV}$	$14,\!312,\!875$	17.660	-0.050	-0.001	-0.031	-0.001	-1.430	-0.936	-1.536	-0.
V	$47,\!234,\!503$	10.810	-0.091	-0.031	-0.091	-0.043	-0.747	-0.363	-0.757	-0
$I\Lambda$	26,863,587	6.940	-0.051	-0.029	-0.061	-0.008	-0.540	-0.328	-0.540	-0
VII	$23,\!190,\!493$	15.770	-0.036	0.000	-0.047	-0.019	-0.544	-0.350	-0.569	-0
Total	209,293,599	16.390	-0.090	-0.035	-0.096	-0.046	-0.898	-0.525	-0.919	-0
Number	r of Poor	$34,\!304,\!352$	-187,635	-72,265	-200,852	-95,969	$-1,\!879,\!868$	-1,098,336	-1,922,462	-1,125

I=Agriculture (with Land); II=Agriculture (without Land); III=Industry; IV=Electricity, Water, Gas and Constructions; V=Trade, Hotel, Restaurant, Transportation and Telecommunication; VI=Banking, Financial Int., Government and Private Services; VII=Others.

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tor	Population	Initial Pov.	SRSIM1a	SRSIM1b	SRSIM2a	SRSIM2b	LRSIM1a	LRSIM1b	LRSIM2a	LRSIM2b
		Gap Index 2005								
	57, 332, 312	4.713	-0.035	-0.014	-0.036	-0.017	-0.231	-0.142	-0.231	-0.142
	20,443,674	5.510	-0.040	-0.020	-0.040	-0.030	-0.300	-0.190	-0.300	-0.190
	19,916,155	2.100	0.000	0.000	0.000	0.000	-0.190	-0.120	-0.190	-0.120
	14, 312, 875	3.013	-0.010	0.000	-0.010	0.000	-0.305	-0.197	-0.315	-0.207
	47,234,503	2.008	-0.010	-0.007	-0.010	-0.007	-0.146	-0.089	-0.149	-0.093
	26,863,587	1.358	-0.009	-0.009	-0.009	-0.009	-0.127	-0.079	-0.128	-0.088
	23,190,493	3.369	-0.019	-0.009	-0.019	-0.009	-0.203	-0.122	-0.203	-0.132
al	209, 293, 599	3.24	-0.020	-0.010	-0.020	-0.011	-0.203	-0.126	-0.205	-0.130

LR=longrun; for SIM1 CIT Decreases from 30% to 25%; for SIM2 CIT Decreases from 30% to 23.5.%.	Land); II=Agriculture (without Land); III=Industry; IV=Electricity, Water, Gas and Constructions; V=Trade, Hotel, Restaur	elecommunication; VI=Banking, Financial Int., Government and Private Services; VII=Others.
ote: SR=short run; LR=longrun; for SIM	Agriculture (with Land); II=Agriculture	ansportation and Telecommunication; VI

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				SI	M 1			SIN	Λ2
Sector	Population	Initial Poverty 2005	0.200	0.250	0.325	0.425	0.200	0.250	0.325
Ι	$57,\!332,\!312$	23.81	-0.034	-0.014	-0.011	0.000	-0.046	-0.034	-0.014
II	$20,\!448,\!294$	25.73	-0.039	-0.039	-0.039	-0.039	-0.039	-0.039	-0.039
III	19,916,155	11.25	-0.021	-0.021	-0.011	-0.011	-0.021	-0.021	-0.021
IV	14,312,875	17.66	-0.120	-0.120	-0.057	-0.057	-0.120	-0.120	-0.120
V	$47,\!234,\!503$	10.81	-0.031	-0.031	-0.019	-0.019	-0.031	-0.031	-0.031
$I\Lambda$	26,863,587	6.94	-0.021	-0.021	-0.021	-0.021	-0.021	-0.021	-0.021
M	$23,\!201,\!581$	15.81	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	209,309,307	16.4	-0.033	-0.028	-0.019	-0.016	-0.036	-0.033	-0.028
Numbe	r of Poor	$34,\!320,\!060$	-69,246.000	$-57,\!634.000$	-39,652.000	-33,184.000	-75,908.000	-69,246.000	-57,634.000

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Appendix 1 Simulated	\mathbf{Price}	Changes	under	\mathbf{the}	\mathbf{Short}	\mathbf{Run}	and	Long	\mathbf{Run}	Condit	tion	(in p	er cei	$\mathbf{t})$
Commodity						The S	hort Ru	n Condit	ion	The	Long R	un Conc	ition	
						SIM	1	SIN	12	SIN	41	5 4	IM2	
)	0.250	0.375	0.250	0.375	0.250	0.375	0.25	0.37	5
Food Croops)-	.046	0.019	-0.048	-0.023	-0.683	-0.418	-0.68	1 -0.41	6
Soybeans					Ţ	.136 .	0.058	-0.143	-0.071	-1.813	-1.103	-1.81	3 -1.10	1-
Other Croops					Ţ	. 089.	-0.036	-0.092	-0.044	-2.513	-1.520	-2.51	5 -1.52	2
Livestock					Ţ	.105 -	0.043	-0.109	-0.052	-0.554	-0.338	-0.55	1 -0.33	∞
Forestry					Ţ	.180 -	-0.074	-0.187	-0.089	-1.964	-1.193	-1.96	3 -1.19	4
Fishery					Ţ	.183 .	-0.075	-0.191	-0.091	-0.572	-0.349	-0.57	2 -0.34	6
Oil and Metal Mining)- -		-0.107	-0.269	-0.130	-0.754	-0.457	-0.75	2 -0.45	9
Other Mining and Quarrying					Ţ	.103 .	-0.042	-0.107	-0.051	-3.167	-1.909	-3.17	-1.91	7
Rice					Ţ	. 095 -	0.040	-0.099	-0.048	-0.714	-0.437	-0.71	5 -0.43	∞
Food and Beverage Industry)- -	.146 -	-0.059	-0.151	-0.071	-0.764	-0.463	-0.76	3 -0.46	2
Textile-clothes-leather Industry					Ţ	.173 -	-0.065	-0.177	-0.078	-0.722	-0.417	-0.70	· -0.40	H.
Wood Processing Industry)-	.111 .	-0.035	-0.111	-0.042	-0.696	-0.395	-0.67	3 -0.37	4
Pulp-Paper and Metal Industry	7				Ţ	.199 .	-0.083	-0.208	-0.100	-0.743	-0.450	-0.74	2 -0.44	6
Chemical Industry					Ť	.218 .	-0.091	-0.227	-0.111	-0.694	-0.422	-0.69	1 -0.42	7
Electricity-Gas-Water					Ţ	.226 -	-0.094	-0.236	-0.114	-1.538	-0.936	-1.53	-0.93	9
Constructions					Ť	.179 .	-0.074	-0.187	-0.090	-10.685	-6.194	-10.69	1 -6.20	Ļ
$\operatorname{Restaurants}$					Ť	.113 .	-0.046	-0.118	-0.056	-0.537	-0.327	-0.53	7 -0.32	-1
Hotels					Ť	.175 -	-0.071	-0.181	-0.085	-0.995	-0.603	-0.99	3 -0.60	Ļ,
Land Transportation					Ţ	.145 -	-0.060	-0.151	-0.073	-1.201	-0.731	-1.20	2 -0.73	2
"Air-Water Transp. And Teleco	ommunica	tion"			Ţ	.204 -	-0.085	-0.212	-0.103	-1.650	-1.001	-1.65	2 -1.00	ŝ
Warehousing)-	.160 -	-0.066	-0.167	-0.081	-3.900	-2.317	-3.90	j -2.32	2
Financial Services)- -	.214 -	-0.089	-0.223	-0.108	-1.056	-0.645	-1.05	3 -0.64	9
Real Estate					Ţ	.219 -	-0.092	-0.229	-0.111	-3.002	-1.805	-3.00	i -1.80	6
Government and Private Servic	ses				Ţ	0.082	-0.033	-0.085	-0.041	-1.224	-0.747	-1.22	5 -0.74	1
Individual Services)-	.174 .	-0.072	-0.182	-0.087	-0.797	-0.486	-0.79	3 -0.48	9
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Source: CGE Simulations Note: For SIM1 CIT Decreases from 30% to 25%; for SIM2 CIT Decreases from 30% to 23.5.%.