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The ASEAN business cycle and China's slowdown

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The economies in the Association of Southeast Asian Nations (ASEAN) have been integrated through increasing trade relations intensified by tariff reductions and increasing openness to foreign direct investment. Rising volume of networks trade has deepened interconnectedness between ASEAN and China, a recent growth locomotive in the world. ASEAN business cycle is shaped by volatile China's trade volume. As China's expansion slows down, adverse consequences on ASEAN economies have become more pronounced. The extent of the damage depends on each member of ASEAN's trade exposure and China dependency. This paper identifies the most vulnerable ASEAN economies to China's business cycle. The slowing down of the Chinese economy would undoubtedly result in a decline in long-term growth of some ASEAN economies, unless appropriate policy responses can be implemented.

JEL classification: E32, F43
Keywords: ASEAN Growth, Business Cycles, China's Slowdown

1. Introduction

Hill [2014] raises an important question on whether there is a Southeast Asia development model. The 10 countries of the Association of Southeast Asian Nations (ASEAN) have become more integrated over time. Hill argues that large socio-economic and institutional disparities among ASEAN members imply that the ASEAN development model does not exist yet. Nevertheless, convergence in growth rates and social development are taking place. In time, through spillover and demonstration effects from ASEAN's leaders to its followers, we might find such coherent regional development strategies. According to Hill and Gochoco-Bautista [2013], there is policy consensus on the desirability of conservative fiscal policy, except during the crisis, and on the independence of central banks. However, rethinking of an export-led growth strategy should be for those countries with highly open and trade-dependent countries.

China, the world's second-largest economy, has experienced a drop in economic growth rate from 10 percent in 2010-2011 to 7 percent in the first two quarters of 2015. The economic slowdown and the depreciation of the yuan would have significant negative consequences on some ASEAN economies. Through vertical integration, Foreign Direct Investment (FDI) has made ASEAN vulnerable to fluctuations in world trade volume. The ASEAN business cycles are synchronized through regional trade linkages. On the financial flows, synchronization of ASEAN-5 stock market has been well documented. Teng et al. [2013] report that stock markets in traditional ASEAN countries are well aligned with economic activities in developed economies rather than those in emerging economies. Also, they do not react to external shocks originating in other ASEAN markets. Each stock market in ASEAN-5 responds differently in terms of direction and degree towards changing world economic conditions. In August 2015, the stock market crash in China led to fears of a market meltdown.[1] The "China factor" is significant in real and financial sectors to the rest of the world, from commodity prices, exchange rates, and stock prices.

Because ASEAN economies have some degree of heterogeneity, some ASEAN countries would suffer from the slowing growth of China more than others. Differences in the level of trade integration, export commodity concentration, and export market dependency would lead to dissimilar impact of China's new normal growth path. Furthermore, the quality of ASEAN institutions differs greatly from authoritarian to democratic regimes. Hill and Jongwanich [2014] note that the determinants of outward FDI from China and other emerging East Asian economies are consistent with standard economic theory. In addition, the desire for natural resource security and exceptionally high domestic savings rates are particularly important factors for FDI in the region. FDI from China is, therefore, another important transmission channel of shocks from China's economic fluctuations to ASEAN economies, which have abundant natural resources.

The quality of institutions can affect the attractiveness of FDI in ASEAN [Masron and Nor 2013]. The heterogeneity among ASEAN economies implies differences in the effectiveness and efficiency of macroeconomic policy in response to China's economic slowdown. China rising has caused a shift in global trade patterns, with China dominating Western markets at the expense of ASEAN countries [Napoli 2014]. Nevertheless, China's dominance does not appear to have had a significant negative effect on growth rates for ASEAN GDP, exports, or FDI stocks. While China is crowding ASEAN out of developed markets, increased Chinese demand for ASEAN imports has more than offset this effect. Now the impact of China's slowdown has become more pronounced in export sectors in the United States, Europe, and Japan. Since ASEAN's export sectors have market

[1] China's Shanghai Composite index rose by 150 percent (year-on-year) in June 2015. The sharp fall in August 2015 represented a 40 percent fall from the June peak.

exposures to those markets, although they do not directly rely on China's imports, eventually they will be adversely affected by the slowdown in China.

This paper examines how the slowdown in China's economic growth affects ASEAN economies. If China's rebalancing policy means increasing consumption and reducing investment expenditure, will the link between China and the ASEAN business cycle become weaker? Which ASEAN economies will be most affected by China's new normal growth?

The rest of this paper is organized as follows. Section 2 discusses key aspects of the China factor that exerts impact on the ASEAN business cycle. Section 3 examines the implication of exchange rate realignment. Section 4 analyzes the impact of China's slowdown on ASEAN economies. Section 5 presents simulation results from a vector autoregressive model, which contains China's imports growth, ASEAN business cycle movements, and ASEAN members' economic activity. The last section provides concluding remarks.

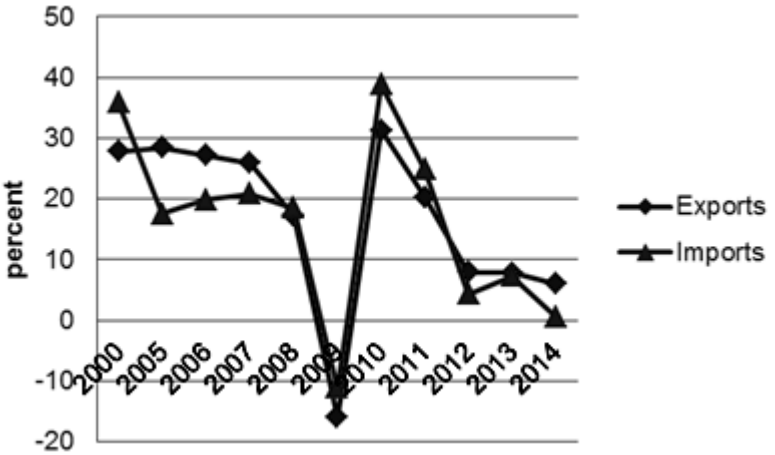
2. The China factor and the ASEAN business cycle

ASEAN economies experienced similar shocks from the Asian financial crisis in the period 1997-1998 to the global financial crisis in the period 2008-2009. The spectacular falls in output were followed by V-shaped recoveries. The reason behind this co-movement of output can be traced back to similar patterns of exports and investment cycles in ASEAN economies. Athukorala and Hill [2010] point out that dependence on fragmentation-based international specialization is proportionately higher in ASEAN than in North America and Europe. The rapid integration of China into regional production networks does not crowd out ASEAN members' opportunities for international specialization.

Not only are their output growth paths related, inflation, interest rates, and stock market performance tend to move together in tandem. Since the Asian financial crisis, the saving-investment gaps in ASEAN economies have widened as the current account deficit in the pre-Asian financial crisis turned around into surplus.

The loss of China's competitiveness is shown by the appreciation of the real effective exchange rate, which weighs down on China's exports. The export-led growth policy of China has been characterized by an artificially weak exchange rate and subsidized credit by public-own banking system. China has welcomed FDI inflows in order to increase the strength of its industrial development, which has contributed to enormous capacity. When the world could no longer support the growth of China's exports, China's exports collapsed spectacularly after the V-shaped recovery in 2010 (Figure 1). Consequently, imports also declined as a result of network trade. The global financial crisis caused the sharp export decline in 2009, but the sharp recovery in 2010 was not sustained. Since then both exports and imports started falling rapidly. Overcapacity among exporting firms would eventually lead to non-performing loans of banks that provided subsidized credit to the Chinese export sector.

FIGURE 1. Growth rate of China' s merchandise trade

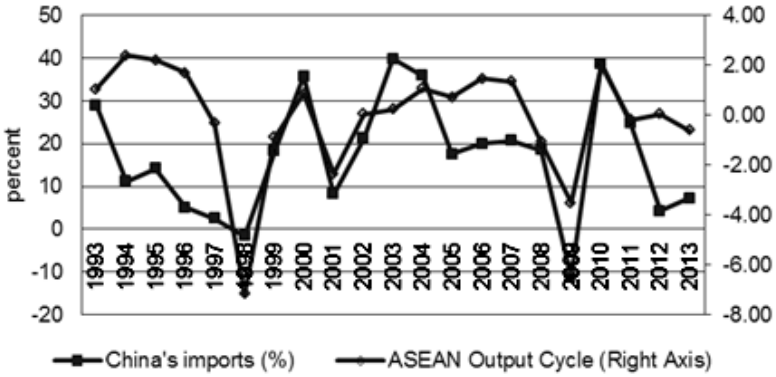


Source: Federal Reserve Bank economic data

In July 2015, China devalued the yuan after its exports declined by almost 9 percent from the same time in 2014. The sharp fall was due to a strengthening US dollar and rising wages. China's devaluation was an attempt to compensate for the strength of the yuan as it has been pegged to the dollar. Total trade declined by 8 percent for the first ten months of 2015. This dramatic economic slowdown has led to a substantial export shortfall in ASEAN countries.

China's major sources of imports are Japan and the United States. Both Malaysia and Thailand are also important sources of China's imports, ranking among the top 10 countries. To gauge the impact of China's imports on ASEAN economies (Figure 2), we compare the movement of business cycle in ASEAN economies (right axis) with China's imports (left axis). The ASEAN business cycle is obtained from the first component of principal components of ASEAN's GDP growth rates between 1990 and 2014. There is a striking similarity between the upturns and downturns of the two magnitudes. A long-run relationship between the two series is confirmed by the Johansen cointegration test. The Granger causality test indicates that the direction runs from ASEAN business cycle to China's import growth. Booming economic activity in ASEAN can predict the rising demand for imports from China. On the contrary, there is no evidence of cointegration between ASEAN business cycle and the United States' imports. Indeed, ASEAN business cycle is synchronized with China's economic activity, i.e., trade and output growth. After the establishment of ASEAN Economic Community in 2016, with diversity in population and economic sizes, income levels, and natural resources, it is expected that synchronization of economic activity among ASEAN members would be more intensified through increasing trade intensity within the ASEAN Economic Community and with China.

FIGURE 2. The ASEAN business cycle and China's imports



Sources: Asian Development Bank data and the author's calculation

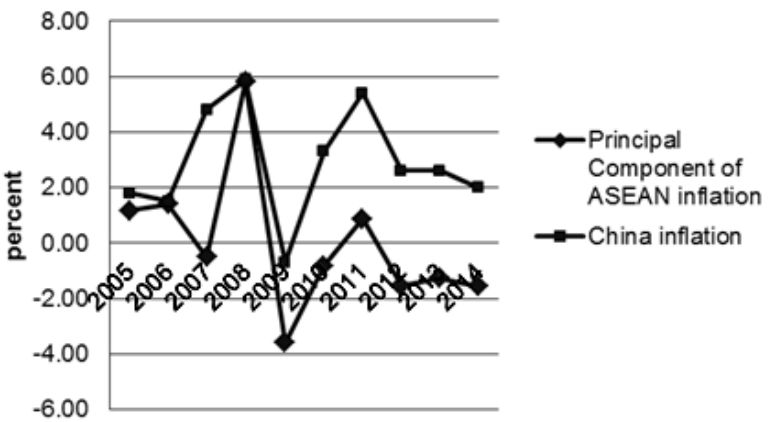
Another explanation of the business cycle synchronization between ASEAN and China is related to the performance of the Japanese economy. The quantitative easing policy of the Bank of Japan, through its record US$665 billion annual asset-buying scheme, has had only limited impact on output on growth and inflation. Japan has suffered as exports to key trading partner China slumped. Japanese consumption spending is also sluggish as a result of an increase in sales tax in 2014. The deterioration in the global economic outlook, including the developments in China, would delay Japanese companies in expanding business investment and raising wages. If the Japanese economy is still in recession and deflationary mode, the demand for Japanese exports from China will also decline, implying a reduction in imported parts and components from ASEAN countries.

The synchronized business cycle is related to credit cycles and exchange rates. Mohan and Nandwa [2009] find evidence of cointegration among the ASEAN interest rates, and the direction of these interest rates is affected by China's. This evidence points to the linkage between ASEAN-5 and China. The synchronization can also be explained by the exchange rate channel. ASEAN countries tend to avoid currency appreciation when the dollar trended downward. China also tries to peg the yuan to the dollar. Thus trade between ASEAN and China can be conducted within an environment of stable exchange rates. Tang [2014] shows that, because of the region's production networks, increasing intraregional exchange rate volatility among Asian economies leads to a decline in intraregional trade, in particular among ASEAN economies.[2] Ong and Habibullah [2012] find evidence of a continuous macroeconomic interdependence between ASEAN-5 and China, which would lead to a successful ASEAN-China economic cooperation.

[2] Intraregional trade within ASEAN amounted to only 24 percent, compared to 69 percent among the European Community.

The macroeconomic interdependence between ASEAN and China can be demonstrated by co-movements of price levels in the two regions. Employing the principal component of ASEAN inflation rates in 10 member countries, we can obtain the proxy of inflation cycles, as shown in Figure 3. When compared with China's, it is obvious that price stability between China and ASEAN is related. The long-run relationship between China and ASEAN exist, with the causal relationship running from China's inflation to ASEAN's.[3] The global food crisis in 2008 led China to ban exports of rice and sent waves of panic to Asia. The inflation rate temporary skyrocketed because of food inflation, followed by export collapse caused by the global financial crisis.

FIGURE 3. Inflation synchronization: China and ASEAN



Source: Asian Development Bank data and the author's calculation

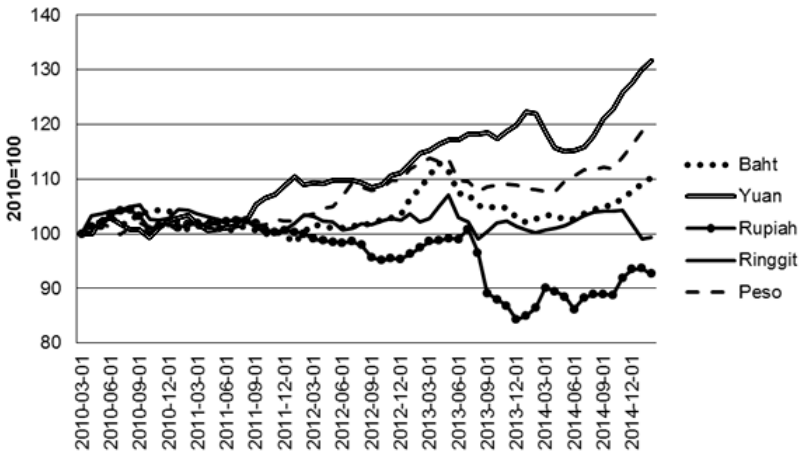
Tham and Kam [2014] employ a gravity model that captures the effects of trade in parts and components as well as final manufactured goods from ASEAN to China. Devadason [2009] also finds evidence that China's integration in the ASEAN region increases the size of the ASEAN export market, rather than reducing ASEAN's export expansion. His result is in line with the fact that, although China has become an important export destination and a source of imports for individual ASEAN 5 countries, there is no reduction in intra-ASEAN 5 trade. From the literature, we can conclude that trade seems to be the most important channel explaining the synchronization between China and ASEAN business cycle.

[3] The long-run relationship is confirmed by Johansen cointegration test. The hypothesis that China's inflation rate does not Granger- cause the inflation cycle in asean is rejected at 0.1 percent statistically significant level.

3. Implications on exchange rates

The quantitative easing monetary policy of the Fed led to capital inflows to emerging markets, as investors were looking for higher rates of return from portfolio investment. After 2009, the Chinese yuan, the Thai baht, the Philippine peso, and the Malaysian ringgit considerably appreciated against the US dollar. In terms of international competitiveness, the real effective exchange rates of these currencies had appreciated substantially since 2010. The yuan strengthened by 30 percent, the peso by 20 percent, and the baht by 10 percent at the end of 2014 (Figure 4). The loss of international competitiveness has compounded economic problems of export-led growth ASEAN economies.

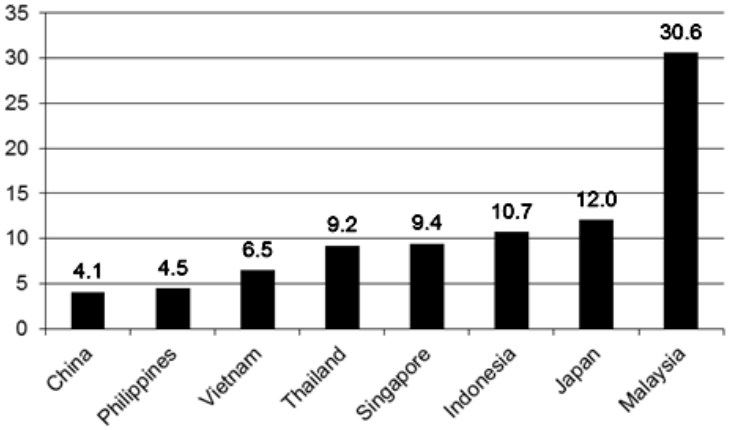
FIGURE 4. Real effective exchange rates



Source: Federal Reserve Bank economic data

Hooy et al. [2015] find that the yuan real exchange rate has a significant positive impact on ASEAN's total exports to China. Parts and components exports are sensitive to the yuan depreciation, because of the recent production relocations of multinational corporations from the ASEAN region to China and Vietnam. The huge capital inflows after the QE operations prompted the ASEAN central banks to buy dollars and to accumulate international reserves so as to prevent currency appreciations. However, the trend of appreciation of ASEAN currencies turned to a rapid depreciation in 2015 (Figure 5). By 2015, the US dollar gained strength as the US economy rebounded and the fear of the Fed's interest rate hike led to fear of capital outflows from the ASEAN region.

FIGURE 5. Asian currency depreciation against the US dollar, October 2015 (% year-on-year)



Source: The Economist

By November 2015, the Indonesian central bank's reserves fell by US$1 billion to US$100.7 billion. The decline was due to rising costs to service the government's foreign debt and the use of reserves to stabilize the Indonesian rupiah, which depreciated by 10.7 percent (year-on-year) in October 2015 (Figure 5). The large depreciation corresponds to a high inflation rate of about 6.4 percent during the same corresponding period. The GDP growth rates in Indonesia and Malaysia slowed down to around 4.8 percent in 2015; while Indonesia experienced current account deficit, Malaysia still maintained current account surplus. The steep depreciation of the ringgit must have been related to capital outflows and political risks.

Vietnam is another country that faces inflation at a higher rate than other ASEAN members. The Vietnamese dong has depreciated gradually in line with the inflation level. However, Vietnam experienced strong economic growth in 2015, helped by robust export growth. The dong depreciated by 6.5 percent in 2015. The gain in Vietnam's exports to the United States was at the expense of Thailand, which is losing world market share in electrical and electronic equipment, apparel, and garments. This is partly due to rising wages and the appreciation of the baht from 2010 to 2014. Thailand also experienced currency appreciation, although the Bank of Thailand does not intervene in the foreign exchange markets as much as it used to. As a result, the baht depreciated by 9.2 percent (year-on-year) in October 2015.

Vietnam imports input materials mostly from China to serve its local production. Therefore, as the Chinese yuan has depreciated, Vietnam is able to buy materials at lower prices, thus enabling it to cut production costs and raise Vietnam's competitiveness. Furthermore, the price decreases in the world market,

caused by the weaker demand from China, will also help Vietnamese businesses cut production costs.

Vietnam still has cheap labor, which can be a main factor in attracting FDI away from China, which is experiencing rising wages and economic slowdown. Another factor that attracts FDI to Vietnam is the benefit Vietnam would obtain from joining the Trans Pacific Partnership Agreement (TPP). Vietnam is the country that would benefit the most from the Trans Pacific Partnership agreement as it has the lowest wages among the 12 members.

Since China surprised world markets by devaluating the yuan by 2 percent in August 2015, net capital outflows have reached US$200 billion. The People's Bank of China is reported to have spent US$229 billion in foreign exchange intervention to prop up the yuan in the third quarter of 2015. There has been speculation that the Fed interest rate hike is imminent as the US economy has been approaching the full employment level in the last quarter of 2015. While the economic recovery in the Eurozone is still protracted and fragile, due to a decline from Chinese imports, the European Central Bank would still maintain easy monetary policy. As a result, the gap between the interest rates in the United States and in the Eurozone will widen in 2016. The dollar may continue to appreciate. Because of the yuan peg with the dollar, there would be speculation of another round of yuan devaluation. In the future, we would observe the similar pattern of Asian currency depreciation as shown in Figure 5.

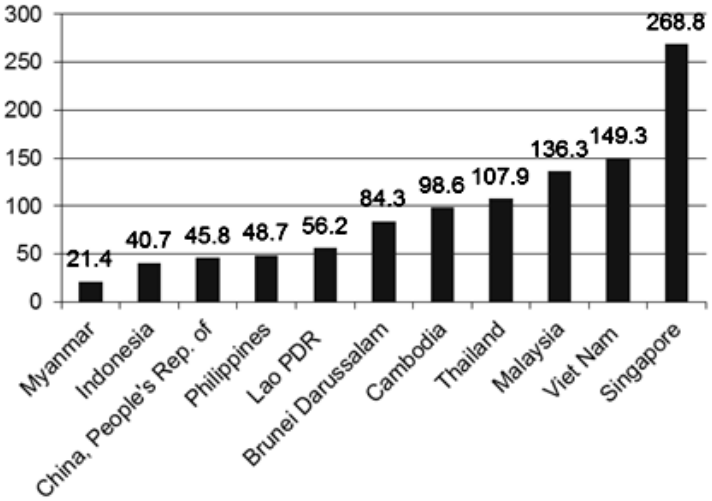
4. Trade exposure and dependency of China

Trade exposure to external shocks can be measured by the value of total trade volume relative to GDP. In general, the ratio can be thought of as a measure of the degree of openness, reflecting trade liberalization over time. The increasing trend of trade openness also implies increasing risk exposure to external shocks, such as terms of trade and volume of trade shocks. Small countries tend to have higher trade volume relative to GDP, while large countries with large domestic markets would tend to have lower trade exposure to trade shocks from the rest of the world. The high trade exposure ratio bodes well for degree of trade integration, which can serve as an economic growth driver.

Hill and Menon [2011] point out the high degree of vulnerability of the Cambodian economy, which arises from a narrow economic base, a pre-crisis asset price boom, a fragile financial system, and limited defensive economic policy instruments. After extremely rapid economic growth during 2000-2007, it experienced a sharp growth collapse in 2008-2009. The economy has begun to rebound since early 2010, and the crisis episode has provided the government with an opportunity to conduct policy reform by diversifying the economy and creating the preconditions for de-dollarization. From Figure 6, between 2010 and 2014, the average ratio of the volume of Cambodia's trade to GDP almost reached 100 percent. It is evident that, despite having the highest dollarization level in

the region, dollarization has contributed to a stable price level and favorable environment to trade.

FIGURE 6. Average degree of trade exposure, 2010-2014



Source: Asian Development Bank

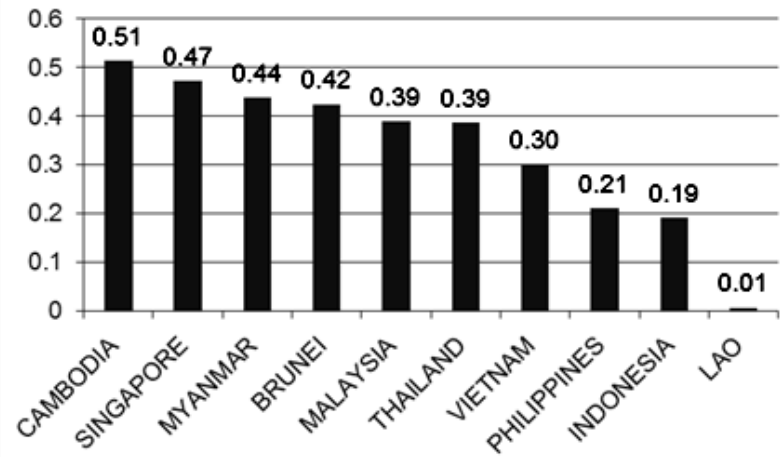
Since China is a major trading partner of Myanmar, and bilateral trade with China accounts for 50 percent of total trade, China's economic growth and imports slowdown would adversely affect Myanmar's exports. Despite low trade exposure (21.4 percent), the falling price of rice and nationwide floods would compound Myanmar's economic problems. The GDP growth of Myanmar is highly correlated with China's total import growth rate (Figure 7), but not as high as Cambodia's.

According to Bird and Hill [2010], the past two decades of reform in Lao People's Democratic Republic (PDR) have been largely successful, with accelerating growth despite unfavorable initial conditions such as the country's being landlocked and having weak institutions and ill-defined property rights. Neighborhood effects have obviously been supportive in Lao PDR's case, but their importance should not be overstated. Lao PDR's GDP growth rate is independent of China's economic activity (Figure 7). Since the major trading partner of Lao PDR is Thailand, its output growth is related more to Thailand's GDP growth through export channel.

The Philippine growth rate in 2015 also slowed down compared to the high rate in 2014. Similar to Indonesia and Lao PDR, the Philippine economy would not severely affected by China's slowdown as much as countries which have high overall trade exposure and high dependency on China. The slump in export demand in the Philippines cannot be compensated by currency depreciation of 4.5

percent in 2015. The depreciation was caused by expectations of capital outflows in anticipation of the Fed's rate hike.

FIGURE 7. GDP growth correlation with China import growth



Source: Author's calculations based on Asian Development Bank data

TABLE 1. China dependency and ASEAN trade exposure

China dependency	High trade exposure (% Trade/GDP)	Low trade exposure (% Trade/GDP)
High (Growth correlation: above 0.35)	Brunei (0.42) Cambodia (0.51) Malaysia (0.39) Singapore (0.47) Thailand (0.39)	Myanmar (0.44)
Low (Growth correlation: below 0.35)	Vietnam (0.3)	Indonesia (0.19) Lao PDR (0.01) Philippines (0.2)

Sources: Figures 6 and 7

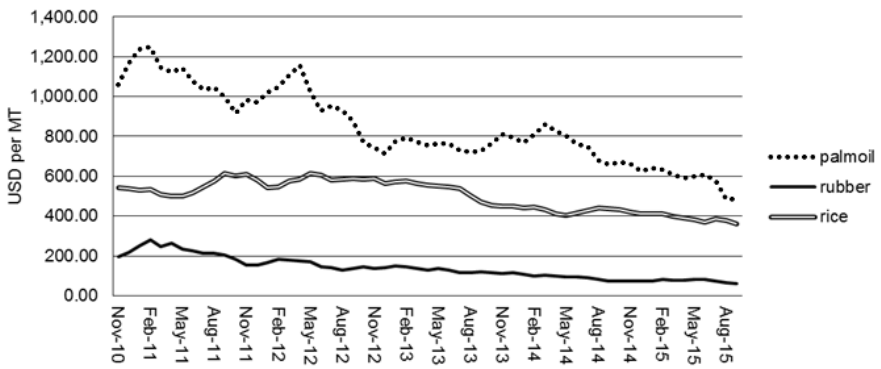
Malaysia is a country with highly open economy and with export-growth driven strategy. Hill et al. [2012] attribute Malaysia's significant slowdown in investment and growth since the late 1990s to some specific institutional and political problems, rather than the middle-income trap. Thus major policy reforms are required to meet challenges to growth acceleration. In 2014, Malaysia's output growth rate is highly related to China's economic growth. The country has high trade exposure and high dependency on China. Malaysia has suffered from losing market shares in declining sectors: electrical and electronic equipment, vegetable oil, and rubber. Indonesia lost its market shares in declining sectors such as rubber,

mineral fuels, and palm oil. In the same development, Thailand's market shares in the growing sector of rice and seafood have deteriorated. Furthermore, to make matters worse, Thailand also lost the market share in a declining sector: rubber. The only export sector that seems to be gaining market share is the automobile and parts sector. Due to rising wages, Vietnam has been replacing Thailand's position as a major exporter of footwear, garment, and seafood. Viewed in this light, ASEAN countries have certain degree of complementarity and competition in the area of labor-intensive industry.

The ASEAN economies that depend on commodity exports suffer from the declines in export demand and commodity export prices. The extent of the damage is related to the reliance and concentration of commodity exports. Palm oil, rubber, and rice are primary commodity exports of many ASEAN countries. They have experienced a declining trend since 2010 (Figure 8). The unfavorable terms of trade would continue as long as the crude oil price still remains below US$80 per barrel.[4]

As Asia's only major net oil exporter and the world's second-biggest producer of palm oil, Malaysia's economic growth has been negatively affected by the weak oil price. The Malaysian government encountered a decline in fiscal revenues. The government derives about 22 percent from energy related business. The political scandal over funds transferred also led to the weakening of the ringgit. A collapse in commodity prices, caused by China's slowdown in export demand for raw materials, has affected the ASEAN community.

FIGURE 8. Declining commodity prices



Source: Mundi Index

In summary, China's slowdown has reduced the fiscal space of ASEAN countries, thereby impairing the governments' ability to use fiscal policy to

[4] Crude oil prices are positively related to the price of natural rubber, which competes directly with synthetic rubber, a byproduct of the oil refinery industry.

counteract the downturn of economic cycles. When the Fed starts normalizing monetary policy, an increase in interest rates would raise household debts in emerging economies. Rapid increases in household debts to GDP have made it difficult for ASEAN monetary authorities to implement effective monetary policies to stimulate the economy after export collapses. Poverty and indebtedness have been a major problem for farmers since the collapse of primary commodity prices. As long as commodity prices remain weak, the inclusive development goals of poverty eradication and improved income distribution will be a challenge. China's slowdown has a far-reaching impact on inclusive growth.

5. Impacts of China's slowdown

We have established that there is a strong causal relationship between China and ASEAN economic activity. In this section, we examined the impacts of the fluctuations on business cycles in ASEAN and China. An unrestricted vector autoregressive model is constructed for this purpose by utilizing the annual data on growth rates in ASEAN economies. The data from 1990 to 2014 are obtained from the Asian Development Bank. As discussed earlier, the first principal component of ASEAN growth rate is employed as a proxy for the economic activity of ASEAN economies as a whole (Figure 2). By utilizing two-period lags, impulse response functions from shocks in ASEAN business cycle and China's import growth are obtained. The accumulated responses of ASEAN output growth rates are reported. In the first group, we select high-trade exposure countries (Table 1), namely Malaysia, Thailand, Cambodia, and Vietnam. The results reported in Figure 8 confirm the earlier conjecture that countries with high trade openness are likely to benefit more from China's rapid expansion than countries with lower degrees of trade exposure. Thailand's growth rates, followed by Cambodia, respond most strongly among the four countries in the first simulation group. On the other hand, during China's slowdown, Thailand and Cambodia would bear the most burdens of adjustments in terms of growth slowdown. Except for Malaysia, the impact of China's economic activity is more prominent than economic activity within ASEAN community (as captured by impulse responses to the ASEAN business cycle). For Malaysia, the impact of ASEAN expansion is more pronounced than the China factor. This is because the trade intensity between Malaysia and other ASEAN countries, namely Singapore, is higher than Malaysia's trade intensity with China. In the case of Thailand, Cambodia, and Vietnam, the accumulated responses of growth of these economies from ASEAN economic activity die off within five years, while China's impacts on growth rates in high-trade exposure countries are sustained more than a decade. These findings underline the importance of China factor in contributing to long-term output growth in Thailand, Cambodia, and Vietnam since China's accession to the World Trade Organization. On the other hand, China's new normal growth pattern would have a detrimental impact on the long-term growth of countries with high

international trade exposure and high dependency on Chinese economy. Hill and Menon [2013] observe that despite Cambodia's weak institutions and a legacy of history and small size that limit government's policy space, Cambodia has achieved high economic growth. Through large public and private capital inflows, economic openness, and reasonably prudent macroeconomic management, the Cambodian economy grows rapidly in a dynamic, integrating neighborhood of the ASEAN region. The empirical finding in this paper underlines the importance of the China factor in generating high growth for low-income ASEAN countries since they started engaging in trade liberalization. With the new growth target set for 7 percent in the China's new development plan for the next five years, heavy reliance on Chinese expansion can be detrimental to their long-term growth, as they cannot depend on China's strength.

For countries with low trade exposure to external shocks, the impact of China slowdown will be minimal. Figure 10 illustrates that, except for Myanmar, the China factor is less important than the ASEAN factor; economic activity in the ASEAN region produces stronger growth impact. Indonesia, the Philippines, and Lao PDR benefit less from China rising than the expansion of ASEAN economies. Lao PDR's growth rate is hardly related to China's growth. Distance matters in trading activity. Lao PDR trades more with Thailand than China. Although Myanmar has low international trade exposure, its GDP growth is highly associated with China's. Figure 10 demonstrates that Myanmar's growth increases substantially with rising economic activity in China, whereas it does not benefit much from increasing ASEAN economic activity. This conclusion may change after the investment and trade impacts of the ASEAN Economic Community become more pronounced in the next decade.

Indonesia, which has a relatively low trade exposure, due to its large size, has less influence from the China factor. Basri and Hill [2011] analyze Indonesian growth dynamics, in particular the V-shaped recoveries after the Asian financial crisis and global financial crisis. The years 1997-1998 were regarded as a watershed in the country's economic history and political economy. The growth of Indonesian economy has never matched that of high-growth East Asian Economies. In Figure 10, Indonesia and the Philippines have not benefited much from China rising, although the two countries' growth rates respond vigorously in line with expansion of ASEAN economic activity.[5]

6. Concluding remarks

China's new normal growth implies that the expansion of ASEAN economies would slow down. China's slowdown has reverberated around the world. Japan

[5] See Hill [2015] for a discussion on political economy of policy reforms in Indonesia and the Philippines.

was also in recession again in the third quarter of 2015. This is Japan's fifth recession in seven years. Some ASEAN economies would not be affected, unless public investment can be implemented effectively to induce growth via enhancing effect of public infrastructure, which can lead to crowding in effect on private and consumption expenditures. ASEAN countries are seemingly homogenous, yet each country has heterogeneity in trade exposure, export markets, and export products concentration. When China's growth declines, it would affect ASEAN economies differently. Countries which have large trade exposure and are highly dependent on China would suffer the most. On the other hand, countries which have low trade exposure and rely less on China's economic activity would suffer the least from China's growth slowdown.

The adverse impact of China's slowdown would be felt less in Cambodia, Lao PDR, Myanmar, and Vietnam. In particular, developing rapid transportation network in the region can compensate for the declining volume of trade with China through increasing trade among ASEAN countries, which would be enhanced by reduced transportation costs. In addition, FDI outflows from ASEAN-5 into Cambodia, Lao PDR, Myanmar, and Vietnam can offset declining export demand from China. Indonesia and the Philippines would be the least to suffer from China's slowdown. Market size and age structure of population can ensure dynamism in investment and consumption expenditures. Thailand would be the laggard in the region unless a democratic government can be restored. Authoritarian rules reflect extractive institutions that create risks, and uncertainty can drive out investment and lower long-term growth.

In the scenario of global growth slowdown, currency depreciation, and rising interest rates, the main challenge in ASEAN will be household and business sector debts that would eventually impair the quality of bank loans and prolong economic recovery. The road to economic recovery will be hard unless the ASEAN community can increase their intra-regional trade through improving regional connectedness through massive infrastructure investment to compensate for the declining China's demand for exports.

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FIGURE 9. Impacts of high trade exposure on ASEAN economies

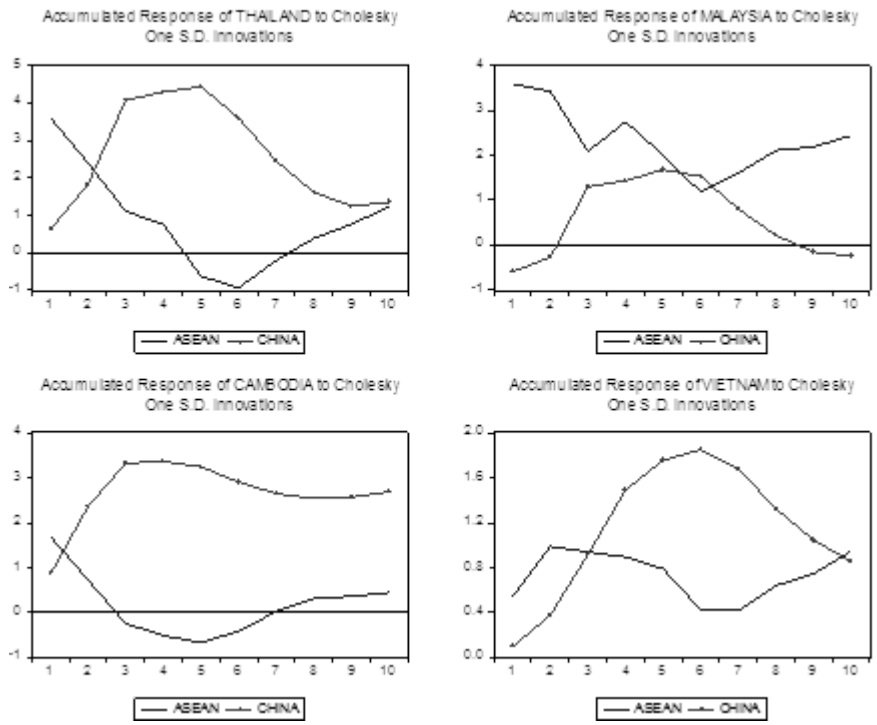
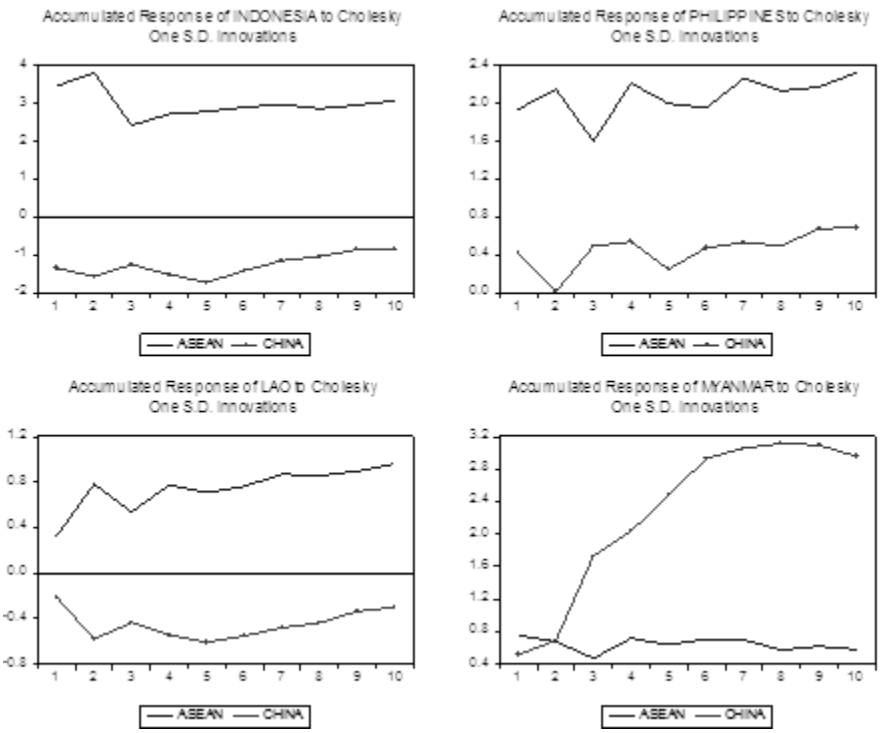


FIGURE 10. Impacts of low trade exposure on ASEAN economies



References

Athukorala, P. and H. Hill [2010] "Asian trade: long-term patterns and key policy issues", *Asian-Pacific Economic Literature* **24**(2): 52-82.

Basri, M.C. and H. Hill [2011] "Indonesian growth dynamics", *Asian Economic Policy Review* **6**(1): 90-107.

Bird, K. and H. Hill [2010] "Tiny, poor, land-locked, indebted, but growing: lessons for late reforming transition economies from Laos", *Oxford Development Studies* **38** (2): 117-143.

Devadason, E.S. [2011] "Reorganization of intra-ASEAN 5 trade flows: the 'China factor'", *Asian Economic Journal* **25** (2): 129-149.

Hill, H. [2015] "The political economy of policy reform: insights from Southeast Asia", in I. Coxhead, ed., *Routledge Handbook of Southeast Asian Economics*. Oxford and New York: Routledge. 327-344.

Hill, H. [2014] "Is there a Southeast Asian development model?", *Malaysian Journal of Economic Studies* **51**: 89-111.

Hill, H. and M.S. Gochoco-Bautista [2013] "Perspectives and issues", in H. Hill and M.S. Gochoco-Bautista, eds., *Asia rising: growth and resilience in an uncertain global economy*. Cheltenham, U.K. and Northampton, Mass.: Elgar; Manila: Asian Development Bank. 3-45.

Hill, H. and J. Jongwanich [2014] "Emerging East Asian economies as foreign investors: an analytical survey", *Singapore Economic Review* **59**(3): 1-26.

Hill, H. and J. Menon [2011] "Reducing vulnerability in transition economies: crises and adjustment in Cambodia", *ASEAN Economic Bulletin* **28**(2): 134-159.

Hill, H. and J. Menon [2013] "Cambodia: rapid growth with weak institutions", *Asian Economic Policy Review* **8**(1): 46-65.

Hill, H., T.S. Yean, and R.H.M. Zin [2012] "Malaysia: a success story stuck in the middle?" *World Economy* **35**(12): 1687-1711.

Hooy, C.W., S-H. Law, and C. Tze-Haw [2015] "The impact of the renminbi real exchange rate on ASEAN disaggregated exports to China", *Economic Modelling* **47**: 253-259.

Ishaq, M. and M.A.U. Rehman [2013] "Surmounting the individual: establishing a common currency in Asia--a case study of East Asian economies", *Global Economy Journal* **13**(1): 63-88.

Masron, T.A. and E. Nor [2013] "FDI in ASEAN-8: does institutional quality matter?" *Applied Economics Letters* **20**(1-3): 186-189.

Mohan, R. and B. Nandwa [2009] "Examining interest rate linkages among ASEAN-5, China and India", *ASEAN Economic Bulletin* **26**(2): 174-179.

Napoli, C. [2014] "China's economic rise: implications for ASEAN trade flows", *Journal of Southeast Asian Economies* **31** (3): 345-360.

Ong, H.-B. and M.S. Habibullah [2012] "Is China compatible with ASEAN-5? a gradual cointegration analysis", *Journal of Economic Studies* **39**(3-4): 356-367.

Tang, H.C. [2014] "Exchange rate volatility and intra-Asia trade: evidence by type of goods", *World Economy* **37**(2): 335-352.

Teng, K.T., S.H. Yen, and S.Y. Chua [2013] "The synchronization of ASEAN-5 stock markets with the growth rate cycles of selected emerging and developed Economies", *The Journal of Applied Economic Research* **7**(1): 1-28.

Tham, S.Y. and A.J.Y. Kam [2014] "Re-examining the impact of ACFTA on ASEAN's exports of manufactured goods to China", *Asian Economic Papers* **13**(3): 63-82.