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The Indonesian Economy amidst the Global Crisis

Good Policy and Good Luck

Muhammad Chatib Basri and Sjamsu Rahardja

The global economic crisis has caused economic collapse in many countries. Indonesia is obviously affected by this crisis, its export growth declined significantly. Nevertheless, the impact of the crisis on the Indonesian economy is relatively limited compared to other countries in the region, including Singapore, Malaysia and Thailand. This situation leads into a question of why the impact of the global crisis on the Indonesian economy is relatively limited so far. Is it because of the structure of Indonesia's trade or the effectiveness of Indonesia's fiscal policy and monetary response? This paper argues that there are at least two reasons why Indonesia's performance was relatively good. Firstly, it was due to the appropriate policy responses both from Bank Indonesia and the Indonesian government. Secondly, Indonesia's relatively small export share to GDP saved the country from the global financial crisis. This was more a case of good luck than deliberately planned economic policy strategy. Nevertheless, this paper indicates that exports are a source of Indonesia's economic growth. Exports have a large effect in supporting economic growth, albeit less stable compared to domestic demand. Because of this, a strategy safeguarding a balance between domestic economy and global orientation, such as becoming a part of a production network and promoting export-oriented growth, must be a part of the development strategy of the national economy.

Keywords: Indonesian economy, vector autoregressive (VAR), model, export-oriented development.

I. Introduction

After experiencing high growth for more than four years, the world economy was hit by a very sharp blow in September 2008. World economic growth, which stood at 5.2 per cent in 2007, plummeted to 3 per cent in 2008, and is projected to fall even

further to –1.3 per cent in 2009. Consistent with this, the United States also experienced a sharp fall from 2.1 per cent (2007) to 0.4 per cent (2008) and is projected to experience negative growth of –2.9 per cent in 2009. Meanwhile Europe dropped from 2.7 per cent (2007) to 0.7 per cent (2008) and is projected to experience a very sharp contraction

of -4.2 per cent in 2009. In line with global contractions and tight liquidity on global markets, the volume of world trade then narrowed. If the volume of world trade continues to narrow, exports of all countries will experience a slowdown, not only Indonesia. As a result of this, economies in emerging markets and developing economies will experience a significant decline, including Indonesia. Economic growth in emerging markets is projected to fall from 6 per cent in 2008 to 1.5 per cent in 2009 (IMF 2009).

Up until now, there has in fact been the idea that there will be “decoupling”; economic growth in Asia will continue to be strong, whereas the United States and Europe will weaken. These authors are however doubtful of the decoupling argument. We are of the opinion that up until now the Asian economies have in fact still been able to grow because the integration of production networks among the Asian countries is very strong. Inter-industry trade in East Asia has caused the effects on Asia to be relatively limited. Many countries in Southeast Asia, including Indonesia for example, export raw materials and intermediate goods to China, Korea and Japan, which are production network centres. In practice, the effects on the Indonesian economy, at least until Q2 2008, was still relatively limited. However, it should not be forgotten that the end-buyers of goods manufactured by production networks in the Asian countries are in fact developed countries, including the United States and Europe. Because of this, if the United States and Europe weaken, the effects will be transmitted to the Asian countries. Also because the Asian countries are integrated in production networks, the effects will take place more quickly. This has been proven with the slowing down in the Asian economies in Q3 2009. For Indonesia itself, the effects of the global financial crisis against the Indonesian economy were seen in Q3 and Q4 2008.

The effects of the global economic crisis on the Indonesian economy came predominantly through trade channels. This symptom had already begun to be seen since Q4 2008. The decline in exports was also reflected in the slowing down of growth

in the Indonesian economy. In Q4 2008, economic growth slowed down to 5.2 per cent year-on-year. Compare this to 6.4 per cent growth in Q2 and Q3 2008. Even so, overall Indonesian economic growth still amounted to 6.1 per cent — the highest growth in Asia after China and India. The reason why Indonesia’s performance was relatively good was because the Indonesian economy was relatively insulated against the weakening effects of the global economy. The share of Indonesia’s total exports against GDP amounted to 29 per cent. This was much lower when compared to other countries like Singapore (234 per cent), Taiwan (74 per cent) and Korea (45 per cent).¹

From the financial side, the effects from the global financial crisis against the Indonesia economy were also reflected from several indicators such as the weakening rate of exchange. The exchange rate value of the rupiah fell by as much as 30 per cent. For the stock market, in 2008, the Indonesia Stock Market Index experienced a decline of as much as 50 per cent.

However, in Q3 2009, signs of improvements in the world economy were seen. This was good for developed countries, emerging markets and the entire world. Certainly if viewed from the speed of growth, the fastest economic recoveries occurred in emerging markets, while in developed countries, even if economic reversals had already begun, the speed was relatively slow compared to developing countries. This was in particular caused by an economic recovery still being somewhat slow in the European countries. For retail sales, the same signs were also seen in June 2009, with sharp reversals, especially in developing countries or emerging markets (IMF 2009).

Faring well with the improvement of global economies, Indonesian export growth continued to improve. Furthermore, the economic growth in Q3 2009 reached 3.9 per cent (quarter-on-quarter). This was obviously higher than the Q2 2009 growth of 2.3 per cent (quarter-on-quarter). This indicates that economic growth began to accelerate in Q3 2009. The year-on-year GDP growth recorded 4.2 per cent in the third quarter of 2009. Cumulatively, Indonesia’s economic growth

in the first three quarters of 2009, compared to the same period in 2008, showed an increase of 4.2 per cent. These figures are higher compared to the estimates made by a number of research institutes and observers. From the monetary side, inflation was extremely safeguarded, and 2009 inflation was recorded at 2.8 per cent, the lowest since 2000. This low inflation had already increased purchasing power and provided a positive effect on macroeconomic stability, which in turn also invited the entry of cashflow into Indonesia. The rupiah strengthened.

From the above picture, the important questions to be asked are: Why were the effects of the global financial crisis on the Indonesian economy relatively light? Why were the effects of this crisis different from the Asian 1998 financial crisis? This paper will try to answer these questions, as well as discuss the lessons learnt and policy implications from the current global financial crisis.

II. What Made the 2008 Crisis Different from the 1998 Crisis?

This is not the first time that Indonesia has experienced a financial crisis. In 1998, Indonesia was badly affected by the Asian financial crisis. An interesting question to ask is why the effects of the 2008 global financial crisis, which in terms of magnitude was much larger than the 1998 crisis, were relatively limited. In order to answer this question, it is important for us to see the differences between the 1998 crisis and the 2008 economic crisis.

We argue that there are at least four differences between the 1998 and the 2008 crises. (See Table 1, details of 2008 policies will be discussed in section V.)

The first difference was the the origin of the crises. In 1998, the initial debate in the country centred on the link between currency depreciation and economic fundamentals. One view suggested that the Indonesian economy was basically sound as it had been before, while others argued that the Indonesian economy was fundamentally poor or far worse than reported by the government or

other bodies such as the World Bank (Soesastro and Basri 1998). Aswicahyono and Hill (2002) pointed out that there was no clear link between the Krugman “myth” and the current crisis. They argued that the crisis in 1997–98 was mainly to do with financial markets, exchange rates, problems of short-term debts, capital mobility and political disturbances. We have to admit that there was a fundamental problem in the Indonesian economy in 1998, especially in the financial sector. Thus, when the financial crisis hit Thailand, the impact on the Indonesian economy was really dreadful. Thus, the 1998 crisis was home ground but not home alone. In contrast, the 2008 crisis was almost entirely external; to be more precise, it was triggered by the sub-prime crisis in the United States.

The second difference was the condition of the financial sector. As pointed out by Soesastro and Basri (1998), Stiglitz and Greenwald (2003), Hill (1999), and Fane and Macleod (2004), many banks in Indonesia were very weak. They had made bad loans. In the case of Indonesia, there was a lending boom. The loan to deposit ratio (LDR) was more than 100 per cent in 1997, whereas the ratio of non-performing loans (NPL) to total credit was around 27 per cent in September 1997. On the other hand, the financial situation in the current crisis was relatively healthier than ten years before. The NPL was less than 4 per cent at the end of 2008, whereas the LDR was less than 80 per cent at the end of 2008 and the capital adequacy ratio (CAR) was around 17 per cent.

In addition, unlike ten years ago, economic agents have now learnt how to diversify their risks. Before Bank Indonesia abandoned the managed floating system in 1997, there was no point in hedging their assets because the Indonesian rupiah constantly depreciated by 5 per cent every year. But now the game is completely different. The economic agents have diversified their portfolios, and hedged their assets. Therefore, even if there were a sudden reversal of capital inflows, the impact would be relatively small compared to ten years ago.

The third difference was the policy responses. In the 1998, Bank Indonesia responded to the

TABLE 1
Policy Responses in 1998 and 2008

<i>The 1998 Crisis</i>	<i>The 2008 Crisis</i>
1. Monetary policy: extremely strict. Bank Indonesia increased interest rate levels to very high levels. Deposit account interest rates reached 60% in the peak crisis period. As regards liquidity, the government implemented a liquidity squeeze.	1. Monetary policy: Bank Indonesia interest rate was reduced by 300 basis points from 9.5% to 6.5%. Liquidity was relaxed.
2. Fiscal policy: to begin with there was a budget surplus, then this was revised by permitting a large budget deficit.	2. Fiscal policy: the stimulus was implemented. The budget deficit enlarged, taxes reduced.
3. Banking health: Prudential banking regulations were extremely weak. NPLs reached 27%. LDR became more than 100%.	3. Banking health: Prudential banking regulations were relatively tight. NPL less than 4%, LDR 77%, CAR around 17%.
4. Reponse towards banking: closure of 16 banks, which then led to rushes.	4. Response towards banking: deposit insurance increased from Rp100 million to Rp2 billion per account
5. Policies focussed towards structural reform by carrying out economic liberalizations, getting rid of monopolies, licensing.	5. Safeguarded relatively open trade regime.
6. Exchange rate regime: managed floating. Economic players were not used to exchange rate risk changes and did not carry out hedging.	6. Exchange rate regime: flexible. Economic players start to become used to exchange rate risk changes.

crisis by implementing an extremely tight monetary policy. Bank Indonesia raised the interest rate to a very high level. Deposit account interest rates reached 60 per cent in the peak crisis period. As regards liquidity, the government implemented a liquidity squeeze. As for fiscal policy, the government initially began with a budget surplus, and then this was revised by permitting a large budget deficit. As argued by Stiglitz and Greenwald (2003), when an economy goes into deep recession due to contractionary devaluation, many firms will go into distresses. In 1998, the response of the Central Bank with high interest rates increased the probability of default and thereby increased the probability of capital

outflows. In contrast, in 2008 Bank Indonesia responded to the crisis by lowering interest rate and ensuring that there was enough liquidity in the financial system. As a result, the probability of default was relatively low in 2008, making the impact on NPLs of the banking sector relatively small.

The fourth difference was the political situation. The political crisis and change of government in 1998 worsened the economic crisis when compared to 2008. The bad economic situation had already caused the political crisis and supported the change of government. On the other hand, the dynamic of the political change had already worsened the economic crisis. One factor

that was different between the political situation in 1998 and 2008 was the level of confidence in the government. From the beginning, the crisis of confidence in the Soeharto government had reached its lowest point. Because of this, there was much pressure to carry out political reform as well as calls for democracy (Bresnan 2005; Schwarz 1999; Aswicahyono and Hill 2002).

III. Effects of the Global Crisis on the Indonesia Economy

In general, the effects of the global financial crisis on emerging markets (EMs) and developing countries, including Indonesia, can be divided into two channels:

- Financial channels in the form of freezing of foreign exchange liquidity when there is a lack of liquidity in international money markets. This is a result of repricing of risk that brings about much tighter conditions as regards funding to EMs and developing countries (especially the systemic players like EMs that rely on funding to international financial markets) and increased funding costs from the issuing of international bonds. This has an effect on the balance of payments and exchange rate of EMs. In addition, the many cases of default in the United States caused a flood of cheap assets as a result of funds absorbed from EMs to the United States. This makes it more difficult for EMs to obtain external funding, meaning drops in the stock market and pressure on exchange rates. What is of concern is that the spread of this current crisis is far wider, overflowing to many more countries and including all regions, as well as a much faster fall of markets. This indicates many more integrated global financial systems and many more short-term capital flows in financial markets, especially those in EMs.
- Trade channels in the form of the effects of the slowing down in global trade that has caused a drop in the value of exports, reduced commodity prices, reduced remittances, and created greater trade competition that is

becoming more intense (as a result of the shift of products that used to be exported to developed countries like United States and Europe), and increased unemployment.

III.1 Effects on the Financial Sector

The financial crisis originally started with the United States sub-prime mortgage market. However, it did not stop there. This situation has already stimulated a wider global repricing of risks. And this is becoming even worse because losses warranted by the financial sector are supposedly much larger than originally estimated. In addition, as a result of this financial crisis, banking balance sheets in the United States have experienced pressure, and huge funds are required for recapitalization. The complication is that liquidity will become extremely tight. Tight liquidity in financial international markets motivates investors to withdraw their funds and carry out flights to quality to the United States or seek safer investment by buying U.S. Treasury bills.

Another effect was that the collapse in asset prices in the United States as a result of this financial crisis made asset prices in the United States extremely cheap, because of the relocation of funds from EMs to the United States. This has already created problems in the countries that are emerging economies, including Indonesia, because all of a sudden they had to face a shortage of foreign exchange liquidity situation. In addition, this financial crisis had also caused confidence levels in Indonesia to decline. As a result, EMs faced difficulties in obtaining access to external financing, reflected in increasing yields on international bond issuances due to losses of investors' appetite for financial products of EMs in general. In Indonesia and other EMs, the impact of the financial crisis showed itself in the depreciation of the currency and the decrease of values on the stock market.

The Indonesian stock exchange composite index was at around 2,700 points in February 2008. However, the fallouts from the bankruptcy of Lehman, the takeover of Merrill Lynch, and

concerns over AIG had affected EMs significantly. The turbulence in the global financial markets in September and October 2008 brought down the Indonesia Stock Market (IDX) index by almost 50 per cent from early September to November 2008. In February 2009, the IDX composite fell to 1285, its level in March 2006 (Basri and Siregar 2009). The massive sell-out of assets by foreign investors in the Indonesian capital market in Q4 2008 had placed more pressure on the rupiah depreciation. The rupiah lost 28 per cent of its value against the U.S. dollar between October and November 2008, accompanied by a significant rise in its volatility. Depreciation pressure persisted in February and March 2009, with the rupiah fluctuating in a range of between Rp11,500 and Rp12,000 against the U.S. dollar, substantially higher than its average level of around Rp9,050 against the U.S. dollar in February 2008.

Basri and Siregar (2009) indicate that even though the effects on the financial sector were seen to be extremely significant, the Indonesian banking industry was however relatively capable of standing up to the pressures of the crisis. The CAR declined from 21.6 per cent to 16.8 per cent, the Return on Assets (ROA) from 3.2 per cent to 2.6 per cent in the period January to November 2008.

Banking credit growth at the end of 2008 still occurred, even though it had started to slow down. In 2009, there was a sharp decline in credit growth, which dropped from 32 per cent down to only 10 per cent. Basri and Siregar (2009) also indicated that in fact credit growth in 2008 was larger when compared to 2004 and 2005, which were more concentrated on consumer credit.

One important factor to take into consideration is the matter of confidence. Basri and Siregar indicated that confidence among banks had declined as well, taking into account the shrinking size of inter-bank borrowing and lending, which was down by 59.3 per cent to Rp83.8 trillion in December 2008 from Rp206.0 trillion in December 2007 (Gunawan, Arman and Hendranata 2009). The need to expand their funding bases, in addition to increases in interbank rates, had created sharp competition between

banks, which had already motivated higher interest rates. One-month deposit account interest rates at several commercial banks had even reached 16 per cent since December 2008. This was clearly far higher compared to the prevailing maximum guarantee rate of 9.75 per cent set by the deposit insurance company (LPS). Special high interest rates were provided by several banks for fresh and large deposits (usually of around Rp1 billion) (Basri and Siregar 2009). This indicates that the banking industry has to give high interest rates so that large customers do not withdraw their funds on deposit from banks. This was in connection with the policy taken by the government and Bank Indonesia to only provide deposit insurance up to a level of Rp2 billion. That was in spite of the fact that other countries such as Singapore and Malaysia provided full insurance. With this difference in insurance provision, there was pressure for arbitrage to be carried out on deposit accounts in Indonesia to Singapore, Malaysia or other countries that provided full insurance. In addition, there were also flights to quality, i.e. depositors moving their funds to large banks and 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.

III.2 Trade as a Channel of Global Crisis

The weak global economic growth had an effect on reducing demand for Indonesian exports. In addition, the decline in global demand had led to a weak demand for primary and additional exports, and as a result the prices of commodities and mining products also decreased. There were also sharp price drops for agriculture and oil. Consistent with this, the Indonesian exports were seen to experience a sharp decline especially in the agriculture, oil and gas and mineral sectors. Papanek, Basri and Schydrowsky (2009) indicated that there was an extremely sharp decline in exports, particularly in the current price, in the first half of 2009 compared to the same period in the previous year (Table 2). Table 2 shows that the decline in exports was mostly driven by price

rather than volume. Figure 1 supports these findings and shows that the export volume growth of several Indonesian commodities seemed to be relatively strong. This was perhaps caused by the depreciation of the rupiah during that period.

It is worth noting that this sharp decline in exports was not only experienced by Indonesia. Similar declines happened in many countries such as China, Singapore, Malaysia and Thailand. If seen from the magnitude in the contraction of exports that occurred, the effect of the global financial crisis towards the Indonesian economy was in fact relatively the same. Figure 2 shows how countries such as China, Malaysia and Singapore experienced contractions in export growth of around 30 per cent in Q4 2008 and Q1 2009. Because of this, it is interesting then to discuss why the effect of this relatively sharp decline in exports had a limited effect on the Indonesian economy. We argue that the effect on the Indonesian economy was limited because the structure of exports within the Indonesian economy is relatively small compared with countries such as Singapore, Thailand and Malaysia.

Kimura (2005) indicated that Indonesia was left behind in production networks. Based on the definition introduced by Kimura (2005), the portion for China is 20 per cent and those of ASEAN-4 amount to 22 per cent (Basri and Rahardja 2009). Kimura (2005), together with Ando and Kimura (2007), indicated that a less favourable investment climate and a bad logistics system left Indonesia lagging behind in terms of production networks. Indicated by Kimura (2005) and Ando and Kimura (2007), production networks are the key to an economic recovery. As a result of this, the effects of the global crisis against the Indonesian economy also became limited. 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 2008) had already made Indonesia less competitive and its growth of exports relatively limited. Consequently, as indicated by Basri dan Patunru (2008), the Indonesian economy moved to

the non-tradable sector, and exports experienced growth that was extremely slow moving. In other words, one thing that minimize the effects of the global crisis as regards the Indonesian economy

FIGURE 1
Exports Volume of Commodities Remain Strong

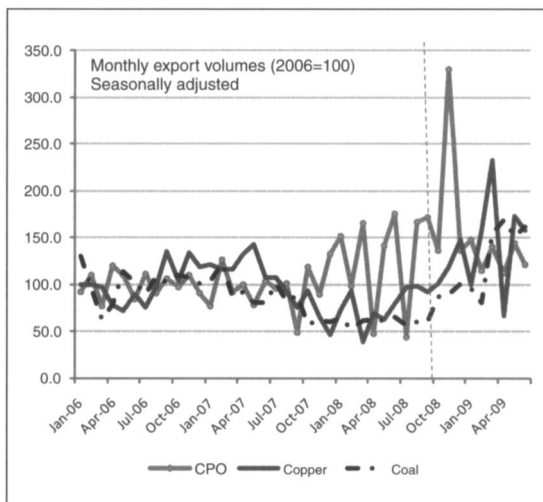
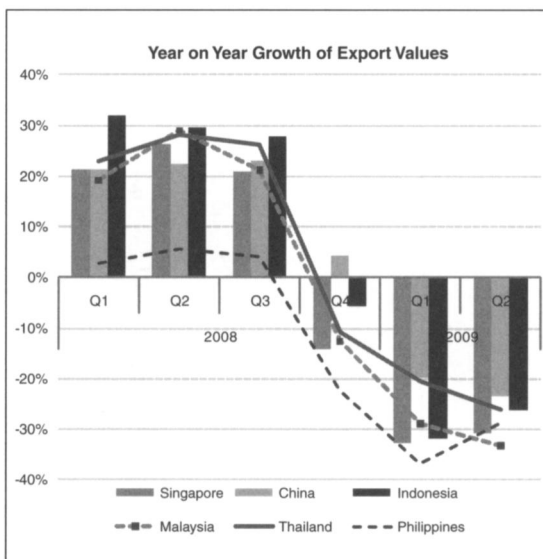


FIGURE 2
All Were Screaming the Same: Mayday



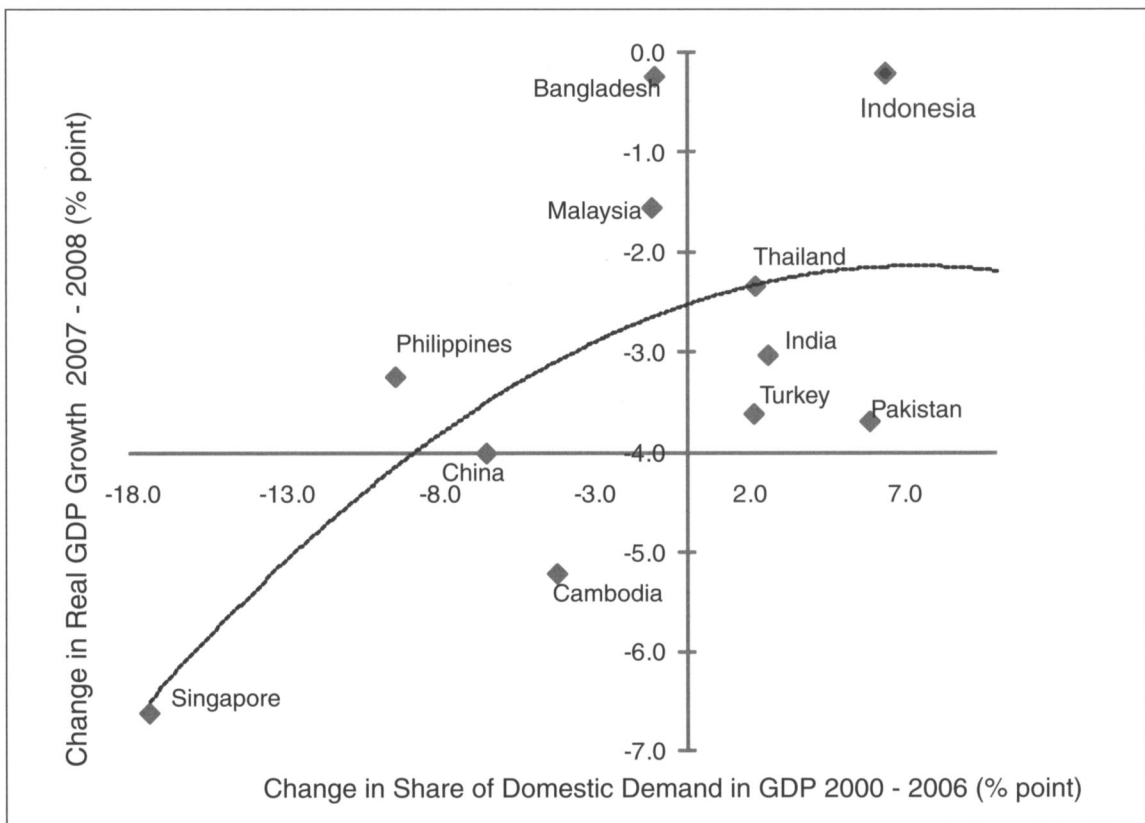
was the factor of good luck as a result of a relatively small portion of exports compared to other countries.

III.3 The Importance of Domestic Demand

The importance of domestic demand in insulating growth from global recession is not unique for Indonesia. We find that at least in Asia, countries that maintained or even increased their share of domestic demand in GDP were in a better position to withstand the global economic downturn (Figure 3). Indonesia increased its share of domestic demand in GDP to 97 per cent

in 2007 from 88 per cent in 2000 and experienced a 0.22 percentage point decline in GDP growth in 2008. Bangladesh and Malaysia are examples of countries whose domestic demand had slightly declined but could still prevent their GDP from declining further. Meanwhile, India and Vietnam, both being important exporting economies, increased their share of domestic demand and experienced relatively low declines in GDP growth compared to other economies. The most extreme case was Singapore where exports were 234 per cent of GDP and a 6.6 percentage point decline was experienced in its GDP growth in 2008.

FIGURE 3
Domestic Demand and Resilience from Global Crisis



SOURCE: EIU, Basri and Rahardja (2009).

IV. Domestic Market versus Exports

The implications of the above explanation are relevant as regards the unintentionally small size of exports caused by the relatively limited effects of the global economic crisis on the Indonesian economy. Because of this, the important question is: wouldn't it be better for Indonesia to become inward-looking and protectionist? This will be discussed in the final section of this paper. One important matter is to see the role of domestic demand versus exports in providing a contribution to economic growth.

IV.1 The Role of Private Consumption

Private consumption accounted for more than 60 per cent in the Indonesian economy. The data show that even at the peak of the global crisis (from third quarter of 2008 to second quarter of 2009), private consumption remains relatively strong and grew by more than 4.7 per cent. Thus, we argue that the Indonesian GDP was relatively strong thanks to private consumption. This phenomenon leads us into a question of why private consumption remains strong during the global financial crisis.

To understand more about what could potentially support the resilience in private consumption, we

look at the co-movement between private consumption and other component of GDP. Table 2 reports the correlation coefficients of innovations in private consumption with innovations of exports, government consumption, and gross fixed capital formation. Innovations from each of the variable are generated by taking the residuals of univariate ARIMA process (see Appendix 2). 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 3 confirms that private consumption moves with government consumption and exports. The striking results from this simple exercise is that we found a relatively large positive contemporaneous correlation — correlation at the same time — between innovations in private consumption and innovations in exports and government consumption. Certainly, we are cautious not to interpret this finding as a causal relationship. Given the scope of data covering first the quarter of 2001 until the last quarter of 2008, we are also taking the results as valid only for those time periods.

TABLE 3
Co-movements between Innovations in Private Consumption with
Innovations of GDP Components^a

<i>Lags</i>	<i>Components of GDP</i>		
	<i>Government consumption</i>	<i>Gross fixed capital formation</i>	<i>Exports</i>
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

NOTE: a. Co-movements between innovations of each component derived from original data that spans from Q1 2001 to Q4 2008. Here growth is expressed as annual (year-to-year) growth.

SOURCE: Estimated from BPS National Account.

Nevertheless, the exercise gives us some idea of how much private consumption moves together with exports and government consumption. The co-movement between private consumption and government consumption is somewhat expected. As a response to the global economic downturn, Indonesia implemented fiscal stimulus targeted at increasing infrastructure spending. However, fiscal stimulus has a rather poor disbursement record, and therefore one could argue that it was less effective than it should have been in stimulating the economy. As a response to increases in global food price, Indonesia also implemented the targeted cash transfer programme in 2007 and 2008 for about 19 million households that were poor or near poor.

But the stronger relationship between exports and private consumption establishes a surprising finding of how close the co-movement of those two variables is. The result shows that the positive movement in private consumption between 2001 and 2008 is associated with increases in Indonesia's exports. After 2004, growth of Indonesia's exports of goods started to accelerate due to high demand and prices of natural commodities. Besides agriculture, fisheries, and mining commodities, other manufacturing products such as footwear and automotive products also showed promising exports growth. We also think that services exports play an important role because strikingly strong exports in tourism, creative designs, and workers' remittances are likely to have a direct link with private consumption.

IV.2 The Role of Exports²

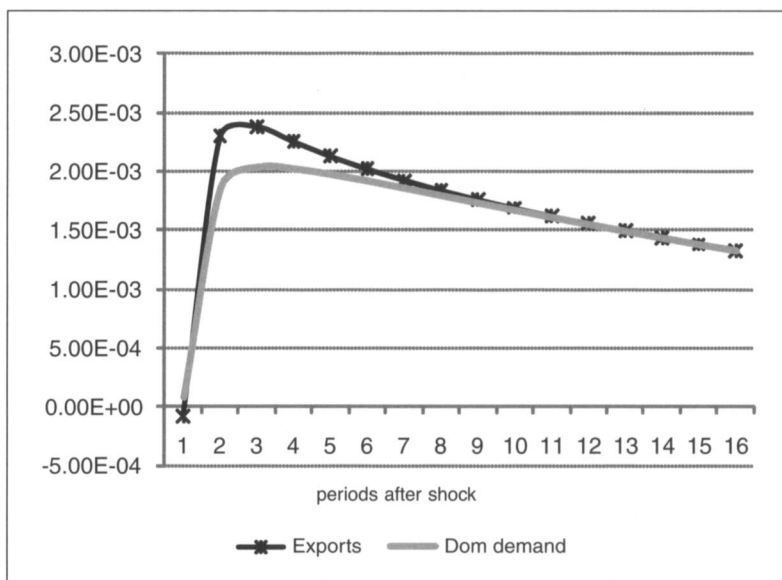
We now turn to an investigation of a shock in domestic demand vis-à-vis a shock in exports to the path of GDP movement. What we would like to know is whether domestic demand has the capacity to sustain GDP growth as exports. We estimate a vector autoregressive (VAR) model consisting of growth of GDP, exports, and domestic demand using quarterly data from 2000 until Q2 2009.³ We have included dummy explanatory variables that capture internal shocks, such as elections and a reduction in oil subsidies,

and external shocks such as the U.S. recession in 2001 and global financial crises in 2008 and 2009. Despite the relatively short sample, we choose VAR because of its simplicity and ability to exploit the inter-relationship between those variables through a feedback process (see Appendix 1 for VAR estimation results). We also use VAR for gauging the impact of shocks on the evolution path of GDP, rather than investigating certain parameters.

The regression result reveals several interesting findings. First, the statistics show that both domestic demand and exports have a noticeable impact on the evolution of GDP. The separate likelihood ratio tests reject both null hypotheses that lagged exports and domestic demand have no impact on subsequent sequences of GDP. Secondly, the impulse response function (IRF) of GDP, i.e., a sequence of impact multipliers from an exogenous shock on GDP, due to shock in exports accelerates faster in the beginning but then converges with the IRF of GDP due to domestic demand (Figure 4).⁴ This result confirms our prior presumption that domestic demand already has the lifting power to take GDP off. Thirdly, the result from variance decomposition also suggests that the shocks from export better explain movement in GDP more than do those from domestic demand (Figure 5). This is also a rather interesting result because it suggests that export shocks causes more variation in GDP movement compared to domestic demand shocks. Overall, these exercises suggest that export and domestic demands are both important for lifting GDP levels, but the former could have a stronger impact on the variation of GDP movements.

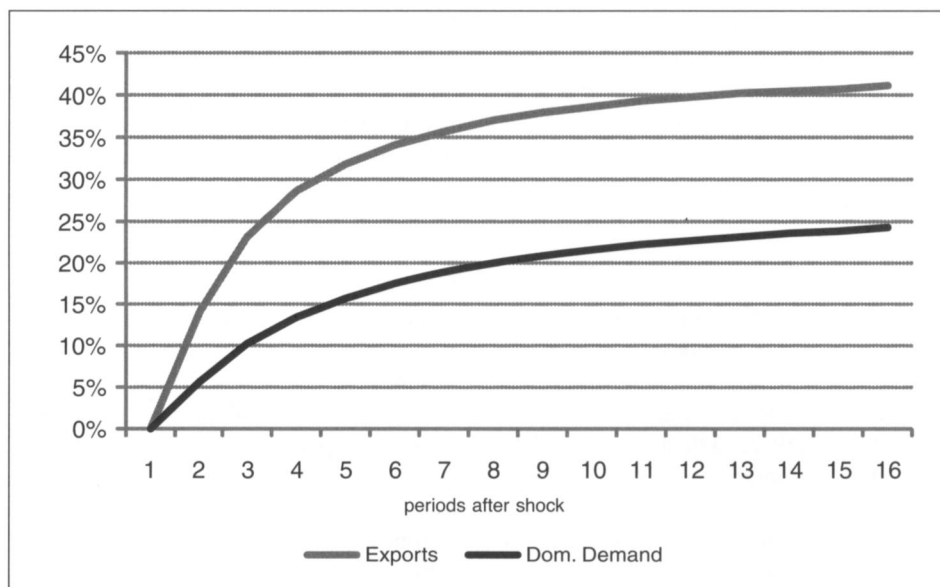
Thus, in contrast to most analysts, we believe trade had a significant role in propelling Indonesia's economic growth up until the global crisis. Although Indonesia has a relatively low share of exports over GDP, the role of exports in driving growth has been significant. Indeed, the average share of exports of goods and services in Indonesia's GDP was only 31 per cent between 2004 and 2008, much lower than most Asian countries. Malaysia and Thailand, for example, had a share of exports over GDP of 122 per cent

FIGURE 4
Impulse Response Function of GDP due to Exports and Domestic Demand Shocks



SOURCE: Basri and Rahardja (2009).

FIGURE 5
Variance Decomposition of GDP due to Exports and Domestic Demand Shocks



SOURCE: Basri and Rahardja (2009).

and 69 per cent, respectively. China, on the other hand, had exports that made up 51 per cent of its GDP. Nevertheless, Indonesia had higher growth in real exports than most countries in East Asia except China and Vietnam. Indonesia had average growth in real exports of 11 per cent between 2004 and 2008, more than double compared to the average growth between 2000 and 2004 of 4.6 per cent. But the most astonishing fact was the substantial contribution of exports to Indonesia's GDP growth. Between 2004 and 2008, the change in real exports explained 82.5 per cent of change in real GDP during the same period.

Nevertheless, by the same token, the slowing down in global trade also had a significant impact on Indonesia's growth performance. The relatively low share of exports to GDP masks the overall impact of contraction in exports on economic growth. There are few potential rounds of impact from the slowdown in global trade to economic growth. First, the collapse in commodity prices and drop in demand from markets in developed countries have hit Indonesia exports just like most other Asian countries. In the first semester of 2009, Indonesia lost 29 per cent of its exports value compared to the first semester of 2008. Most of the decline in export value was in manufacturing sectors, such as clothing, footwear, and automotive products. Secondly, the second round effect hit local suppliers serving exporters, particularly in the manufacturing and processed sectors. The impact of these rounds could have been magnified as demand from emerging economies like China and India also declined.

But Indonesia also found support for its resilience from the export of natural commodities. Much of the reason behind the significant role of exports in maintaining growth was likely due to the relatively stable export volume of agricultural and mining commodities (Figure 2). Indonesia is currently the largest exporter of crude palm oil and the only country in Southeast Asia that is exporting coal. Although the global crisis pricked the boom in commodity prices, the demand for agriculture and mining commodities have not dropped that much. Export volume for coal showed a steady increase in 2009, most likely

driven by strong demand from India. After a deep dip in the late 2008, the export volume of crude palm oil has stabilized around a certain quantity that is about 50 per cent higher than the volume exported in 2007. The export volume for copper also showed some strength as quantity exports rebounded after a steep fall in early 2009. With natural resources accounting for more than half of Indonesia's exports, these enhanced the life support for the Indonesian economy.

From the import side, there was also an indication of expenditure switching. Total imports between January and October 2009 declined by 31 per cent compared to the same period in 2008. Indeed, imports of raw materials including petroleum were responsible for most of the decline because it has a 75.6 per cent share in total imports and declined by 36 per cent between January and October 2009 (year-on-year). As the export market deteriorated and domestic economy cooled down, producers in the region, including Indonesia, were less eager to build up new inventories (World Bank 2009). However imports of consumption goods, for example, consumer electronics, processed foods, and clothing, also declined significantly by 25 per cent between January and October 2009 (year-on-year). Although consumer goods represent only 6.8 per cent of total imports, the decline could potentially create a market for similar domestic products. Aside from a diminishing incentive to hold large inventories, there could be other reasons causing the decline of consumer goods such as the availability to obtain trade finance and non-tariff measures on imports of consumer electronics, foodstuff, clothing and footwear that Indonesia imposed.⁵

V. Policy Responses

Indonesia's experience during the Asian financial crisis in 1998 suggested that disruption and instability in the financial sector could lead to a severe crisis of confidence. At that time, Indonesia suffered from bank runs due to loss of confidence. Indonesia's experience showed that the cost of allowing such a situation to happen was very

TABLE 4
Imports by Main Product Category

<i>Product category</i>	<i>January–October</i>		<i>Growth (% yoy)</i>	<i>Share (2008–09)</i>
	<i>2008</i>	<i>2009</i>		
Total imports	112.4	77.7	–30.1	100.0
Consumption goods	7.4	5.5	–25.0	6.8
Intermediate and raw materials	87.8	55.9	–36.3	75.6
Capital goods	17.3	16.4	–5.5	17.7

SOURCE: BPS.

much higher than the cost of preventing losses of confidence. Based on this, Indonesia strongly supported immediate efforts to restore confidence in the financial sector.

Key areas for action included:

- Ensuring the existence of liquidity in the system. The Government of Indonesia (GOI) and Bank Indonesia (BI) have taken measures to ensure liquidity.
- Maintaining confidence in the banking sector by providing guarantees. The GOI and BI have increased the ceiling for the guarantee on deposits from Rp100 million to Rp2 billion per account. Such a move to provide guarantee needs to be coordinated internationally to avoid capital migration that could further destabilize the global financial system.
- Mitigating the impact of the financial crisis to the poorest segment of society by providing a social safety net.
- Establishing swap lines between central banks to extend the swap line mechanism already given by U.S. Fed to some countries. Furthermore, Indonesia proposes the acceleration of activating regional swap lines mechanism such as through the Chiang Mai Initiative in the Asian region.
- Lowering the interest rate. Unlike in 1998, BI responded to the crisis by lowering interest rate. The 50 basis point cut announced in the second week of January 2009 and two more 50 basis point reductions in the first week of February

and March 2009 were steps in the right direction. Bank Indonesia has cut the rate from 9.5 per cent in November 2008 to become 6.5 per cent by the end of 2009. Nevertheless, as argued by Basri and Siregar (2009), despite BI's low interest policy, the banking sector continued to face high borrowing costs due to the agency cost problem. Banks remained unwilling to lend to each other until early 2009. Although the effectiveness of monetary policy has been limited to boost the economy, at least the low interest rate policy succeeded in reducing the probability of default of the companies, which helped to minimize the impact of the financial crisis on the real economy.

- Counter-cyclical policy through fiscal expansion.⁶ In a situation where monetary transmissions are not yet fully effective because of agency cost problems, then the role of fiscal policies must be more dominant. This will support consumption. The Minister of Finance has unveiled a stimulus package for 2009, worth around Rp73.3 trillion (or around US\$6.4 billion), to boost the economy amid the threat of the economic downturn. The package is broken down into three major categories, namely income tax cuts, tax and import duty waivers, and subsidies and government expenditure. In line with Keynes (1936), with the aim of stimulating more spending by households and firms, around 60 per cent of the Indonesian fiscal stimulus has been allocated to finance cuts in income taxes. To minimize the effects of

the global financial crisis, the government cuts individual income taxes from 35 per cent to 30 per cent as well as corporate income taxes from 30 per cent to 28 per cent. Owing to the high dependency of the local industries (both tradable and non-tradable sectors) on imports, as discussed earlier, around Rp2.5 trillion would finance waivers of import duties for raw materials and capital goods. This is part of the more than Rp13 trillion packages on taxes and duties, about 18 per cent of the total stimulus package, to predominantly support businesses. To help reduce the operation cost of businesses, the stimulus package also covers diesel and electricity subsidy. Lastly, close to Rp12.2 trillion will be allocated to support infrastructure and rural sector development. In view of the measures above, the government has committed to raise its fiscal deficit to 2.6 per cent of GDP in 2009.

Nevertheless, there are a number of shortcomings in the implementation of the expansionary measures to achieve the much-needed targets. It is important to note that the forecasted deficit of 2.6 per cent of GDP is partly driven by the decline in revenue (especially tax and non-tax revenue). Only about 1.2 per cent of GDP can be considered as real expansionary. Two main constraints limit the fiscal space for a much-higher stimulus. Furthermore, it is of interest to note that central government expenditure so far has always been far below the government target. In 2008 the budget deficit was targeted around 2.1 per cent of GDP. However, the turnout of the budget deficit was only 0.1 per cent. This seemed to have been caused by administrative hurdles including an introduction of a new budget authorization process as well as tighter anti-corruption measures that were aimed at making the tender process more transparent but resulted in delayed spending (Basri and Patunru 2006; Manning and Roesad 2006). The turnout of the budget in 2009 was only 1.6 per cent. This problem has led us to a question of how effective the fiscal stimulus will be, given the inability of the central government to spend its money. Under

these particular circumstances, we argue that it is more effective for the central government to redirect the fiscal stimulus towards income tax cuts and tax waivers. In fact, this is consistent with what the Indonesian government has been doing. Some 60 per cent of its fiscal stimulus has been allocated to cover cuts in income taxes. Our next question is: Will the tax cut be effective? The U.S. experience shows us that the fiscal stimulus through tax cuts was not really effective due to three factors: the access to formal banking credits, the demographic structure, and its relative high marginal propensity to consume (Krugman 2009; Modigliani and Brumberg 1955). Thus, instead of increasing their spending, U.S. households responded to the tax cuts by increasing their savings. We, however, argue that the fiscal stimulus through tax cuts to some extent can be more effective in Indonesia for three reasons: First, unlike in the United States, the household group in Indonesia holds less savings and has a limited access to formal banking credits. Hence, spending behaviours of this group are more likely to be influenced by current income, instead of 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 United States. Third, as pointed out by Modigliani and Brumberg (1955), consumption behaviour may vary by stages of life. Based on this theory, consumption may be relatively high in the society which is dominated by young population compared to that with an ageing population. However, 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 focus on the individual income taxes at the highest tax bracket, as well as corporate income taxes. While it is true that raising the non-taxable income threshold from Rp13.2 million per year (Rp1.1 million per month) to Rp15.84 million per year (Rp1.32 million per month) may induce consumption for the low income people, the number of people who have tax file numbers is relatively small.

VI. Lessons Learnt and the Way Ahead

The above discussion indicates that the role of the domestic economy is undeniably important to safeguard economic stability and to support economic growth. The global financial crisis underscores the importance of securing some “structure” for the economy in the midst of globalization. The crisis has already indicated that there has to be measures to create and safeguard some minimum amount of “structure” in the domestic economy, if we do not want the economy to be too dependent on external shocks. Indonesia’s relatively small export share has already saved the country from the global financial crisis. This was more a case of good luck as opposed to a deliberately planned economic policy strategy. On the other hand, this paper indicates that exports are a source of Indonesia’s economic growth. Exports have a large effect in supporting economic growth, albeit less stable compared to domestic demand. Because of this, a strategy safeguarding a balance between domestic economy and global orientation, such as becoming a part of a production network and promoting export-oriented growth, must become a part of the development strategy of the national economy. The implication is that there has to be a balance between businesses integrated with the Indonesian economy and the global economy, with efforts to integrate the Indonesian economy internally.

What policy will support exports and at the same time support the application of a domestic economy? Here, we are of the opinion that it is necessary to see Indonesia as an archipelagic country. Several studies show that due to its archipelagic nature logistics costs in Indonesia are relatively higher compared to those in continental countries (LPEM 2005; Basri and Rahardja 2009; Patunru, Nurridzki and Rivayani 2007; Ray 2008). A simple reason for this is that larger transport and inventory costs and the need for inter-island

shipping increase transaction costs. This subsequently increases production costs. Ray (2008) indicates that harbours in Jakarta are still more expensive and more inefficient than harbours in Chittagong, Port Klang or Singapore. In addition, productivity in Jakarta is half the level of productivity in Singapore and Tanjung Pelepas (Malaysia).

For many regions in Indonesia, logistics may be the key to unlocking the door to prosperity. “Trade logistics” — the capacity to integrate the domestic economy and also connect the domestic economy with international markets through the dispatch of goods — are an extremely important factor in the potential economic growth of a country. With this background, we are of the opinion that Indonesia has to place major priority on developing physical infrastructure that integrates the domestic economy. This is an extremely important factor for a country like Indonesia. The development of national roads and inter-island transportation systems and harbours, or more generally, that of domestic logistical systems, is essential and has to be given the highest priority. All this will guarantee the physical basis for a more integrated domestic economy. Because of this, we see that there are several major focuses that have to be carried out such as improving harbour infrastructure, roads and multi-modal transportation, as well as the development of efficient freight forwarding industries.

In addition, in line with the development of physical infrastructure, Indonesia also has to ensure that domestic “soft” infrastructure includes improvements in bureaucracy, the simplification of the investment licensing process, a decrease in the cost of doing business, legal certainty, and the simplification of regulations have to be carried out in order to make economic activities work more quickly.

APPENDIXES

Appendix 1

We use quarterly data that spans from Q1 2000 to Q4 2008 to calculate innovations and expressed in annual growth (year-to-year).

The ARIMA process for each of the component are given as follows:

$$\Delta c_t = 0.023349 + 0.455704 + \Delta c_{t-1} + e_t + 0.227013e_{t-1} + 0.904046 e_{t-2}$$

$$\Delta g_t = 0.076412 + 0.412418\Delta g_{t-1} - 0.380171\Delta g_{t-2} + e_t$$

$$\Delta gfc_t = 0.029401 + 0.537358\Delta gfc_{t-1} + e_t + 0.773359e_{t-1} - 0.223397e_{t-2}$$

$$\Delta x_t = 0.015630 + 0.588775\Delta x_{t-1} + e_t + 0.233876e_{t-1} + 0.875558e_{t-2}$$

where c , g , gfc , x , and e are logarithmic of private consumption, government consumption, gross fixed capital, exports, and residual term, respectively.

The standard deviation of innovations of each of those components are given as:

$$si\Delta c = 0.00472$$

$$si\Delta g = 0.0658$$

$$si\Delta gfc = 0.0341$$

$$si\Delta x = 0.05135$$

Appendix 2

Estimating Vector Autoregression (VAR)

We estimate the following VAR system consisting of three variables with the following standard representation:

$$x_t = a_{10} + \sum_{j=1}^p \alpha_{1i} x_{it-j} + \sum_{j=1}^p \beta_{1i} dd_{it-j} + \sum_{j=1}^p \gamma_{1i} y_{it-j} + \phi_1 Z_t + \delta_1 t + e_{1t}$$

$$dd_t = a_{20} + \sum_{j=1}^p \alpha_{2i} x_{it-j} + \sum_{j=1}^p \beta_{2i} dd_{it-j} + \sum_{j=1}^p \gamma_{2i} y_{it-j} + \phi_2 Z_t + \delta_2 t + e_{2t}$$

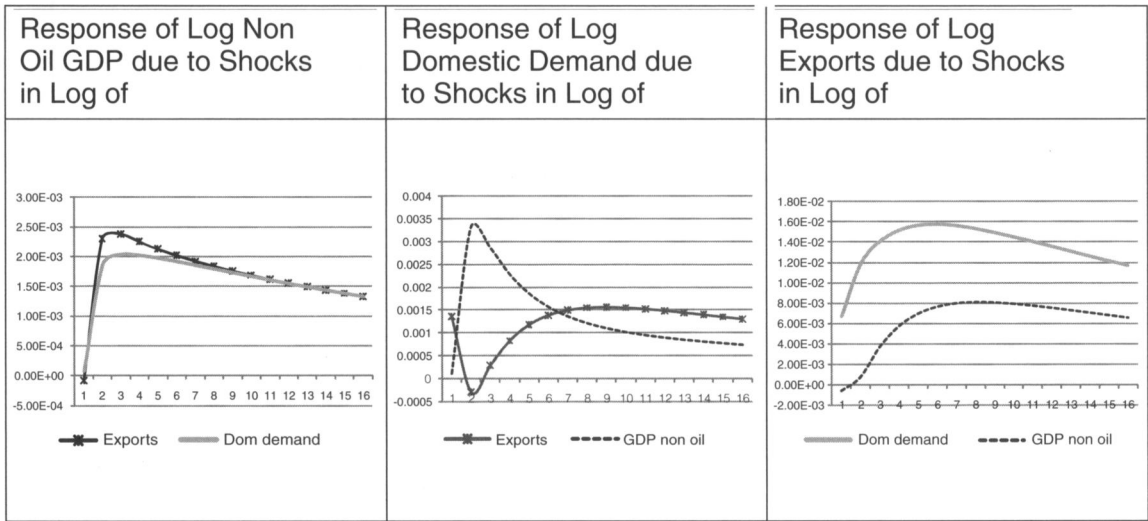
$$y_t = a_{30} + \sum_{j=1}^p \alpha_{3i} x_{it-j} + \sum_{j=1}^p \beta_{3i} dd_{it-j} + \sum_{j=1}^p \gamma_{3i} y_{it-j} + \phi_3 Z_t + \delta_3 t + e_{3t}$$

Where x , dd , y , are quarterly logs of exports, domestic demand, and non-oil GDP, respectively. All of those series are seasonally adjusted before differencing. Z is a variable containing contemporaneous shocks such as removal of oil subsidies, global economic crisis, and Idul Fitri period. We assign Z equals to 1 for a negative shock and zero otherwise. Instead of differencing those series, we control common trend to preserve other co-movement relationship between those variables.

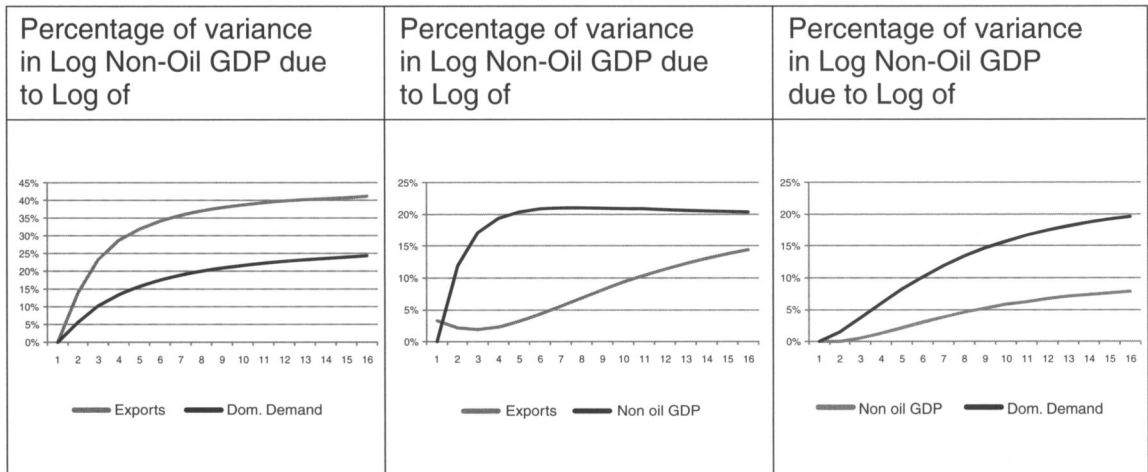
Given the length of sample, we decide whether it is possible to cut down the lags from 4 periods to 2 and then 2 periods to 1 using Likelihood Ratio test. The final result is the following table (t-statistics are given in parentheses)

Explanatory variables:	<i>xt</i>	<i>ddt</i>	<i>yt</i>
<i>xt</i> -1	0.846 (7.790)	-0.029 -(1.300)	0.056 (3.570)
<i>ddt</i> -1	0.823 (1.310)	0.603 (4.730)	0.194 (2.170)
<i>yt</i> -1	0.219 (0.220)	0.610 (3.050)	0.277 (1.960)
Constant	-11.288 -	-2.326 -	6.009 -
	-(0.945)	-(0.956)	(3.510)
Z	-0.153 (-4.762)	0.002 0.340	-0.008 (1.834)
TREND	-0.010 -	-0.003 -	0.007 -
	-(0.798)	-(1.201)	(3.771)
No. of obs		37	
Adj. <i>R</i> -squared	0.973	0.997	0.999
<i>F</i> -statistic	183.56	1802.50	4646.30
Log likelihood	74.0	132.9	145.9
Akaike AIC	-3.57	-6.75	-7.45
Schwarz SC	-3.22	-6.40	-7.11
Mean dependent	12.12	12.84	12.87
Log likelihood		353.42	
Akaike information criterion		-17.81	
Schwarz criterion		-16.76	

To investigate the short-term impact of a shock to all variables, we plot generalized impulse functions that are invariant from VAR ordering (Pesaran and Shin 1998).



Likewise, the variance decomposition results are given as follows:



NOTES

The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors, and do not necessarily represent the views of their affiliated institutions.

1. Total export of goods and services in national account as a percentage of GDP.
2. This section is drawn heavily from Basri and Rahardja (2009).
3. The sample size is relatively short for a typical time series exercise. But extending the data to include series in the 1990s could pose another problem because the Indonesian census bureau (BPS) changed the base year for GDP in 1993 and later in 2000. Nominal GDP figures in series with previous base year tend to be lower than nominal GDP figures in the new base year. To date, there has not been any systematic attempt to backcast the quarterly GDP series to the early 1990s with 2000 base year.
4. We use the generalized impulse as introduced by Pesaran and Shin (1998) in order to ensure the result was invariant from ordering of endogenous variables in VAR.
5. There was anecdotal evidence suggesting that in early 2009 Indonesian importers found it hard to obtain trade financing because of the credit squeeze, particularly U.S. dollar short-term financing. However, the situation soon improved as the relatively healthy Indonesian banking sector started securing credit lines in the international market.
6. This section is drawn heavily from Basri and Siregar (2009).

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