Chapter 5

Mild Crisis, Half Hearted Fiscal Stimulus: Indonesia During the GFC

Muhammad Chatib Basri
Department of Economics, University of Indonesia

Sjamsu Rahardja
World Bank country office, Indonesia

March 2011

CHAPTER 5

Mild Crisis, Half Hearted Fiscal Stimulus: Indonesia During the GFC

MUHAMMAD CHATIB BASRI

Department of Economics, University of Indonesia.

SJAMSU RAHARDJA [*]

World Bank country office, Indonesia.

1. Introduction

The Global Financial Crisis (GFC) which occurred in 2008 impacted the world's economies, not excepting Asia. After experiencing high growth for more than four years, the world economy went into steep decline starting in September 2008. World economic growth which reached 5.2% in 2007 declined to 3% in 2008, and dropped even further to -0.6% in 2009. Consistent with this, the United States experienced a sharp decrease in growth from 2.1% (2007) to 0.4% (2008) and contracted to -2.4% in 2009. Meanwhile, Europe decreased from 2.7% (2007) to 0.6% (2008) and then -4.1% in 2009. Following the global contraction and tight liquidity in the global market, global trade volume also abated. When the global trade volume decreased, exports from all countries slowed. As a result, emerging markets and developing economies also

experienced a significant decrease, including Indonesia. Growth in emerging market economies fell from 6.1% in 2008 to 2.4% in 2009 (IMF, 2010).

The impact on economic growth in Indonesia is evident from the fourth quarter of 2008. The decrease in exports is also reflected in the decrease in Indonesia's economic growth. In the fourth quarter of 2008, economic growth slowed to 5.2% year-on-year. Still, growth in Indonesia as a whole reached 6.1%.

In the second quarter of 2009, the global economy showed signs of improving. This occurred in developed countries and emerging markets, and across the whole world. In terms of speed of recovery, the fastest economic recovery occurred in emerging markets; while developed countries experienced recovery it was relatively slow compared to emerging markets. This was primarily due to consistently slow recovery in Europe. With the improvement of global economics, Indonesian exports grew. In monetary terms, inflation was strictly controlled, and in 2009 inflation reached its lowest levels since 2000, at only 2.8%. This low inflation improved buying power and positively impacted macroeconomic stability, which in turn prompted the flow of foreign investment to Indonesia. The Rupiah strengthened. In 2009, when the global economy posted negative growth, Indonesia grew by 4.5%, and Indonesia became the third fastest growing G-20 country after China and India.

One factor which helped to limit the impact of the GFC on the Indonesian economy was support from the domestic demand. The share of total Indonesian exports on GDP is 29%. This is much lower than in countries like Singapore (234%), Taiwan (74%) or Korea (45%).[1] This emphasizes the importance of domestic demand. With exports hard hit plus weak investment, economic growth was practically totally dependent on household and government consumption.

Given this illustration, it is important to ask why growth in domestic demand was relatively strong during the GFC. Was it due to the fiscal stimulus enacted by the Indonesian government? Household consumption is the largest segment in Indonesia's GDP, accounting for 65%. It is therefore best if household or even government consumption acts as the motor of growth. Aaron, *et al.* (2004) indicate that government consumption can create job opportunities amounting to as much as 19% of total job

---

[1] Total export of goods and services in national account as a percentage of GDP

opportunities. They also showed that government expenditure — in addition to those of the government sector itself — are also significant in creating job opportunities through the construction sector as this includes housing and retail construction. This is why fiscal stimulus has become so important. Take into account the important of fiscal stimulus during the economic crisis, this paper will elucidate the role fiscal stimulus in responding the GFC in Indonesia.

Specifically, this paper will address the following questions:

- What was the fiscal position before and after the GFC?
- How did the fiscal stimulus minimize the impact of the crisis?
- What challenges need to be anticipated in fiscal policy to face future economic crises?

This paper will attempt to answer these questions, as well as discuss lessons learned and policy implications from the current global financial crisis. The organization of this paper is as follows. Section II will address the impact of the GFC on the Indonesian economy; Section III will discuss the Indonesian government budget in a nutshell; Section IV will focus on the design of the fiscal stimulus package; Section V will discuss the impact assessment of this stimulus and Section VI will focus on the agenda for further reforms in fiscal policy.

2. The Impact of the Global Financial Crisis on Indonesia[2]

The financial crisis began with the fall of the US sub-prime mortgage market. But it did not stop there. The crisis pushed a broad global re-pricing of risk. This was worsened because the loss in the financial sector turned out to be much bigger than originally estimated. Another result of the financial crisis was that the US banking balance sheet was under a lot of pressure and required huge funds for recapitalization. The implication: liquidity became very tight. The lack of liquidity in international

---

[2] This section is heavily drawn from Basri and Rahardja (2009); Basri and Rahardja (2010); Basri and Siregar (2009)

financial markets pushed investors to withdraw their money and a flight to quality to the US ensued as they looked for safer investments in US Treasury bills.

The collapse of asset prices in the US as a result of the financial crisis, led to extremely low prices in the US, and thus a relocation of funds from emerging market economies to the US. This was a real problem for emerging market countries, including Indonesia, as suddenly they were faced with a shortage of foreign exchange liquidity. In addition, the financial crisis also impacted Indonesia through a decrease in confidence. As a result, emerging markets faced difficulty in gaining access to external financing, reflected in increasing yields on international bond issuances due to loss of investor appetite for emerging market financial products generally. In Indonesia and other emerging markets, the financial crisis showed itself in currency depreciation and a decrease in stock market value.

The Indonesia stock exchange composite index hovered at 2,700 in February 2008. But the fallout from the bankruptcy of Lehman, the takeover of Merrill Lynch, and concerns over AIG significantly affected emerging markets. The turbulence in the global financial markets in September and October 2008 pushed the Indonesia Stock Market (IDX) index down by almost 50% from early September to November 2008. The massive sell-off of assets by foreign investors in the Indonesian capital market in the last quarter of 2008 put more pressure on the rupiah. The rupiah lost 28% of its value against the US dollar between October and November 2008, accompanied by a significant rise in its volatility.

Basri and Siregar (2009) demonstrate that although the impact on the financial sector was significant, the Indonesian banking sector was relatively successful in handling the pressures of the crisis. Capital Adequacy Ratio (CAR) fell from 21.6% to 16.8% and Return on Assets (ROA) decreased from 3.2% to 2.6% from January to November 2008. The exception was Bank Century, which failed. The government and the Bank of Indonesia decided to bail it out to avoid a systemic impact on the national economy.[3]

---

[3] This decision to bail out Bank Century was highly politicized as the Indonesian Legislative Assembly (DPR) discussed whether the decision was in fact correct or if there was an element of corruption inherent to it. This issue was purely political, as from an economic standpoint the bail-out was necessary to avoid systemic economic impact (Basri, forthcoming)

Bank credit continued to grow at the end of 2008, but at a slower pace, and in 2009, a sharp decrease in credit occurred, from 32% to 10%. Basri and Siregar (2009) also show that credit actually grew in 2008, as it was more widespread than in 2004 and 2005 when it was concentrated in consumer credit.

An important point to note is confidence. Gunawan *et al.* (2009) demonstrate that confidence among banks declined as well, seen in the shrinking of inter-bank borrowing and lending, which fell 59.3% to Rp. 83.8 trillion in December 2008 from Rp. 206 trillion in December 2007. Sharp competition between banks resulted from the need to expand their funding base, accompanied by increases in interbank rates, which in turn pushed interest rates higher. One-month deposit rates in commercial banks reached 16% in December 2008, significantly higher than the prevailing maximum guaranteed rate of 9.75% set by the deposit insurance company (LPS). Banks enticed big clients by giving these high interest rates to keep them from withdrawing their funds. The government and Bank of Indonesia policy only guaranteed deposit insurance to Rp 2 billion. Yet at the same time, countries like Singapore and Malaysia applied full guarantees. This difference created a risk of arbitrage from deposits in Indonesia to Singapore, Malaysia and other countries offering full guarantees. In addition, there was a tendency toward flight to quality, wherein depositors moved their money to large or state banks (although not to foreign banks like in the 1997/98 crisis), thus deepening the problem of liquidity imbalance and segmentation in the banking system.

Trade as a channel of global crisis

The weak global economy led to a decrease in the demand for Indonesian exports. Further, this decrease in global demand also weakened the government's ability to export primary mining goods, as a result commodity and mining prices fell. The sharp decrease in price also affected agriculture and oil. Consistent with this, Indonesian exports went into sharp decline, particularly agriculture, oil, gas and minerals. Papanek, *et al.* (2010) show a sharp decrease in exports in the first quarter of 2009 compared to the same quarter one year earlier. This was mainly due to a decrease in value. Theoretically, the depreciation of the rupiah since September 2008 compensated for the collapse in the demand for exports. Yet data shows that the impact of the substitution

effect was smaller than the income effect. As a result, exports as a whole declined. Still, growth in volume of exports in several Indonesian commodities was relatively strong, perhaps due to the weak rupiah during this period.[4]

The sharp decrease in exports was not unique to Indonesia. The same pattern emerged in many countries, including China, Singapore, Malaysia and Thailand. Given the size of the export contraction which occurred, the impact of the global financial crisis on the Indonesian economy was relatively similar. Figure 1 shows how exports in countries like China, Malaysia and Singapore contracted by 30% in the fourth quarter of 2008 and first quarter of 2009. We should thus discuss why this relatively sharp decline in exports had a limited impact on the Indonesian economy. The authors argue that the limited impact on the Indonesian economy was due to the relatively small place of exports in the Indonesian economy compared to countries like Singapore, Thailand and Malaysia.

---

[4] Indonesian exports of raw materials and semi-processed materials such as coal, crude palm oil, and minerals, to emerging markets such as China and India have increased significantly since the global financial crisis

Figure 1. All were Screaming the same Mayday
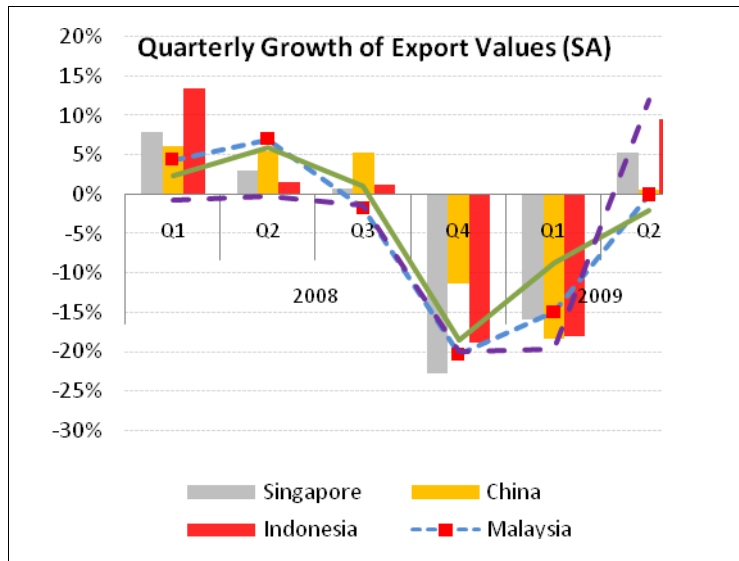
Source: estimated from CEIC database

Furthermore, Kimura (2005) indicated that Indonesia was left behind in production networks. As a result of this being left behind, the effects of the global crisis against the Indonesian economy also became limited. In fact this was not something that had been planned. Indonesia certainly only wished for a large portion of the large exports within the economy. But several obstacles from the supply side (Soesatro and Basri (2005); Basri and Patunru (2006)) had already made Indonesia become less competitive and its growth of exports relatively limited. Ironically, Indonesia's weak distribution network helped cushion the blow of the global financial crisis on the Indonesian economy. In sum, Indonesia survived the GFC thanks to the domestic demand.

The importance of domestic demand

The importance of domestic demand in insulating growth from global recession is not unique to Indonesia. Basri and Rahardja (2010) demonstrate that at least in Asia, countries that maintained or even increased their share of domestic demand in GDP were in a relatively better position to withstand the global economic downturn as shown by figure 2 (data in Appendix B).

Figure 2. Domestic Demand and Resilience from Global Crisis
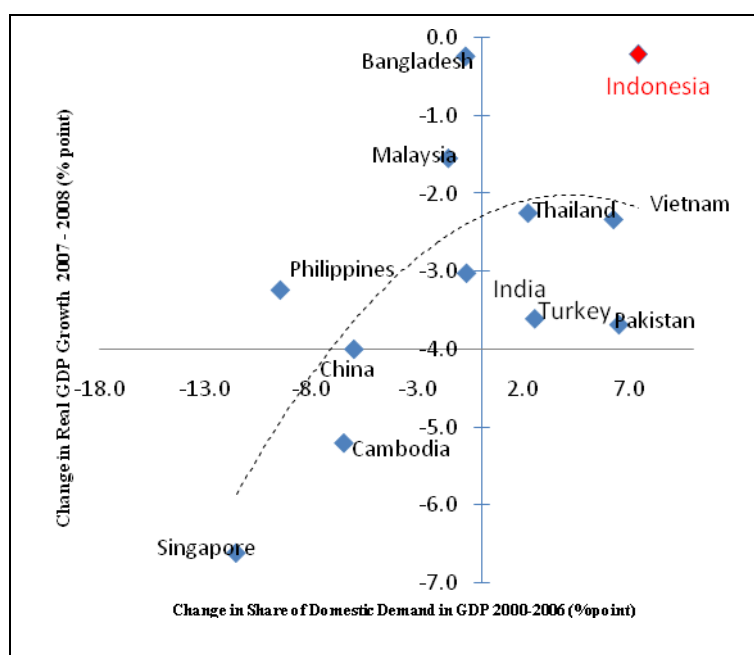
Source: EIU, Basri and Rahardja (2009)

As we discussed earlier, the role of private consumption in Indonesia is very vital in the Indonesian economy. Interestingly even when the global crisis peaked (from 3rd quarter 2008 to 2nd quarter 2009), private consumption remained relatively strong and grew by more than 4.7% Given the important role of domestic demand especially private consumption in supporting the Indonesian economy during the GFC, an important question becomes why did private consumption remain relatively strong? Was it due to the fiscal stimulus adopted by the Indonesian government? More specifically, what was the role of the fiscal policy in minimizing the impact of the GFC? This will be discussed in section IV and V. Before we proceed to address these questions, it is important to understand the structure of Indonesia's government budget.

3. Indonesian Government Budget in a Nutshell

Government budget is at the central pillar of Indonesian fiscal policy. After the birth of New Order in 1966, government budget has been driving government policies to ensure macroeconomic stability, reduce dependencies to foreign aide, and to improve

income distribution. With the oil boom, the government also had the resources to enforce political authority of Suharto through development projects (Hill, 1996). Although this last element is particularly similar to the objective of government budget in Sukarno era, in general, government budget under New Older presented a significant departure from the Old Order doctrine in budget was used as a tool to achieve "nation building" through defense and other projects that contributed to hyper inflation and high debt.

Since the Asian Crisis, government budget processing in Indonesia undertook several important changes. First, the full democratization has brought significant role of the Parliament in the budgeting process. Indonesian State Budget Law introduced in 2003 solidifies the interaction between government and Parliament in the budgeting process.[5] Involvement of the Parliament has changed. From merely endorsing the proposed budget by central government, Parliament is actively involved in the deliberation and modification of the macroeconomic assumptions and approving or rejecting the budget, proposed by all government agencies, line by line.

The budgeting process can be quite lengthy and sometimes contribute to the delay in government spending. Except for 2008, since 2001 until 2009 central government spending has been largely lower that the revised budget projection (*APBN-P*). The APBN process requires all line ministries to perform multiple consultations with Bappenas (Ministry of Planning), Ministry of Finance, and the Parliament. Changes in budgeting assumptions, uncertainties in interpretation of new rules in government procurement, and low capacity in line ministries to develop working program minimizes iterative consultations often contribute to delays in spending (World Bank, 2009). On the other hand, the government is challenged to balance the needs to spend quickly and to have a transparent and accountable budget reporting.

Secondly, there have been fundamental changes in the format of government budget. In 2000 the government changed the fiscal year, from April 1st to March 31st in subsequent year, to January 1st through December 31st. But more importantly, Indonesian government budget adopted the international standard of the government financial statistics (GFS) for its budget report. After 34 years of implementing "balance

---

[5] Undang-Undang no 17 tahun 2003 tentang Keuangan Negara

budget" doctrine of the New Order, Indonesia finally allowed its budget to reflect deficit/surplus and implemented series of rearrangement in the budget items. The current budget format also introduced financing items that clarifies sources of financing government spending, such as privatization, government debt, and foreign loans which before were all simply treated as "development revenue". Since 2001 the central government budget also included "balancing funds" item to anticipate the decentralization of authority to local governments. Following up the introduction of State Law no.17 of 2003, in 2005 the central government implemented unified budget system that collapsed routine and development expenditures and changed sectoral budget allocations to functional allocations by line agencies.[6]

Casual observation of figure 3 suggests that disbursement in total spending by central government has been pro-cyclical even during the global financial crisis. The path of actual spending of Indonesian central government budget almost tracked growth in real GDP with simple correlation between *growth* of real GDP and disbursement of central government spending of 0.7. Total spending realization by central government deflated by GDP deflator has risen approximately 1.2 times in the course of 2001 – 2009 period while Indonesian real GDP increased by 1.5 times.[7] Spending disbursement by central government also dipped during the global financial crisis. In 2009 real GDP growth was down 1.5 percentage point from growth in 2008 whilst government spending was down by 16% in real terms. The reduction in spending disbursement by central government in 2009 was due to a steep decline in energy subsidy bills because of the collapse of global commodity prices.

The figure 3 also suggests that subsidies have taken a significant part of central government spending in Indonesia. In the course of 2001 and 2009, on average subsidies has been 28.5 percent of central government spending excluding transfers to the regions. This figure is significantly higher than years before the Asian Crisis in

---

[6] An example of the implication of this restructuring is that budget for "national defense" sector is no longer present and has transformed into budget to execute work program under the "Ministry of Defense". Meanwhile, activities of development expenditures, which under the old format was mainly consisted of capital expenditures, has been merged to different expenditures items including capital, material, personnel, social and other expenditures.

[7] We chose to use GDP deflator (base year 2000) because it covers prices from more economic activities compared to CPI.

which subsidies took about 3.5 percent throughout 1990/91 and 1995/96. Around 80 percent of the total subsidy bill has been for energy subsidies in the form of payment to SOEs and that has been extremely sensitive to upward movement in the global crude price. The rest of the subsidies are aimed for fertilizers, food program (RASKIN), public housing loans, and seeds. Despite a 30 percent average increase in administered fuel prices, subsidy bills increased sharply in 2008 because of the "untouchable" electricity subsidy and government decision to roll out cash-transfer to protect the poor from rising food prices. Nevertheless, due to politically contentious subject, preventing subsidies from ballooning has not been an easy task for the central government, let alone to reduce it deliberately.

Casual observation also suggests that the only spending component that has been counter-cyclical is discretionary expenditures. Simple correlation between real GDP growth and disbursement of discretionary expenditure between 2001 and 2009 is -0.2. Although a simple correlation does not necessarily provided prove of impact of fiscal shocks to GDP growth, it is a crude indicator of how the government have made use discretionary expenditure to affect economic activities. Nevertheless, the size of discretionary spending has been much smaller than subsidies that are tied to government pre-commitment.

Figure 3. Actual Government Expenditures in Real Terms (Rp trillion) and Real GDP Growth (%)

Routine spending: personnel, interest payment, and materials (purchase of goods and services); discretionary spending: capital expenditures, grants, and social expenditures
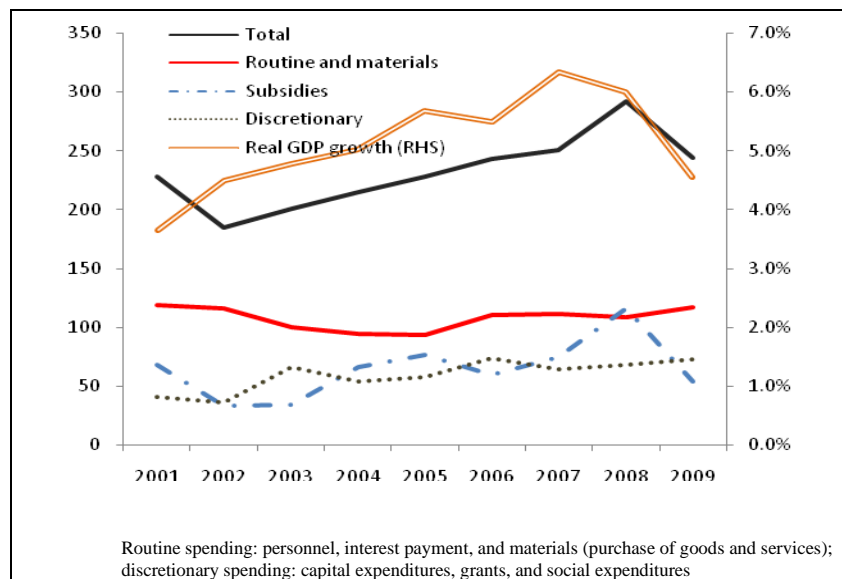
Source: CEIC, processed from Ministry of Finance

The pattern of disbursement in capital spending and purchases of goods and services are marked with significant back-loading. This pattern certainly raises doubt on the effectiveness of stimulus through government spending. As previously mentioned, delays in budget approval and low capacity in executing work program contributed to push back in spending schedule. Figure 4 illustrates the trend that capital spending and purchase of goods and services tends to be small in the beginning of the fiscal year and suddenly accelerated towards the end. Between 2001 and 2009, about 30 percent of spending has been rammed in the month of December. Even during the global financial crisis, 32 and 29 percent of capital spending and purchase of goods of services in were done in December of 2008 and 2009, consecutively.[8] Although slow burn rate in the beginning of fiscal year is unusual in any given public or private institution, the pace of the disbursement of discretionary spending of Indonesian government remains a challenge for the effectiveness of fiscal policy. It also and questions the capacity of line ministries to properly execute development projects, particularly for tackling economic crisis.

Figure 4. Capital Spending and Purchase of Goods and Services by Central Government
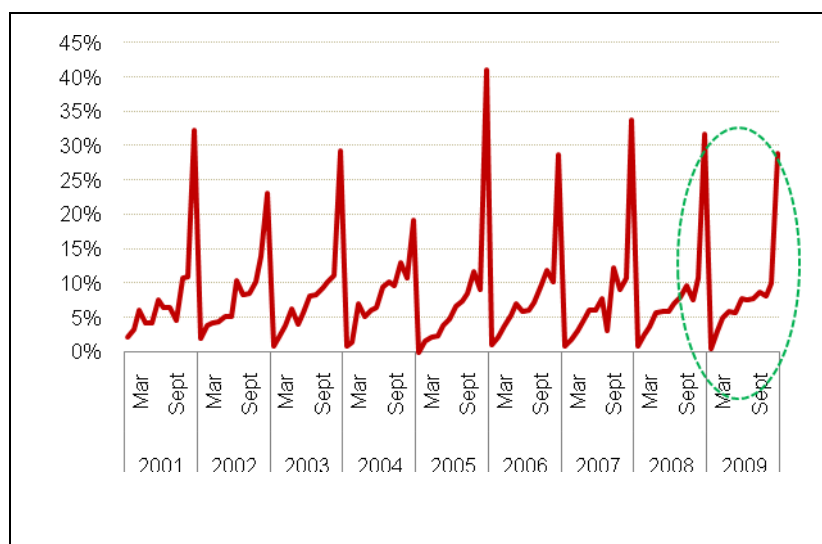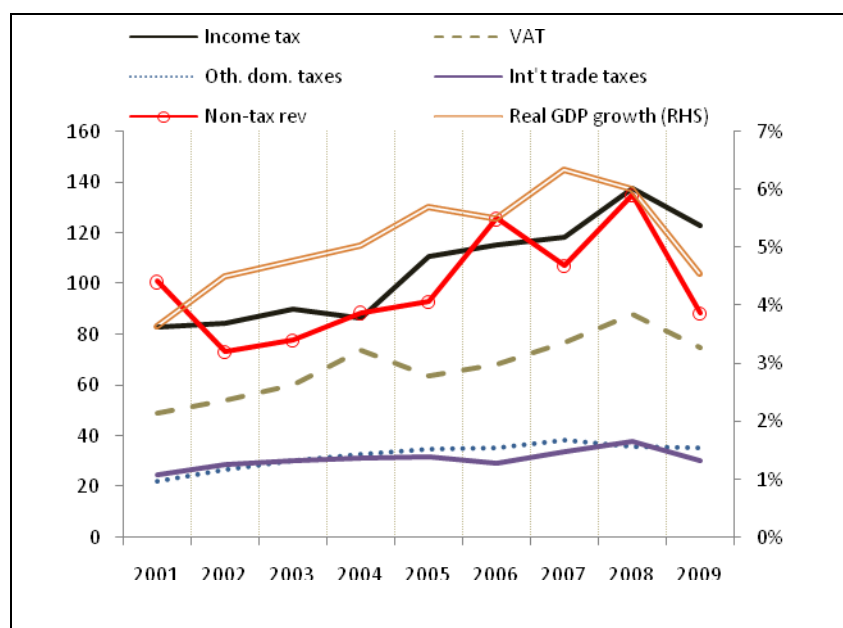

Source: processed from Ministry of Finance

---

[8] Overall budget disbursement by line ministries in 2009 was close to the revised projection (APBN-P) as the government established a Committee consisting of DG of Treasury and representative from the Planning Agency (Bappenas) to monitor and speed up the process to develop budget allocation (DIPA)

Tax revenue has been the main driver of increase in actual revenue of the central government. Between 2001 and 2009 on average tax revenue contributed to 69% of central government domestic revenue or 12.1% of Indonesian GDP. In real term, tax revenue increased by 1.5 times between 2001 and 2009 and that was mostly due to increase in income and value added taxes after the government started reforming tax administration in 2005. Actual revenue from income and value added taxes in real terms increased by 1.5 times in the course of 2001 and 2009, which was similar to expansion in Indonesian economy.[9] Increase in revenue from income tax and VAT also compensates relatively stagnant revenue from international trade and other domestic taxes, while provides cushion from the volatile non-tax revenue due to swings in international commodity prices and uncertainties from SOEs profits.

Figure 5.   Actual Domestic Revenues of Central Government in Real Terms (Rp trillion) and Real GDP growth (%)

Source: CEIC, processed from Ministry of Finance

The ability of Indonesian government to use counter cyclical fiscal policy seems to be limited. The size of discretionary spending is relatively small, only around 3 to 4% of GDP. Meanwhile, Indonesia still needs to enlarge its tax base, particularly business

---

[9] Deflated using GDP deflator with base year 2000

and personal income tax. At this stage, automatic stabilizer has been around 10% of GDP.[10]

Now let us turn to inspect the behavior of the series that we analyze in quarterly time frame. The two figures below indicate year on year growth of quarterly disbursement in central government spending and tax revenue. To help isolate the discretionary spending, we construct series of central government spending excluding salaries and subsidies (dashed line). The figure on the left-hand side suggests that if we exclude salaries and subsidies, growth in disbursement in government spending has been relatively stronger in episodes of economic downturn. This is particularly true in 2006 when the government introduced cash transfer to compensate for increasing price of rice and fuel. Despite weakness in disbursement during the period of global financial crisis, disbursement in discretionary spending still performed better than the overall disbursement of central government spending. Meanwhile, the right figure suggests cases in which that tax revenue dropped prior to economic upturn in 2007 and during the global financial crisis. Nevertheless, looking the two figures still do not provide meaningful assessment on the relationships among those three variables.

Figure 6. Growth (yoy) of Disbursement of Central Government Spending and Real GDP (right axis)

Figure 7. Growth (yoy) of Central Government Tax Revenue and Real GDP (right axis)
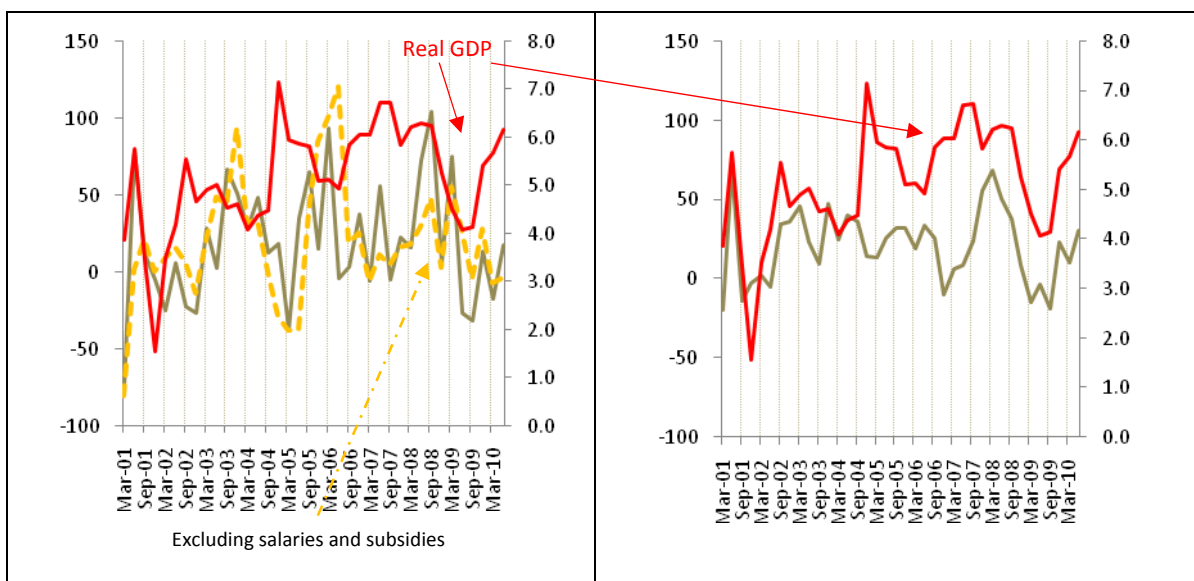
Source: CEIC processed from Ministry of Finance

---

[10] Here automatic stabilizer consists of income tax, sales tax, and tax (tariff) from international trade.

Has Indonesia demonstrated a clear fiscal stance? Previously we indicated that, from graphical inspection, pattern of government spending has been pro-cyclical towards economic growth. But there is more to it. We also find that government budget has been heavily influenced by fluctuation of global crude price. The next figure shows that changes (year on year) in primary balance has been following changes in global crude price. Co-movement between changes in primary deficit and crude price was very close in 2002 and 2003, period when Indonesia was still under the IMF program. But the co-movement between those two variables has loosened up after series of adjustment in energy subsidies in 2005. Nevertheless, changes in primary deficit still response to steep changes in crude price. In other words, the fiscal position of Indonesian government seems to be heavily influenced by fluctuations in crude price that changes the amount of energy subsidies.

Figure 8. Does this Represent Indonesia's Fiscal Stance?
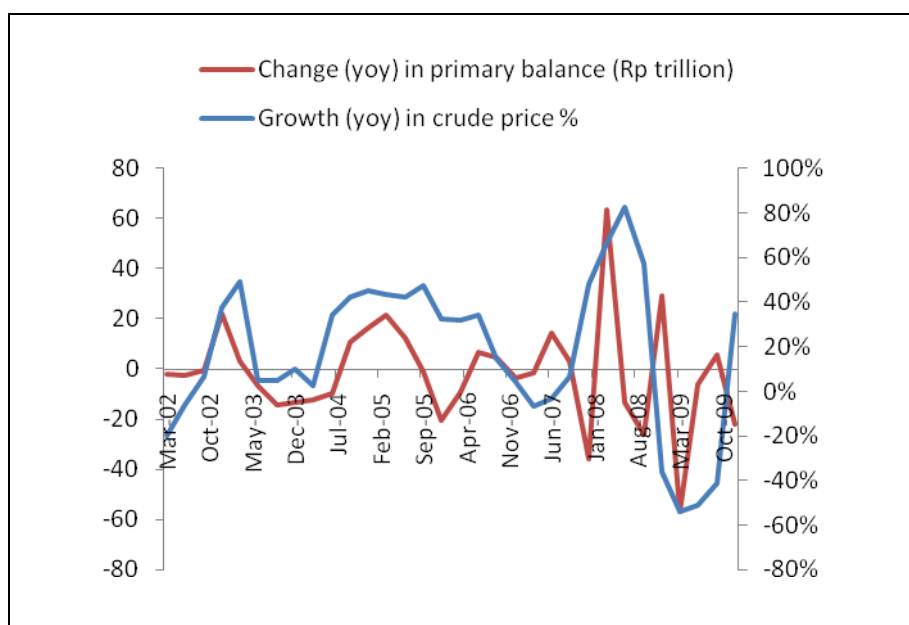
Source: authors calculation from CEIC and MOF data

4. Fiscal Policy and Stimulus Package

4.1. Fiscal Position before the GFC

Since the Asian Financial Crisis (AFC), the Indonesian government has taken various steps to improve its fiscal structure (see Section III). Because of this, Indonesia entered the GFC with better fiscal conditions than many Asian countries, or even the US and Europe. Figure 8 shows that the budget deficit/GDP continuously declined, and that there was a surplus in the primary balance since 2000. Only in 2009 did the primary balance approach 0% in line with the increase in the budget deficit as set forth in the 2009 fiscal stimulus. The government's success in maintaining the budget deficit below 3% since 2000 helped the debt/GDP ratio to consistently decline (Figure 9). Basri and Hill (forthcoming) show that one main issue faced by Indonesia after the 1998 AFC was the increase in the government debt/GDP ratio which exceeded 100% as a result of the government's decision to takeover debt from companies and banks which collapsed in the AFC. Because of this, macroeconomic stability in the early 2000s was extremely vulnerable.   Many studies have been conducted to examine fiscal sustainability in Indonesia. But the government's success in maintaining a low budget deficit made Indonesia's fiscal position relatively good and even better than the Maastricht model, calling for a budget deficit not to exceed 3% and public debt of less than 60% of GDP.

There are several reasons why Indonesia was able to maintain its relatively low budget deficit.

- IMF reform in 1998. Although critics insist that the IMF recommendation to Indonesia to apply tight fiscal policy in the AFC was the wrong course to take, in the long term this requirement has led Indonesia to adopt a more cautious fiscal policy. The pay-off of this policy can be seen several years after the AFC. This allowed Indonesia to enter the GFC in a stronger fiscal position.
- This cautious stance led to the Fiscal Policy Law which limits the Indonesian budget deficit to 3% of GDP and government debt/GDP ratio of less than 60%.

- This cautious fiscal policy combined with modest sales of nationalized distressed assets has significantly reduced public debt from 2000-2010 (Basri and Hill, forthcoming)

- It is of interest to note that central government expenditure has always fallen far below government targets. In 2008, for example, the budget deficit was targeted at 2.1% of GDP, however, the turnout of the budget deficit was only 0.1%. This was due to administrative hurdles including the introduction of a new budget authorization process as well as tighter anti-corruption measures aimed at making the tendering process more transparent but which resulted in delayed spending (Basri and Patunru, 2006; Manning and Roesad, 2006). Decentralization also hindered disbursement from the government budget (this is discussed in more detail later in the paper).

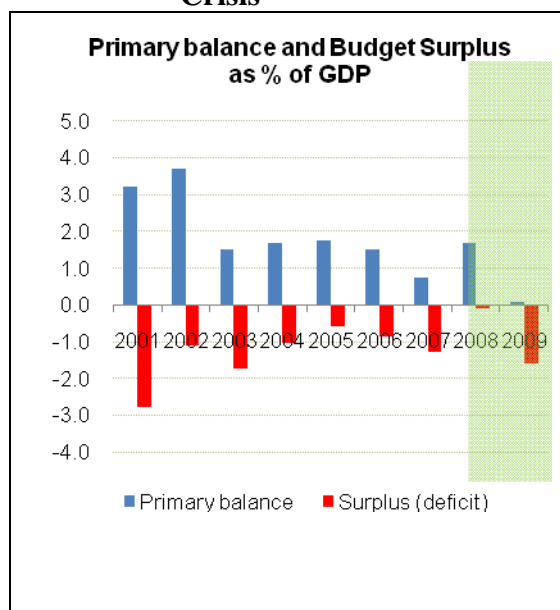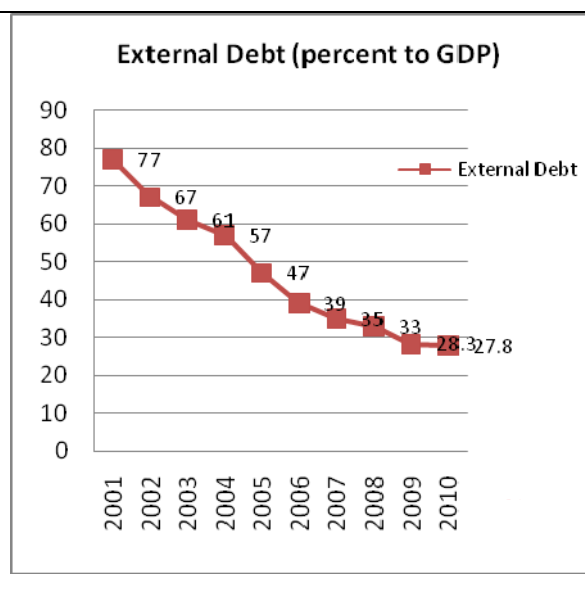| Figure 9. Fiscal Balance before and after the Global Financial Crisis	Figure 10. External Debt/GDP

Source: BPS and Ministry of Finance

4.2. Counter-cyclical Fiscal Stimulus

The Minister of Finance unveiled a stimulus package for 2009, valued at Rp 73.3 trillion (US$ 6.4 billion) (Table 1), to boost the economy amid the threat of an

economic downturn. In line with Keynes (1936), the package addressed three major areas: income tax cuts, tax and import duty waivers, and subsidies and government expenditure. Aiming to stimulate more household and corporate spending, almost 60% of the Indonesian fiscal stimulus was allocated to income tax cuts. To minimize the effects of the global financial crisis, the government cut personal income tax from 35% to 30% and corporate income tax from 30% to 28%.

In addition to the tax cut, and taking into account the high dependency of local industries (both tradable and non-tradable sectors) on imports, around Rp 2.5 trillion was allocated to finance import duty waivers for raw materials and capital goods. This was part of the Rp 12.3 trillion tax and duty package, accounting for 18% of the total stimulus package, meant to support businesses. To help reduce operational business costs, the stimulus package also included diesel and electricity subsidies. Last but not least, close to Rp 12 trillion was allocated to support infrastructure and rural sector development.

It is worth noting that the size of the budget expansion was criticized as negligible. The forecasted deficit of 2.6% of GDP was partly driven by the decline in revenue (especially tax and non-tax revenues) as earlier discussed. Only about 1.2% of GDP can be considered as the real expansionary and the rest was incremental government deficit.

Recent empirical work on East Asian show that a country's success in applying counter-cyclical fiscal policy depends on the government's fiscal capability. Bad government financial health, as reflected in a high debt/GDP ratio will hinder the ability of the government to apply counter-cyclical measures, while countries with a low debt/GDP ratio have more fiscal space in which to maneuver (see, Hur *et al*., 2010).

Despite having a healthy fiscal position (relatively low debt/GDP), the size of the fiscal stimulus in Indonesia was modest compared to other economies including Malaysia, Thailand and Australia. Thus, an important question is why did Indonesia introduced a relatively modest fiscal stimulus compared to other countries, even though its debt/GDP ratio was relatively low.

Table 1. Major Fiscal Stimulus Measures, Indonesia

Major Stimulus Measures		Allocation (Rupiah billion)	% to total
Public Purchasing Power Stimulus		25,850.0	35.3
°	Lower Personal Income Tax Rate (from 35% to 30%)	13,500.0	18.4
°	Broader Income Tax-free Band	11,000.0	15.0
°	Tax Subsidies (cooking oil & biofuels)	1,000.0	1.4
°	Nontax Subsidies (generic medicines)	350.0	0.5
Business Resilience & Export Competitiveness Stimulus		35,478.8	48.4
°	Lower corporate tax rate (from 30% to 28%)	18,500.0	25.3
°	Tax Subsidies (import duties for industries, value-added tax on oil & gas exploration, geothermal tax, payroll tax)	12,300.0	16.8
°	Nontax subsidies (diesel price reduced by Rp. 300/litre, discounted electricity billing rates for industrial users, interest subsidy for water utility companies)	4,172.8	5.7
°	State equity participation in the Jamkindo & Askrindo loan guarantee corporations to boost funding for grassroots business credit guarantees	500.0	0.7
Job Creation & Mitigation of job Losses through Labor-Intensive Infrastructure Projects Stimulus		11,936.5	16.3
°	Public works infrastructure	6,601.2	9.0
°	Transport infrastructure	2,198.8	3.0
°	Energy infrastructure	500.0	0.7
°	Housing infrastructure	500.0	0.7
°	Construction & rehabilitation of roads & irrigation facilities	650.0	0.9
°	Construction of public markets	315.0	0.4
°	Improvement of vocational training & its facilities	300.0	0.4
°	Health infrastructure	150.0	0.2
°	Rehabilitation of storage facilities	120.0	0.2
°	National community empowerment program	601.5	0.8
Total		73,265.3	100

Source: Adopted from Hur, *et al.* (2010)

There are two constraints which limited the fiscal space of Indonesian government to opt for a higher fiscal stimulus: First, State Financial Law and Government Regulation No.23/2003. This law prescribes that the consolidated national and local government budget deficits be limited to 3% of GDP in any given year, and that total central and local government debt not exceed 60% of GDP.

Second, costs of financing the deficit. This started as internal concerns in the Ministry of Finance over financing the debt, with the government worrying that a large deficit could not be financed. Emerging economies, including Indonesia were hit particularly hard by the fallout from the financial crisis. Indiscriminate re-pricing of risk occurred despite efforts by many emerging countries to implement reforms, undertake sound economic policies and to strengthen institutional structures. In September, an attempt was made, and the market responded by asking for bond rates between 13-13.5%, around 300 basis points higher than what the government was willing to pay. In January 2009, the Ministry of Finance successfully absorbed around Rp 9.25 trillion from its sale of government bonds of 1 to 10 years tenor at rates ranging

between 11.2 to 12.24%. Despite the interest rate differential in the Indonesian bonds, due to the low yield of the US Treasury bill hovering around zero percent in January 2009, there was not much interest from foreign investors in the two government bond auctions in January. Rather, domestic investors were the primary buyers.

To handle this financing issue, Indonesia approached the World Bank and requested a Deferred Draw-down Option (DDO) scheme. This enabled Indonesia to obtain financing assistance for the budget deficit if a market disruption occurred, in which the "normal" cost of financing through markets became prohibitively expensive. So there exists a threshold agreed to by Indonesia and the World Bank. This mechanism goes into effect if the market rate which must be paid by the Indonesian government exceeds this threshold (meaning that the government must pay higher rates to finance its debt), making the Indonesian government eligible for loans from the World Bank at a concession rate much lower than the market rate. With this scheme and the support of the World Bank, Indonesia was successful in securing loans from multilateral institutions (such as the Asian Development Bank and the World Bank), and major trading partner countries (such as Japan) at a concession rate amounting to more than US$ 5 billion.

Parallel to this, Indonesia also submitted a proposal to G-20 for the establishment of a Global Expenditure Support Fund (GESF) in order for developing countries to maintain reasonable levels of economic growth and sustain development. The main function of the GESF is to support budget financing – as well as project financing, on top of regular development assistance - to be used specifically for the implementation of counter-cyclical measures aimed at ensuring sustained economic growth in the face of external shocks. This proposal was adopted at the G-20 meeting in London in which the G-20 agreed to allocate US $100 billion through the multilateral development banks (including the World Bank and Asian Development Bank) which could be used to support budget financing for fiscal stimulus.

The concern over financing prompted the government to limit its fiscal stimulus. Another factor which influenced the government's limited fiscal stimulus was the assumption that the GFC would have a relatively small impact on Indonesia. The Ministry of Finance (MoF) estimated that the Indonesian economy would continue to grow at 4.5-5.5% (GMTN, February 2009), because the role of the domestic economy is

so large and the GFC hit export and externally-linked sectors the hardest. With the estimated small impact from the GFC, the MoF decided to adopt a relatively modest fiscal stimulus.

4.3. Tax Cut versus Expenditure Expansion

The initial debate within the country was how the fiscal stimulus program should be designed. The business world (as reported in Kompas and Jakarta Post, 2009) pushed for a stimulus to support business. The government argued that the fiscal stimulus should be focused on supporting household consumption, with an emphasis on efforts to increase the income of marginal groups with a high propensity to consume. There was also concern over the impact of fiscal expansion on the current account balance. Thus, suggestions were made to the government to focus the fiscal stimulus on labor-intensive and domestic oriented projects. Equally important was the role of concerted efforts by countries around the world to pursue a collective fiscal stimulus to limit the impact on current accounts. Nevertheless, Indonesia's current account balance remained positive in part due to major declines in imports from the collapse of investment.[11]

One important issue considered in the design of the fiscal stimulus was the government's ability to spend money. The initial debate within the MoF was how to ensure that the fiscal stimulus would be effective, given the inability of the central government to spend money. Under these particular circumstances, we argued that it would be more effective for the fiscal stimulus to focus on income tax cuts and tax waivers. Eventually Indonesia decided to combine expenditure expansion and tax cuts with the largest proportion allocated to tax cuts (60% of the fiscal stimulus). Another factor was at play in this, as, at the same time, the government was drafting a bill on new tax laws, one of which was to reduce the tax rates on corporate and household incomes. Thus, the tax cut policy did not wholly result from the fiscal stimulus design, but actually was already being prepared and advocated in parliament in the drafting of

---

[11] More than 90% of Indonesia's imports are made of capital goods and raw materials. Thus the collapse of investment will bring down imports as well.

189

the new tax code. The government then included this project in the fiscal stimulus package.

Our next question is will the tax cut be effective? We argue, however, that the fiscal stimulus through tax cuts can be relatively more effective in Indonesia for three reasons: First, unlike in the US, Indonesian households hold less savings and have limited access to formal bank credit. Hence, spending behavior is likely to be influenced more by *current* income, rather than *permanent* income (Modigliani and Brumberg, 1955). Second, given the stage of development, it is more likely that the marginal propensity to consume in Indonesia is higher than in the US. Third, as pointed out by Modigliani and Brumberg (1955) consumption behavior may vary by stage of life. Based on this theory, consumption may be relatively high in societies dominated by younger populations compared to aging populations.

5. Assessing the Potential Impact of Fiscal Stimulus on Indonesian Economy and Fiscal Position after GFC

While it was true that the tax cut might have boosted consumption, this argument has to be juxtaposed against the fact that the impact of the fiscal stimulus on the economy may not be as large as we thought because some of the tax cuts targeted individual income tax at the highest tax brackets, as well as corporate income tax. While it is true that by raising the non-taxable income threshold from Rp 13.2 million per year (Rp 1.1 million per month) to Rp 15.84 million per year (Rp 1.32 million per month) could have induced consumption for low-income people, the number of Indonesians holding tax file numbers is still relatively small. In addition, looking at the size of the fiscal stimulus and given the size of government expenditure, about 10% of Indonesian GDP in 2008, one cannot claim that the relatively high Indonesian GDP growth (compared to other countries in the region) was due to fiscal stimulus.

5.1. Estimating the Impact of Fiscal Stimulus

There are several issues in estimating the impact of fiscal policies in Indonesia. First, as discussed in previous section, the decentralization in 2000 has diminished the control central government to influence spending at the regional level. Therefore, for this paper, we only estimate the effect of fiscal variable directly controlled by the central government. Because spending by central government still accounts for 66 to 70 percent of total spending, we are confident that this would capture most of the impact of fiscal policy in Indonesian economy. Secondly, because Indonesia changed its format of government statistics in 2000, it is quite impossible to come up with a consistent measure of discretionary spending. Instead, here we deliberately broaden the scope of government spending to include personnel and subsidies. Thirdly, close to 60 percent of the fiscal stimulus introduced during the global crisis was **permanent** tax-cut that had been discussed with the parliament. This complicates the effort to conduct an event study to measure the impact of fiscal stimulus to Indonesian economy during the global financial crisis.

Nevertheless, there are good reasons and long theoretical arguments that both government spending and tax affect GDP. But since those fiscal variables are not necessarily independent, the effect of one can affect the other. Therefore, we decided to estimate the potential impact of fiscal multiplier on economic growth using vector autoregressive (VAR) approach. We run a structural VAR of real GDP, central government spending, and tax revenues using identification approach suggested by Blanchard and Perotti (2002). The other advantage of the using VAR is that we can isolate the impact of contemporaneous shocks in government spending or tax to GDP from the anticipated movement of fiscal variables.

Following Blanchard and Perotti, the model used is written as the following

$$X_t = A(L)X_{t-1} + \mu_t \quad (1)$$

Where A(L) is matrix of lag operator and $X'_t = [Y_t, T_t, G_t]$, with Y, T, G, as real non-oil GDP, tax revenue, and spending of central government, all in natural logarithmic term.[12]

---

[12] We do not include quarter dependent dummy variables in A(.) as in Blanchard and Perotti because of limited degrees of freedom.

The vector u_t consists of residuals with the following set-up

$$\mu_{Y_t} = a_1 \mu_{T_t} + a_2 \mu_{G_t} + \varepsilon_{Y_t}$$

$$\ldots\ldots\ldots\ldots \mu_{T_t} = b_1 \mu_{Y_t} + b_2 \varepsilon_{G_t} + \varepsilon_{T_t} \ldots\ldots\ldots\ldots(2)$$

$$\mu_{G_t} = c_1 \mu_{Y_t} + c_2 \varepsilon_{T_t} + \varepsilon_{G_t}$$

The first equation in (2) states that unexpected movements in real GDP in quarter t could come from unexpected movements in tax revenue, unexpected movements in government spending, or other unexpected shocks. The second equation declares that unexpected movements in tax revenue could be due to unexpected movements in GDP, unexpected movements in government spending, or other unanticipated shocks. Similar interpretation also applies in the third equation on unexpected movement in government spending.

The identification for system of residuals in system of equations 2 starts by assuming b_1 equals to elasticity of tax to output under the current fiscal policy rules. The quarterly data eliminates the possibility of b_1 capturing discretionary changes in tax policy because in practice it will take more than 2 quarters for the government and Parliament to learn about the GDP shock and to adjust tax. We ran an OLS between log of tax revenue against log of real GDP on quarterly data from 1995 to 2009 and came up with an estimate of 2.16. [13]

Meanwhile, for c_1 we assume there is no immediate and automatic link between changes in government spending with changes in economic activity. It will take months for the government to prepare revised budget projection and for approval by the Parliament. Therefore, we assume $c_1 = 0$.

We also assume tax does not respond to unanticipated changes in government spending, i.e., $b_2 = 0$. In other words, we assume that spending comes first in the Indonesian budget process while changes in tax policy would require separate proposal and discussion with the Parliament.

Finally, using b_1 and assumptions $b_2 = c_1 = 0$, we construct $r_{Tt} = u_{Tt} - b_1 Y_t$ and $r_{Gt} = u_{Gt}$, that are series of residuals that are free from movement in real GDP. We then use

---

[13] Blanchard and Perotti construct the elasticity using information on tax base. Unfortunately this information is hard to come by. However, our result is similar to what the elasticity they got using US quarterly data which was 2.08.

those series to estimate a_1 and a_2 using two-stage least squares using those series as instruments.

To investigate the relationships among those variables more thoroughly, we ran a VAR as specified in (1) and (2) over quarterly data from 2nd quarter of 1995 until 4th quarter of 2009. We express all variables in real term by deflating them with GDP-deflator.[14] We also control for deterministic trend, dummy variable for decentralization since 2000, and dummy variable for fiscal stimulus in the 2nd and 3rd quarter of 2008. We also include a dummy variable to mark the change in government budget format and the start of decentralization period in 2000.

The path of impact multiplier over time for output is given by the following graphs of impulse responses.

Figure 11.a. and 11.b: Impact Multiplier due to 1 Standard Deviation of Unanticipated Shocks in Government Spending and Negative Tax Revenue to Real GDP
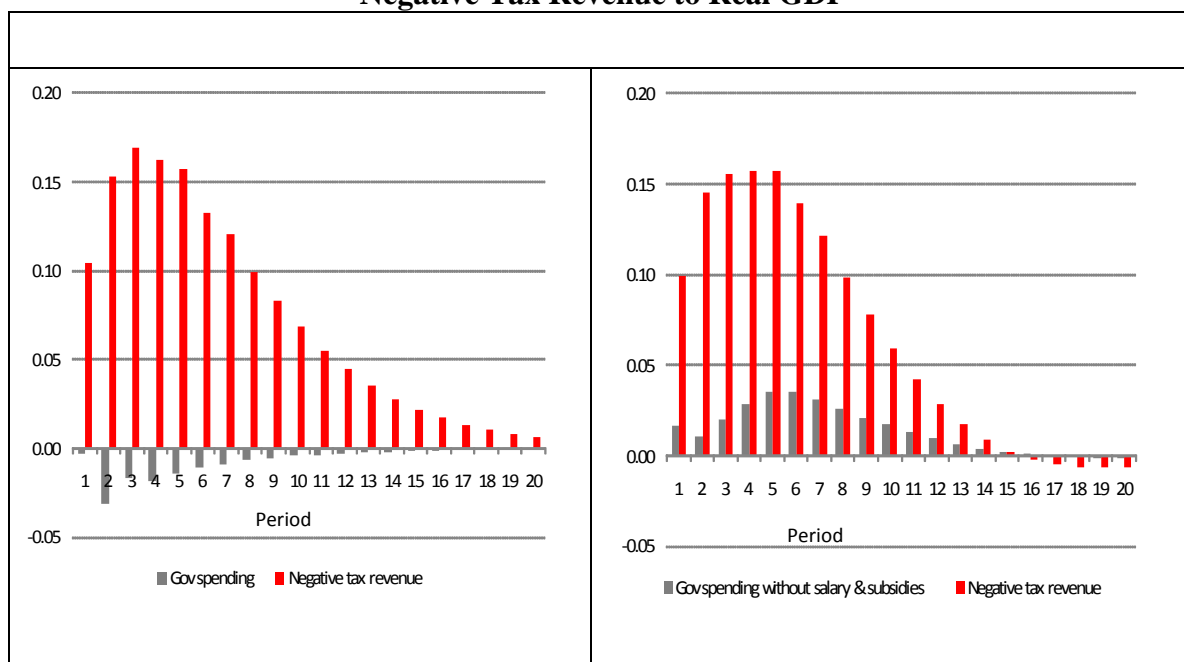
Source: authors' estimates

The result on the left interestingly suggests that unanticipated shocks in central government spending has little, or in fact, negative effect on real GDP. Both figures above suggest that impact multiplier for unanticipated tax shocks to real GDP are higher than that of unanticipated shocks in government spending. We find that one standard

---

[14] We ran the quarterly data using X11 procedure for seasonal adjustment.

deviation of negative unanticipated shocks on tax revenue demonstrates stronger positive impact on real GDP of 0.1% in one quarter or 0.56% in four quarters. This result differ slightly than that of the World Bank (2010) which found a considerable positive impact of growth in central government spending on growth of Indonesian real GDP. Our results are more similar to recent findings on impact of fiscal policy in East Asian countries using structural VAR but with additional identification for the business cycle and monetary policy (Jha *et al.*, 2010).

We then use an alternative definition of central government spending which reflects more discretionary policy decisions rather than commitments. We excluded salaries, subsidies, and interest payment for domestic government bonds to dampen the impact of spending that had been pre-committed. The result from using this measure as central government spending in VAR suggest that one standard deviation in unanticipated discretionary spending by central government have 0.016% and 0.07% impact on real GDP in one quarter and four quarters, respectively.[15] This result might be attributed to capital and social spending which are less pre-committed. As seen above, the multiplier of an unanticipated discretionary spending on real GDP reaches its peak at the 5th quarters.

One possible explanation for the lack of impact of central government spending on Indonesian GDP is that subsidies have been more pro-cyclical to economic activity. Subsidies contributed to 29 percent of central government spending. About 80.5 of subsidy spending have been for energy through payments for the state electricity company (PLN) and state oil company (PT Pertamina). The central government disbursed subsidy payments those SOEs after they settle their expenses.

Secondly, the rigidity of subsidy commitment can, sometimes, put pressure on the government budget. Subsidies considered tied to political commitments made by central government to the Parliament. In some episodes of high global commodity prices, subsidy bills increased sharply and raised questions on the capacity of government budget to keep the subsidy while increasing social spending. This situation can often turn into episodes of macroeconomic uncertainties that increased borrowing costs.

---

[15] Using disbursement of discretionary spending by central government, our estimate on the impact of central government spending on GDP is similar to that found by the World Bank (2010).

Thirdly, even disbursement of discretionary spending is marred with delays, back-loading, and complicated procurement for government agencies to purchase goods and services.

Meanwhile, changes in tax code or tax policies can be internalized relatively more efficient by individuals and private companies. We believe that this is quite plausible given the fact that Indonesia introduced a permanent tax cut in 2009, which can reduce forward-looking adjustment by corporation and households given the current strong position of Indonesian government budget.

In sum, using quarterly data of realized spending and revenues by Indonesian central government, our exercise suggests that fiscal stimulus in the form of tax cut would have had a larger impact on Indonesian economy during the global financial crisis. We also find that an increase in government spending has less of an impact on economic activity. Delays in disbursements on central government spending could reduce the effectiveness of policy decision. We also thought that government spending might not necessarily drive up the economy as long as the government considers increase in subsidy as part of the spending package. Instead, we find that increase in discretionary spending, such as capital expenditure and social spending can have a desirable impact on economic activities in the subsequent periods

5.2. If not Fiscal Stimulus, What else?

As previously mentioned, the role of private consumption is very important in supporting Indonesian economy during the GFC. This leads us to ask why did private consumption remain strong during the global financial crisis?

To understand more about what could potentially support the resilience in private consumption, Basri and Rahardja (2010) examine the co-movement between private consumption and other components of GDP. They found out that the relatively strong growth in consumption during the crisis period was a lag effect from strong exports in the previous two to three quarters. The co-movement between private consumption and government consumption is somewhat expected. As a response to the global economic downturn, Indonesia implemented a fiscal stimulus targeted at increasing infrastructure spending. However, as we discussed earlier the fiscal stimulus had a rather poor

disbursement record, therefore one could argue that it was less effective than it should have been in stimulating the economy as we discussed earlier. This lead us into a question of if not fiscal stimulus what else boosted the private consumption during the GFC?

Table 2 reports the correlation coefficients of innovations in private consumption with innovations in exports, government consumption, and gross fixed capital formation. Innovations from each of these variables are generated by taking the residuals of univariate ARIMA process. The interpretation of those correlations is simple. For example, a positive correlation between innovations in private consumption and innovations in government consumption indicates that unexpected movements in private consumption are associated with unexpected movements in government consumption.

Table 2. Co-movements between Innovations in Private Consumption with Innovations of GDP Components [a]

Lags	Components of GDP Government consumption	Gross fixed capital formation	Exports
0	0.12	0.06	0.24
-1	-0.16	-0.04	-0.27
-2	-0.22	-0.01	-0.41
-3	0.26	-0.07	0.29
-4	0.20	-0.13	0.49

Adopted from: Basri and Rahardja (2010)
[a] Co-movements between innovations of each component derived from original data that spans from 2000-I to 2008-IV. Here growth is expressed as annual (year-to-year) growth

This results suggest that it is likely that commodity exports played an important role in driving consumption. The effect of the commodity boom on economic activities is to be explained as follows. Economic activities outside Java increased as a result of the commodity boom that occurred several years before. This was reflected by the relatively high credit growth outside Java over the past several years (Figure 12).

Figure 12. Commodity Boom Outside Java
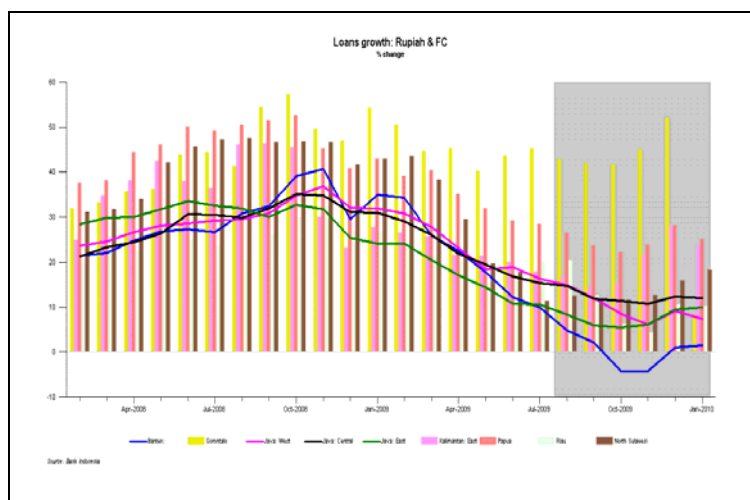
Source: Bank Indonesia

The growth of third party funds in commodity producing regions also slowly increased. This data strengthens the argument that the economy outside Java improved as a result of the commodity boom, and during the crisis period, residents outside Java were capable of making use of their accumulated savings to fund consumption during the global financial crisis. In addition, we also think that service exports played an important role because surprisingly strong exports in tourism, creative design, and workers' remittances are likely to have a direct link to private consumption.

5.3. Fiscal Position after the GFC

What was the fiscal position after the GFC? In 2010, as the GFC started to wane, the proportion of the fiscal stimulus was mostly unchanged. The components of the fiscal stimulus like the reduction in corporate tax rates, personal income taxes and broader income tax-free bands are permanent rather than temporary. In addition, the stimulus in the form of the reduction in the price of diesel oil and electricity billing for industrial users can also be seen as 'quasi-permanent'.

Keeping in mind the high infrastructure requirements, the Indonesian government also continued to increase expenditure on infrastructure. In other words, the fiscal stimulus pattern has not undergone much change post-GFC. So, the Indonesian fiscal stimulus formed a new expenditure pattern or new 'normal'. Thus, in the case of

Indonesia, it is difficult to discern a practical exit strategy from the fiscal stimulus. The important question is, thus, if the fiscal policy formed a new normal pattern, will fiscal sustainability be upset and will Indonesia have a permanent deficit? We don't believe that this will occur as thus far Indonesia – with a relatively low debt/GDP ratio – is actually underleveraged and the fiscal stimulus was relatively small, and thus does not endanger fiscal sustainability as a whole. It is true that since the GFC there are signs that the primary balance has become negative, because of this the government is planning to return the primary balance to positive by increasing tax revenue.

It is interesting to examine the budget deficit post-GFC in 2010. In 2010, Indonesia's budget deficit decreased to 0.6% lower than the government's target. Yet we can see that this is not only due to the exit strategy, but more to the inability of the government to absorb the budget or spend money. Under these conditions, the issue confronting Indonesia in the future will not be fiscal sustainability, but rather how to increase and improve the quality of government spending. We further believe that there is room to increase the deficit even further and that this is necessary to push the Indonesian economy to grow faster. This will be discussed further in Section VI.

6. Agenda for Further Reform in Fiscal Policy

As previously discussed, the primary challenge in Indonesian fiscal policy is how to increase and improve the amount and quality of government spending. There are several obstacles to this.

First, improving transparency and managing fiscal risk. Improvements in government budget administration, including improvements in governance (by eliminating off-balance sheet financing) and adopting fiscal risk and contingent liabilities. Good budget planning is the key to improving the quality of spending. The government has already implemented a performance based budgeting program, in which budgeting is based on targets in each government institution based on clear priorities, rationale and evaluation of potential results of these programs. But in practice, designing a performance based budgeting system is not easy and requires time to

implement. Improvements in administration will eventually help expedite government spending.

Aside from administrative issues, off-balance sheet financing also must be minimized. In the past, the military budget has been the most sensitive area for this, particularly during the Soeharto-era. Progress has been made as more and more off-balance sheet items enter the budget. This is also not an easy process and will require long-term efforts as it is a politically sensitive area.

Other progress is evident in the adoption of fiscal risk and contingent liabilities in the design of the government budget over the last several years. With global uncertainty, the government must also pay heed to fiscal risk. In the last several years the Indonesian government has begun to adopt fiscal risk analysis in the government budget. The macroeconomic variables used in the government's budget design are economic growth, inflation, interest rates, currency exchange rates, Indonesia Crude Oil Price/ICP, and oil lifting. These indicators form the basic assumptions used as a reference to calculate income, spending and financing in the National Budget (*Anggaran Pendapatan dan Belanja Negara* or APBN). When these variables differ from their assumptions, income, spending and financing in the APBN are also adjusted. This means that variations or uncertainty in macroeconomic indicators are risk factors which influence the APBN.

As an example, the MoF (2010) stated that in fiscal year 2010, if economic growth was only 1 percent lower than the assumed figure, the deficit in the 2010 Estimated National Budget (RAPBN) would grow by Rp 4.1 to Rp 4.5 trillion. Further, depreciation in the rupiah's exchange rate against the US dollar would impact income, spending and financing in the budget. In fiscal year 2010, if the rupiah depreciated against the US dollar by an annual average of Rp 100 from the assumed rate, then an additional Rp 0.38 to Rp 0.42 trillion would be added to the deficit in the 2010 proposed APBN (RAPBN). Meanwhile, an increase in the 3-month SBI interest rate would raise the interest on financing domestic debt. In fiscal year 2010, if the 3-month SBI interest rate increased by more than 0.25% from the assumption, then an additional Rp 0.3 to Rp 0.5 trillion would be added to the 2010 RAPBN deficit.

The most important factor to examine in fiscal risk is the Indonesian Crude Oil Price (ICP). In fiscal year 2010, if the average ICP was USD1 higher per barrel than the

assumed rate, the 2010 RAPBN deficit would grow by Rp 0.1 trillion. In addition to this, a decrease in domestic oil lifting would also influence the APBN in terms of government income and spending. In fiscal year 2010, if domestic oil lifting was 10.000 barrels per day lower than the assumed rates, an additional Rp 3.0 to Rp 3.34 trillion would be added to the 2010 RAPBN deficit. Another variable influencing the deficit is the volume of domestic fuel consumption (BBM). An increase in the domestic fuel consumption of 0.5 million kiloliters would increase the 2010 RAPBN deficit by Rp 1.33 to Rp 1.46 trillion.

Outside fiscal risk, another important concern is contingent liabilities. This is an extremely important area because, like it or not, the government that will run Indonesia for the next five years must endeavor to ensure fiscal sustainability in order to guarantee macroeconomic stability. Several surveys, such as that carried out by the LPEM (2006), have indicated that macroeconomic stability is the first prerequisite to entry of investment into Indonesia. If the government cannot guarantee macroeconomic stability because of the existence of large contingent liabilities, then there is the threat that macroeconomic improvements will not continue. Eventually, this could lead to the collapse of the state's finances. In addition, problems regarding fiscal sustainability would result in an increase in Indonesia's country risk rating. This in turn could lead to an increase in the difference between domestic and international interest rates. Any rise in the country risk rating would further delay the entry of foreign investment into Indonesia, at the very time when investment is very much needed for economic recovery.

Second, the handling of principal-agent problems between the central and local governments. Decentralization has given rise to incompatibility between centralized government policy and local governments. This makes centralized government policy, including central government expenditure, less effective. We argue that the main problem is a lack of an appropriate incentive and disincentive mechanism in the new democratic era. Basri and Hill (forthcoming) argue that there is a principal-agent problem in which the agent (local government) does not obey the principal (central government) because the central government is now directly elected by their own constituencies. As a result, the central government is less able to enforce reward and penalty mechanisms on local governments. This is a big challenge which needs to be

resolved. Although sufficient funding is transferred from the central government to local governments, this does not ensure that development tied to infrastructure or poverty alleviation improves on the local level. The central government can no longer control the regions, and whatever occurs in the regions falls under local capture. Without a clear reward and penalty scheme, government policy tied to infrastructure, poverty alleviation and improving the investment climate cannot function. Because of this, it is necessary to formulate a reward and penalty mechanism to handle the principal-agent issue and ensure effective fiscal coordination between central and regional governments. We suggest that the central government increase the proportion of Special Allocation Funds (DAK), which are transfers from the central government to regional governments for projects funded by the central government. The larger the portion of DAK in regional transfers, the better able the central government to synchronize policy with regional governments. If the proportion of DAK is increased, then DAK can be used as a reward and penalty instrument, in which if regional governments implement poverty alleviation programs or build infrastructure, DAK allocation can be raised. But if the regional government does not administer these programs, the central government will reduce their portion of DAK. This will create a clear incentive and disincentive system, ensuring that fiscal policy adopted by the central government is consistent with regional implementation.

Third, maintain efforts to deal with corruption and effectiveness in applying the budget. As previously discussed, one factor which hinders and slows government expenditure is concern over the anti-corruption program. Efforts to fight corruption have also impacted the speed and ability for government institutions to spend money. Efforts aimed at improving good governance are full of good intention, namely to reduce the probability of misuse of power, but on the other hand, this also causes delays in the budget process, due to strict procedures and oversight. In addition to this, during the transition period, government officials are not yet accustomed to new rules and there exist multiple interpretations of existing rules, and thus many government institutions are not bold enough to act or spend their budgets out of fear that their actions will later fall under corruption. In several cases, government officials have chosen not to pass the tests to obtain tender certification. By not passing these tests, they are unable to be employed in the tender process for government procurement, and thus avoid any risk of

being tainted by corruption. We believe that the application of these anti-corruption regulations will have an impact similar to a J-curve, in which in the short-term the government's ability to spend will decrease, but in the long term the ability of government officials to spend the budget in line with good governance procedures will improve, and thus the portion of the budget lost to corruption will decrease. But this will require a relatively long time.

Fourth, improvement in fiscal space and quality of spending. Indonesian fiscal space is relatively limited. As discussed in Section II, only a small portion of the government budget is discretionary. For example, since 2005 85% of the government budget has been allocated to mandatory spending on specific sectors like education (20% of the budget, *etc*). The implication of this is that 91% of domestic revenue is allocated to fixed sectors, and thus only 9% of domestic revenue in the government budget can be used flexibly. Given this, it is difficult for the government to maneuver in terms of its fiscal policy. Because of this, we recommend that the government must create more fiscal space by relocating items in the government budget to productive sectors. For example by reducing the fuel subsidy and allocating this to health care, education and poverty reduction. In 2008 Indonesia decreased the fuel subsidy by raising fuel prices. This policy saved the government Rp 32.8 trillion which was then allocated to:

- ✓ Rice for the poor and food security: Rp 4.4 trillion
- ✓ Direct Cash Transfer: Rp 13.7 trillion
- ✓ Reduction in government budget deficit: Rp 11.7 trillion
- ✓ Cushion for fiscal risk: Rp 3 trillion
- ✓ In addition, the government also enacted the National Program for People's Empowerment (*Program Nasional Pemberdayaan Masyarakat*) specifically aimed at empowering poor communities susceptible to economic shock and expanding programs for women, impoverished farmers and fishermen, the disabled, sufferers of chronic disease, victims of natural disasters and social conflicts, and so forth.

In the future, we recommend that the current subsidy of goods must be reallocated as direct subsidies to people. This means that the fuel subsidy must be removed in the mid to long term and that these funds should be allocated to reducing poverty and

improving public health. In addition, budget allocation must be made more flexible by reducing compulsory budget items. By making these policy changes, the government will have more fiscal space in which to maneuver and improve the quality of its spending.

References

Aaron, Carl, Lloyd Kenward, Kelly Bird, Mihir Desai, Haryo Aswicahyono, M. Chatib Basri, Tubagus Choesni (2004), 'Strategic Approach to Job Creation and Employment in Indonesia', *paper prepared for the USAIS mission, Jakarta*

Basri, M. Chatib (2011), 'A Tale of the Two Crises: Indonesia's Political Economy', *paper prepared for JICA-RI Workshop*, February 2011, Tokyo

Basri, M. Chatib and Arianto A. Patunru, (2006), 'Survey of Recent Developments' *Bulletin of Indonesian Economic Studies* 42(3), pp.295-319.

Basri, M. Chatib and Hal Hill (forthcoming), 'Indonesian Growth Dynamics', *Asian Economic Policy Review*.

Basri, M. Chatib and Reza Y. Siregar, (2009), 'Navigating Policy Responses at the National Level in the Midts of the Global Financial Crisis: The Experience of Indonesia', *Asian Economic Papers* 8(3), pp.1-35.

Basri, M.Chatib and Sjamsu Rahardja (2009), 'Indonesia Navigating Beyond Recovery: Growth Strategy in an Archipelagic Country', *paper presented at the* conference on Growth Performance and Sustainability in the Enhanced Engagement Countries. Conference organized by the OECD Economics Department, Paris, 24 September 2009

Basri, M.Chatib and Sjamsu Rahardja (2010), 'The Indonesian Economy amids the Global Crisis: Good Policy and Good Luck', *ASEAN Economic Bulletin* 27, (1), pp.77-97.

Blanchard, Olivier and Roberto Perotti, (2002), 'An Empirical Characterization Of The Dynamic Effects Of Changes In Government Spending And Taxes On Output' *The Quarterly Journal of Economics*, MIT Press, 117(4), pp.1329-1368.

Gunawan, Anton H., Arman, Helmi and Hendranata, Anton (2009), 'Indonesia 2009 Economic Outlook: Slowing, Not Falling', PT Bank Danamon Indonesia, Tbk., Jakarta, 7 January.

Hill, Hal, (1996), *The Indonesian Economy since 1966: Southeast Asia Emerging Giant*, Cambridge

Hur, Seok-Kyun, Shikha Jha, Donghyun Park, and Pilipinas Quising, (2010), 'Did Fiscal Stimulus Lift Developing Asia out of the Global Crisis? A Preliminary Empirical Investigation', *ADB Economics Working Paper Series*, 215.

IMF (2010), 'World Economic Outlook, October 2010'.

Jha, Shikha , Sushanta Mallick, Donghyun Park, and Pilipinas Quising, (2010), 'Effectiveness of Countercyclical Fiscal Policy: Time-Series Evidence from Developing Asia', *ADB Economics Working Paper Series*, 211.

Keynes, John Maynard (1936), *The General Theory of Employment, Interest and Money*. London: Macmillan.

Kimura, Fukunari (2005), 'International Production/Distribution Networks and Indonesia', *The Developing Economies*, XLIII-1, March, pp.17-38.

LPEM–FEUI (2006) *Monitoring Investment Climate in Indonesia: A Report from the End of 2005 Survey*, Report in collaboration with the World Bank, Jakarta.

Manning, Chris and Kurnya Roesad (2006), 'Survey of Recent Developments'. *Bulletin of Indonesian Economic Studies* 42(2), pp.143-170.

Ministy of Finance Republic of Indonesia (MoF), (2010), *Nota Keuangan dan RAPBN 2010* (Government Budget), Jakarta: Ministry of Finance Republic of Indonesia

Modigliani, F. and R. Brumbergh (1955), 'Utility Analysis and the Consumption Function: An Interpretation of Cross-section Data' in K. Kurihara (ed.), *Post Keynesian Economics*, London: George Allen and Unwin

Papanek, Gustav, M. Chatib Basri and Daniel Schydlowsky (2010), 'The Impact of World Recession on Indonesia and Appropriate Policy Response: some lesson for Asia'. *Paper prepared for Asian Development Bank Report*

Soesastro, H. and M.C. Basri (2005), 'The Political Economy of Trade Policy in Indonesia' *ASEAN Economic Bulletin* 22(1), pp.3-18.

The World Bank, (2009), *Indonesian Economic Quarterly: Weathering the Storm*, June.

The World Bank, (2010), *Indonesian Economic Quarterly: Looking Forward*, September.

Appendix A

(1) Data definition and sources

We use CEIC database for GDP and GDP deflator, while using data obtained from the Ministry of Finance for the quarterly budget realization. We define the fiscal variables as follows

- <u>Central government spending</u> = total spending by central government – interest rate of government debt – transfers to the region (a)

  An equal expression of the above identity is: salary + purchases of goods and services + capital spending + subsidies

  We also construct an <u>alternative</u> measure of government spending which is given by (a) – salary – subsidies

- <u>Tax revenue of the central government</u> = total tax revenue – interest rate of domestic government debt – profits received from SOEs

Results from identification strategy

We run an OLS of log of tax revenue of the central government against log of real GDP to estimate b_1 in system of equations given by (2)

Dependent Variable: LOG(TXSA/GDPDEFSA*100)
Method: Least Squares
Sample (adjusted): 1995Q2 2010Q2
Included observations: 61 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
C	-17.42003	2.163323	-8.052439	0.0000
LOG(GDPSA)	2.161146	0.167502	12.90220	0.0000

R-squared	0.738321	Mean dependent var	10.48917
Adjusted R-squared	0.733885	S.D. dependent var	0.432435
S.E. of regression	0.223077	Akaike info criterion	-0.130361
Sum squared resid	2.936041	Schwarz criterion	-0.061152
Log likelihood	5.976009	Hannan-Quinn criter.	-0.103237
F-statistic	166.4668	Durbin-Watson stat	0.686795
Prob(F-statistic)	0.000000		

As explained previously, we ran a two-stage least squares of contemporaneous movement of real GDP on contemporaneous shocks of tax revenue and government spending with $r_{Tt} = u_{Tt} - b_1 Y_t$ and $r_{Gt} = u_{Gt}$ as instruments.

Dependent Variable: RY
Method: Two-Stage Least Squares
Sample (adjusted): 1995Q4 2010Q2
Included observations: 59 after adjustments
Instrument list: C RT_ RGE

	Coefficient	Std. Error	t-Statistic	Prob.
RT	-0.131949	0.030526	-4.322468	0.0001
RGE	-0.003765	0.013935	-0.270182	0.7880
R-squared	-0.010771	Mean dependent var		0.000492
Adjusted R-squared	-0.028504	S.D. dependent var		0.017222
S.E. of regression	0.017465	Sum squared resid		0.017387
Durbin-Watson stat	1.950627	Second-Stage SSR		0.010530

The results of estimating VAR using the first definition of central government spending is as follows:

Vector Autoregression Estimates
Sample (adjusted): 1996Q2 2010Q2
Included observations: 57 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	LY	LTX	LGE
LY(-1)	1.362976	-0.216218	-3.212787
	(0.15866)	(0.78789)	(1.58383)
	[8.59074]	[-0.27443]	[-2.02850]
LY(-2)	-0.422463	-1.158034	3.415373
	(0.25824)	(1.28244)	(2.57798)
	[-1.63591]	[-0.90299]	[1.32482]
LY(-3)	-0.028217	1.302386	-1.709662
	(0.16114)	(0.80024)	(1.60866)
	[-0.17510]	[1.62749]	[-1.06279]
LTX(-1)	0.005559	-0.272755	-0.117695
	(0.03012)	(0.14957)	(0.30067)
	[0.18458]	[-1.82360]	[-0.39145]
LTX(-2)	-0.014637	0.200074	0.404383
	(0.02847)	(0.14141)	(0.28426)
	[-0.51402]	[1.41489]	[1.42260]

	LY	LTX	LGE
LTX(-3)	0.009070	0.221455	0.632275
	(0.02735)	(0.13584)	(0.27307)
	[0.33156]	[1.63024]	[2.31541]
LGE(-1)	-0.026787	-0.117414	-0.374923
	(0.01259)	(0.06253)	(0.12570)
	[-2.12726]	[-1.87765]	[-2.98259]
LGE(-2)	0.015273	-0.152914	-0.145614
	(0.01442)	(0.07162)	(0.14398)
	[1.05895]	[-2.13502]	[-1.01138]
LGE(-3)	-0.002877	-0.131336	0.026910
	(0.01476)	(0.07328)	(0.14730)
	[-0.19497]	[-1.79232]	[0.18269]
C	1.235243	13.15184	24.56842
	(0.96742)	(4.80422)	(9.65752)
	[1.27684]	[2.73756]	[2.54397]
T	0.001470	0.035217	0.034298
	(0.00167)	(0.00829)	(0.01666)
	[0.88099]	[4.24911]	[2.05859]
FS	0.001711	-0.271482	-0.089476
	(0.01683)	(0.08360)	(0.16805)
	[0.10166]	[-3.24751]	[-0.53244]
FS(-4)	0.002549	-0.310652	-0.031041
	(0.02117)	(0.10514)	(0.21135)
	[0.12039]	[-2.95471]	[-0.14687]
DS	-0.003028	-0.168692	-0.395226
	(0.01684)	(0.08363)	(0.16812)
	[-0.17980]	[-2.01707]	[-2.35087]
D00	0.005484	0.279924	0.653219
	(0.01339)	(0.06650)	(0.13368)
	[0.40953]	[4.20927]	[4.88633]
R-squared	0.992240	0.951802	0.826285
Adj. R-squared	0.989654	0.935736	0.768380
Sum sq. resids	0.016794	0.414151	1.673569
S.E. equation	0.019996	0.099301	0.199617
F-statistic	383.6120	59.24341	14.26964
Log likelihood	150.8201	59.47095	19.67114
Akaike AIC	-4.765616	-1.560384	-0.163900
Schwarz SC	-4.227971	-1.022739	0.373745
Mean dependent	12.82265	10.54330	10.53916

S.D. dependent	0.196587	0.391716	0.414772

Determinant resid covariance (dof adj.)	1.26E-07
Determinant resid covariance	5.03E-08
Log likelihood	236.2962
Akaike information criterion	-6.712147
Schwarz criterion	-5.099212

Meanwhile the results of estimating VAR using the alternative definition of central government spending is as the following

Vector Autoregression Estimates
Sample (adjusted): 1996Q2 2010Q2
Included observations: 57 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	LY	LTX	LGE
LY(-1)	1.311105	0.537707	-2.591261
	(0.16475)	(0.81963)	(2.53891)
	[7.95825]	[0.65604]	[-1.02062]
LY(-2)	-0.327436	-1.786214	4.525333
	(0.26859)	(1.33624)	(4.13919)
	[-1.21910]	[-1.33674]	[1.09329]
LY(-3)	-0.066195	1.731043	-1.733363
	(0.17057)	(0.84861)	(2.62868)
	[-0.38807]	[2.03986]	[-0.65940]
LTX(-1)	-0.012901	-0.222276	-1.229517
	(0.03216)	(0.15998)	(0.49556)
	[-0.40120]	[-1.38940]	[-2.48107]
LTX(-2)	-0.018235	0.010877	-0.270755
	(0.02883)	(0.14343)	(0.44429)
	[-0.63250]	[0.07583]	[-0.60941]
LTX(-3)	-0.005680	0.151880	0.969400
	(0.02721)	(0.13536)	(0.41928)
	[-0.20877]	[1.12207]	[2.31204]
LGE(-1)	-0.011019	-0.058976	0.163515
	(0.00922)	(0.04589)	(0.14216)
	[-1.19449]	[-1.28503]	[1.15019]
LGE(-2)	0.012821	0.019975	-0.045183
	(0.01040)	(0.05175)	(0.16030)
	[1.23261]	[0.38599]	[-0.28186]

	LY	LTX	LGE
LGE(-3)	0.006107	-0.084017	-0.237408
	(0.00953)	(0.04742)	(0.14688)
	[0.64080]	[-1.77188]	[-1.61633]
C	1.314809	5.459639	13.06356
	(0.93642)	(4.65872)	(14.4310)
	[1.40408]	[1.17192]	[0.90524]
T	0.001899	0.027946	0.044470
	(0.00175)	(0.00872)	(0.02702)
	[1.08340]	[3.20398]	[1.64593]
FS	-0.003260	-0.323579	-0.236182
	(0.01657)	(0.08241)	(0.25529)
	[-0.19677]	[-3.92626]	[-0.92516]
FS(-4)	-0.007251	-0.314210	-0.314447
	(0.02207)	(0.10982)	(0.34018)
	[-0.32848]	[-2.86114]	[-0.92435]
DS	-0.002878	-0.175499	-0.732934
	(0.01822)	(0.09066)	(0.28083)
	[-0.15796]	[-1.93583]	[-2.60992]
D00	-0.001646	0.259849	0.816905
	(0.01530)	(0.07609)	(0.23571)
	[-0.10764]	[3.41486]	[3.46572]
R-squared	0.991583	0.947527	0.604935
Adj. R-squared	0.988777	0.930036	0.473247
Sum sq. resids	0.018217	0.450886	4.326398
S.E. equation	0.020826	0.103612	0.320951
F-statistic	353.4068	54.17223	4.593686
Log likelihood	148.5016	57.04889	-7.397495
Akaike AIC	-4.684268	-1.475400	0.785877
Schwarz SC	-4.146623	-0.937755	1.323522
Mean dependent	12.82265	10.54330	9.746478
S.D. dependent	0.196587	0.391716	0.442216

Determinant resid covariance (dof adj.)	3.91E-07
Determinant resid covariance	1.57E-07
Log likelihood	203.9470
Akaike information criterion	-5.577088
Schwarz criterion	-3.964152

Appendix B: Change in Domestic Demand and Economic Growth

	Share of Domestic Demand in GDP (%)			Real GDP Growth (%)		
	2000	2007	2000-07	2007	2008	2007-08
Bangladesh	105.1	104.1	-1.0	6.4	6.2	-0.2
Cambodia	108.8	104.6	-4.2	10.2	5.0	-5.2
China	97.6	91.1	-6.5	13.0	9.0	-4.0
India	100.1	102.7	2.6	9.1	6.1	-3.0
Indonesia	90.4	96.9	6.4	6.3	6.1	-0.2
Malaysia	80.8	79.7	-1.1	6.2	4.6	-1.5
Pakistan	101.2	107.2	5.9	5.7	2.0	-3.7
Philippines	103.9	94.5	-9.4	7.1	3.8	-3.2
Singapore	86.4	69.0	-17.4	7.8	1.2	-6.6
Thailand	90.3	92.5	2.2	4.9	2.6	-2.3
Turkey	103.0	105.2	2.2	4.7	1.1	-3.6
Vietnam	102.5	112.6	10.1	8.5	6.2	-2.3

Source: EIU