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Not a Trap, But Slow Transition? Indonesia’s Pursuit to High Income Status*

Muhammad Chatib Basri

Ash Centre, Harvard Kennedy School
79 John F. Kennedy Street, Mailbox 74
Cambridge, MA, 02138 USA
Chatib_basri@hks.harvard.edu
Mcbasri@icloud.com

Sjamsu Rahardja

Paramadina Graduate School
The Energy Tower 22nd floor
Jakarta, Indonesia
sjamsu.rahardja@policy.paramadina.ac.id

Syarifah Namira Fitriana

CRECO Research Building
Jl. Teuku Cik Ditiro no.37a Menteng Jakarta Pusat 10310
Indonesia
s.namira.f@crecoconsulting.com
namira.fitriana@gmail.com

Abstract

In the last four decades, Indonesia’s economy demonstrated remarkable progress. After the devastating currency crises in 1998–99, growth recovered. With the help of commodity prices, Indonesia has become one of the largest middle-income countries in the world. All of this happened amidst the backdrop of delicate political transformations. It is far from clear, however, whether Indonesia can continue to follow the successful path of other industrialized countries in East Asia. We lay out key issues that are likely to hinder Indonesia’s transformation to a high-income country and discuss constraints in policymaking that may require calibrating reform prescription with the new political landscape.

1. Introduction

In 2011 the Asian Development Bank (ADB 2011) published a study on the Asian Century, naming seven countries¹ that would drive Asia’s powerhouse of growth; in addition, the ADB also predicted that in the Asian Century scenario the region would become

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¹ The seven countries are People’s Republic of China, India, Indonesia, Japan, Republic of Korea, Thailand, and Malaysia.

free from poverty. As one of the seven engines of growth, Indonesia has tremendous potential (Wilson and Purushotaman 2003).

After experiencing economic and political turmoil in 1997–98, Indonesia managed to implement a series of political reforms that ended the existing authoritarian system and transformed Indonesia into the second largest non-Western democracy (Basri and Hill 2011). The management of reform in Indonesia was not easy because of the severity and complexities of its political economy problems. It is clear that Indonesia faced far more substantial difficulties than similar crises in Korea, Malaysia, or Thailand. Yet Indonesia has made significant progress: the economy over the last ten years has grown by an average of 5.8 percent per year and real per capita income has increased from approximately US\$ 1,222 in 2004 to US\$ 1,866 in 2014. This has helped Indonesia join the group of middle-income countries, with a large emerging consumer class, a significant pool of labor, and the availability of natural resources.²

This situation has led to a new concern, however: the fear that Indonesia will be stuck in the middle-income trap (MIT). Gill and Kharas (2007) coined this term after comparing growth patterns of economies in East Asia versus Latin America. Other researchers have also found that countries' economic growth tends to slow down after a certain level of income per capita (e.g., Eichengreen, Park, and Shin 2012). Similarly, studies have also described challenges such as problems in governance of public institutions and low innovation capabilities that are facing emerging economies. Some are able to achieve the middle-income country status, but so far have failed or face challenges entering the next stage of fully industrialized countries (Felipe 2012).

This paper will focus on Indonesia's ability to speed up the transition from a middle-income to a high-income country, and to consider what efforts are needed to ensure that the process is accomplished in a reasonable amount of time.

2. Middle-income trap literature review

The term "middle-income trap," introduced in the World Bank's "East Asia Renaissance" (Gill and Kharas 2007), originally had a strong emphasis on competitiveness. It presented economic integration and institutional reforms as key ingredients that had allowed several countries in East Asia to grow quickly and move to high-income status. Their work highlighted successful experiences of countries in East Asia, the "renaissance" that this region experienced after suffering from the 1997–98 Asian financial crisis (AFC) to become

² See, for example, the report by McKinsey Global Institute, "The Archipelago economy: Unleashing Indonesia's potential," September 2012. Available at: http://www.mckinsey.com/insights/asia-pacific/the_archipelago_economy.

the most dynamic region in a globalized world. Their work also identified countries that had been experiencing growth slowdowns and were stuck between low-income competitors and showed an inability to challenge high-income innovators in rapidly changing industries.

Eichengreen, Park, and Shin (2012) found a striking pattern of growth slowdown across countries after reaching a certain level of GDP per capita. Using data of non-oil-exporting countries, they described how high-growth periods tend to end after a country's GDP reaches US\$ 16,740 in 2005 constant purchasing power parity terms. But they also noted that there were considerable variations in that threshold and in the patterns of growth slowdowns.

There are also views that the MIT is merely the result of an inappropriate growth strategy. Bulman, Eden, and Nguyen (2014) argue that middle-income countries need to change their growth strategy to transition more smoothly to high-income status. They find countries that did not make it to high-income status in 2009 had lower growth rates at all income levels compared with those that managed to move to high-income status. Their findings suggest that middle-income countries need strategies for sustaining a high growth rate for a long period, and that these strategies are different from those for transitioning from low-income to middle-income status. A middle-income country with an inappropriate growth strategy will face difficulty transitioning to the next level, and thus could become trapped at the middle-income stage.

Felipe (2012) suggests that MIT is generally a "non-Asian" phenomenon because of the relatively fast growth of Asian economies compared with countries in Latin America that were mostly associated with MIT. Nevertheless, he also argues that countries like Indonesia and Pakistan risk falling into the MIT in the near future because of their current average GDP per capita growth is much lower than the average GDP per capita growth rate necessary to move to high-income status (i.e., "escape velocity").

The topic also has triggered important policy discussion and research literature in Indonesia. Woo and Hong (2010) flagged the need for Indonesia to shift its growth strategy towards a knowledge-based economy. They compared Indonesia's development indicators with a group of middle-income countries that share many similar characteristics with Indonesia (Malaysia, the Philippines, Thailand, China, India, Brazil, Mexico, and Nigeria). They argue that for Indonesia to sustain growth, it needs to intensify the use of knowledge and innovation in economic activities. The indicators they presented on education attainment, innovative capacity, and export composition suggest the need for micro-level reforms beyond those that are aimed for macro-stability. Patunru and Tarsidin (2012) also flagged concerns on the slowing pace of Indonesia's structural transformation around the time of the commodity boom in 2005 until the global financial crisis in 2009. They

pointed to potential growth bottlenecks due to a large concentration of labor force in the agriculture sector (with slow economic growth) and a 65 percent total poor population, whereas growth was driven by sectors that are relatively capital-intensive (e.g., utilities and telecommunication).

The World Bank (2014) also highlighted the need for Indonesia to close the gap in public infrastructure if it wishes to achieve the necessary “escape velocity” of economic growth to achieve high-income status. Similar to *Visi Indonesia 2030*, the work underlines the importance for Indonesia to address development challenges during the golden period of demographic bonus, such as on education and infrastructure.

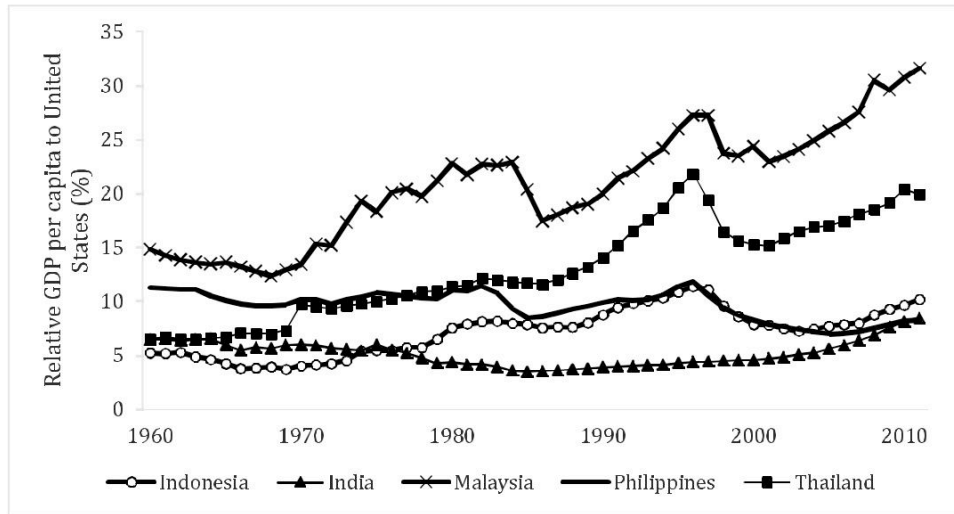
3. Indonesia’s evolution of relative income: Slow and steady

Indonesia’s challenge to shift into high gear is formidable and unique. Most of the new “escapees” have been medium or small countries with respect to population and geo-graphical size (e.g., Hong Kong, Singapore, Puerto Rico, Taiwan), countries that had a strong industrial base before World War II (e.g., European countries, Japan), or countries that found ways to manage the interaction between reforms and political changes (China, Singapore, South Korea). We believe that Indonesia is nowhere near any of those countries.

Basri and Rahardja (2010) argue that Indonesia’s archipelagic landscape imposes an extraordinary challenge for domestic market integration. Manufacturers face obstacles to expand operations competitively and to procure inputs from outside Java because of poor internal connectivity and the multiple handlings of freight (from sea, land, and sea and land again) undermines the reliability of the supply chain. This also makes it difficult for low-income regions to connect with growth poles. In contrast, China’s vast landmass is connected through highway networks that minimize issues in freight logistics for Chinese industries, including those that are expanding to the West. It is also in contrast with Singapore whose small size allows it to leverage urbanization and agglomeration of services and high-technology industries.

Successful democratization and a high degree of government decentralization puts Indonesia at par with countries like Brazil and India. Nevertheless, like other developing countries, corruption, lack of capacity in formulating and implementing policies, and uncertainty in the regulatory environment remain problematic for Indonesian businesses. The question is whether there is a common recipe that Indonesia can learn from those countries to leverage its high political participation and implement an effective economic reform process.

To shed some light on the evolution of Indonesia’s income status, we use the same approach as Bulman, Eden, and Nguyen (2014) in defining the middle-income threshold

Figure 1. Relationship of Indonesia's income relative to the United States

Source: Penn World Table version 8.0.

Note: Income per capita = Expenditure-side real GDP at chained PPPs (in mil. 2005US\$)/Population (in millions).

by tracking evolution of relative income per capita to the United States.³ We use data from the Penn World Table version 8.0 and calculate relative GDP per capita of Indonesia to the United States in purchasing power parity terms. For comparators, we use India and middle-income countries in ASEAN. We believe India is highly relevant for benchmarking Indonesia because both countries won their independence in the mid 1940s, have a large population, share a relatively noisy political landscape, and also face challenges from the poor quality of their public institutions. Other middle-income countries in ASEAN are also important because each of them shares characteristics with Indonesia: Malaysia because of exposure to commodity and natural resources, Thailand for its agriculture and manufacturing, and the Philippines because it is an archipelago. They are also important comparators for Indonesia because all of them experienced significant contractions in their economy in the aftermath of the AFC.

Figure 1 presents the path of Indonesia's income relative to the United States. Indonesia's relative income to the United States was higher in 1960, before the economy suffered from Soekarno's government decision to escalate military confrontation with Malaysia and Singapore and turned its foreign diplomacy against the Western bloc. Visual

³ Relative income to the United States, less than 10 percent is defined as "low income," 10–50 per-cent as "middle income," and greater than 50 percent as "high income."

inspection of Figure 1 also suggests that Indonesia overcame a growth slowdown in 1970 and the economy expanded continuously until the financial and political crises (twin crises) in 1997 and 1998. It also shows that from 1999 to 2011 Indonesia was trying to recover to what it already achieved with its relative income per capita with the United States in 1995. In 2011, Indonesia's relative income per capita to the United States was above 10 percent, which classified Indonesia as a "middle-income country" according to Bulman et al. (2014).

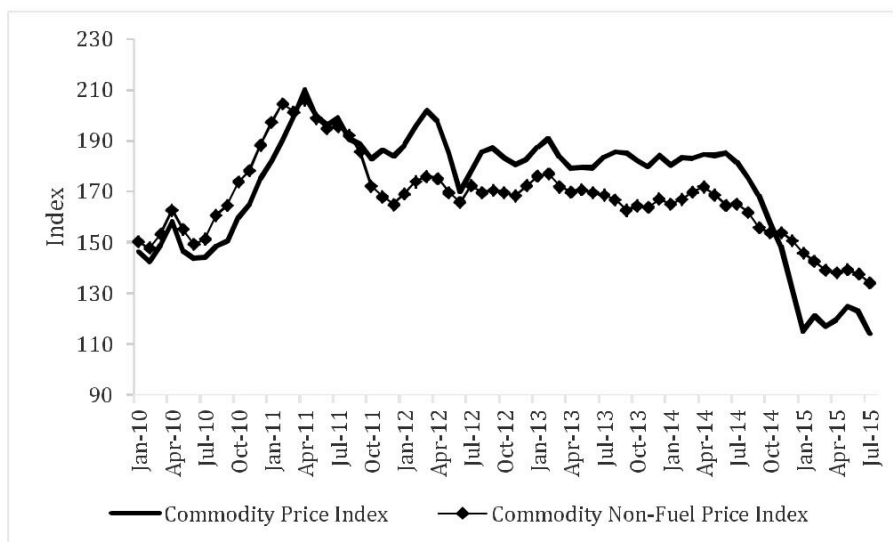
Compared with Malaysia and Thailand, the pace of evolution of Indonesia's relative in-come to the United States has been slow. Malaysia experienced a growth spurt in the mid 1970s and mid 1980s and the economy was not affected that much by the AFC. Thailand also demonstrated a strong pick-up in growth in the mid 1980s, and together with Malaysia had already moved into "high middle-income" status. China (not pic-tured in Figure 1) managed to double its relative income per capita to the United States in ten years by increasing its relative income 1 percentage point per year between 2003 and 2011.

Evolution of Indonesia's income relative to the United States seems to share the pace of the evolution of India's. India, however, doubled its per capita income relative to the United States in a shorter period (between 1985 and 2011) than Indonesia (between 1970 and 2011). Again, economic and political crises in 1997–98 in Indonesia significantly af-fected its growth trajectory, and its income relative to the United States in 2011 was only slightly above the level it had before those twin crises. The figure also shows that in 2006 Indonesia's relative income to the United States surpassed the Philippines.

3.1 Can Indonesia avoid the trap?

The challenges for Indonesia to successfully shift toward high growth and avoid the trap have become even greater since the global economic slowdown, the decline in commodity and energy prices, and the slowdown in China's economy. We describe some of these challenges in the following.

3.1.1 Macroeconomic stabilization and economic growth The strong growth that emerging economy countries, including Indonesia, enjoyed during 2009–12, due to a com-bination of increased domestic demand and the positive impacts from quantitative easing (QE) by the U.S. Federal Reserve System (Fed), began to dissipate when the Fed signaled an end to QE in June 2013. This "taper tantrum" led to asset re-pricing and triggered sig-nificant capital outflows from some countries, including Indonesia. The end of the QE period was also accompanied by a weakening in commodity and non-fuel energy prices (Figure 2). The combination of the tapering tantrum and weak commodity and non-oil energy prices coincided with fiscal and current account deficit problems in five countries

Figure 2. Commodity and non-fuel price index (2005 = 100)

Source: Index Mundi.

Table 1. The fragile five macroeconomic indicators (2014)

Country	Gross domestic product growth (%)	Current account/gross domestic product (%)	Budget balance/gross domestic product (%)	Inflation rate (%)
South Africa	1.50	-5.40	-3.80	6.38
Indonesia	5.02	-2.95	-2.25	6.39
Turkey	2.87	-5.73	-1.30	8.85
India	7.42	-1.40	-4.50	6.35
Brazil	0.14	-4.17	-0.63	6.33

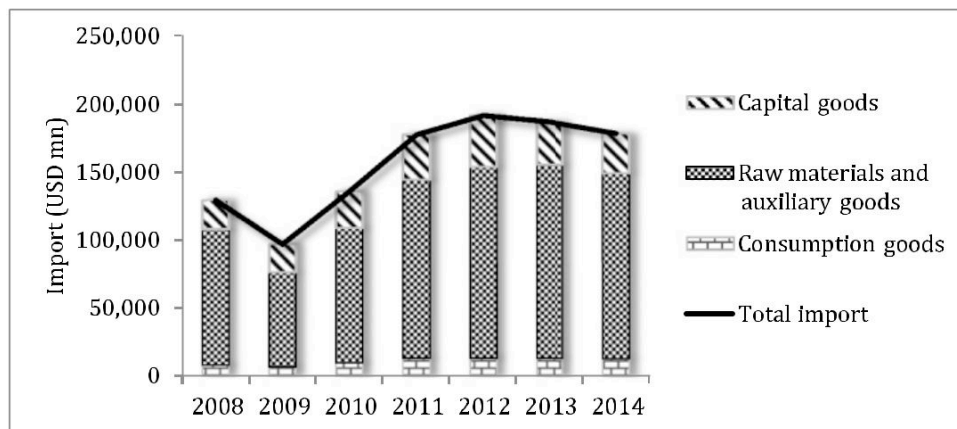
Source: CEIC, Trading Economics, World Bank, IMF.

(Indonesia, Brazil, India, South Africa, and Turkey) (Table 1), which investors began referring to as “the fragile five.”⁴

In the case of Indonesia, the tapering tantrum, which occurred at the same time as an increase in the current account deficit, led to concerns by portfolio investors regarding Indonesian macroeconomic stability. The primary concern was the persistent increase in the current account deficit over the last few years. The current account deficit in Indonesia was triggered by weakening commodity prices and energy prices (non-oil), which caused a drastic decrease in Indonesian exports, and the consistently sharp increase in imports

⁴ For example, Morgan Stanley in 2013. Available at: http://www.morganstanley.com/public/Tales_from_the_Emerging_World_Fragile_Five.pdf.

Figure 3. Composition of Indonesian imports (2008–14, US\$ million)



Source: CEIC.

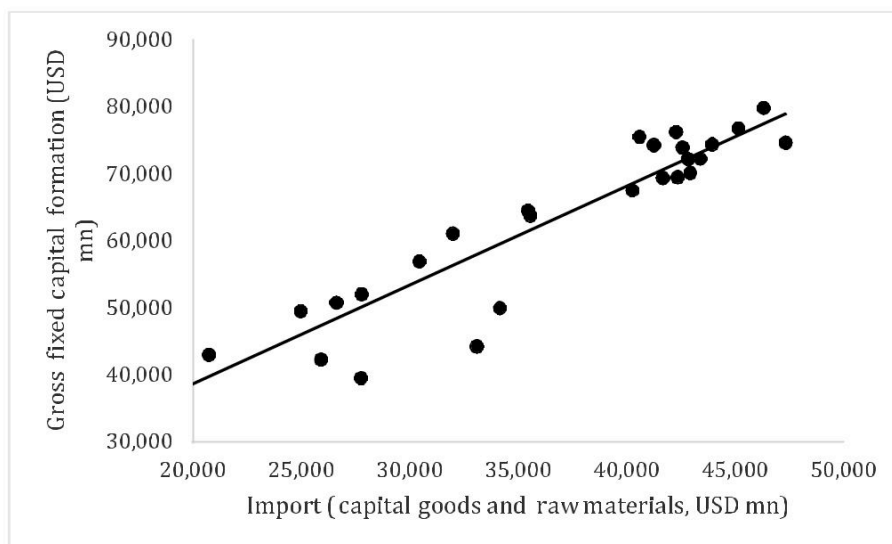
due to continuously rising demand pushed by investment growth. Figure 3 shows the composition of Indonesian imports, which are dominated by imported raw materials and capital goods.

Figure 4 reveals the strong correlation between investment (gross fixed capital formation) and the combination of imported raw materials and capital goods. The situation is worsened by the fact that foreign direct investment (FDI) entering Indonesia from 2004–14 tended to focus primarily on natural resources and the domestic market. Rapid growth in the domestic market led to more and more investment, and in turn increased imports. This is further exacerbated by the fact that this growth has not been accompanied by an increase in exports, but instead by constraints in supporting industries. Further, falling commodity prices have meant that investment in natural resources has not pushed the value of exports. As a result, the current account deficit has increased significantly.

The ideal solution to the current account deficit would be to improve productivity and increase efficiency, by fixing infrastructure, easing bureaucratic hurdles and pushing manufacturing exports. But this can only occur in the mid term to long term. Indonesia already faced a current account deficit of 4.4 percent of GDP in the second quarter of 2013. Because of this, a short-term policy was needed to rescue Indonesia from the tapering tantrum mini-crisis.

The Indonesian government and Bank Indonesia chose to prioritize macroeconomic stabilization over growth in the short term by slowing economic growth. The Indonesian

Figure 4. Correlation between gross fixed capital formation and imports (2008–14, quarterly, US\$ million)



Source: CEIC.

government has undertaken a tightening policy to reduce the fiscal deficit by slashing the fuel subsidy and raising fuel prices by an average of 44 percent in June 2013. Bank Indonesia increased interest rates by 175 basis points. The exchange rate was allowed to gradually weaken in accordance with the market. In November 2014, the new administration (Joko Widodo's administration) also undertook a bold reform by removing the fuel subsidy and raising the fuel price by around 30 percent.⁵ As a consequence of the tightening macroeconomic policy, the economic growth slowed to 5.8 percent in 2013, from its previous level of over 6 percent. Furthermore, parallel with the declining terms of trade due to the declining commodity prices and weakening domestic demand, economic growth continued to decelerate and reached 4.7 percent in the third quarter of 2015. Taking a comparative perspective, however, growth around 4.7 is still relatively strong compared with other resource-rich countries in 2015. With the slowdown of the economy, the current account deficit has been successfully managed and curbed from 4.4 percent of GDP in 2013:Q2 to 2.1 percent of GDP in 2015:Q2.

⁵ The most important question to ask is whether the government will consistently implement no gasoline fuel subsidy in the future. We noted that in the past six months the government capped the gasoline price, although it was supposed to be adjusted because of exchange-rate depreciation.

It is important to realize that this strategy of macroeconomic stabilization over growth is a short-term solution to prevent an economic crisis in Indonesia. In the long term, this solution will not work, as it is insufficient to push Indonesia into high gear. Because of this, in the mid term and long term, Indonesia must change its growth strategy so that the transition from the middle-income to high-income level can run smoothly and quickly.

A suitable growth strategy must focus on the supply side by increasing productivity and efficiency and focusing on improvements in good governance. Indonesia has to focus on boosting its infrastructure to improve logistics; diversifying products so that it is not dependent on one product (keeping in mind that a high dependence on natural resources is also risky); stressing the importance of innovation and human capital to increase efficiency; and, equally important, improving governance.

3.1.2 The role of logistics in an archipelago like Indonesia Indonesia is an island nation with an uneven spatial concentration of population and industrial clustering. Organizing supply chains for sourcing inputs or distributing products within the island of Java (which accounts for 80 percent of employment and 75 percent of output of Indonesia's manufacturing) would be less problematic than a supply chain covering different islands. Multiple handling of cargo due to different transport modes are likely to increase logistics costs compared with that in continental nations. Limited containerization and the unavailability of a standardized pallet in domestic cargo expose challenges for logistics handling. Similar to international trade, Indonesia's geographical landscape creates barriers that increase trade costs within Indonesia.

Poor logistics in Indonesia is affecting industrial transformation vis-à-vis other countries in the region. Indonesia ranked 53 out of 160 in 2014 in the World Bank logistics performance index (behind Malaysia, Thailand, and Vietnam), with infrastructure, international shipment, and tracing and tracking the most problematic areas affecting reliability and quality of logistics. This implies that compared with Vietnam, which has better logistics performance and closer proximity to China, Indonesia would have to leverage the size of its domestic market to attract manufacturing investment. Most manufacturing production in East Asia is part of a regional production network, and the cost of "service links" (Ando and Kimura 2005) to use Indonesia merely as the base for export operations can be high, given its logistics performance. Manufacturers in Indonesia, including FDI-affiliated firms, are becoming less export-oriented (Aswicahyono, Hill, and Narjoko 2010) and this is in contrast to manufacturers in Malaysia, Thailand, and Vietnam, who are increasingly taking part in regional production networks. Leveraging the domestic market to sustain manufacturing also puts deficit pressure on the trade balance because as demand for manufactured goods increases, imports of machinery and intermediate inputs will increase more than exports.

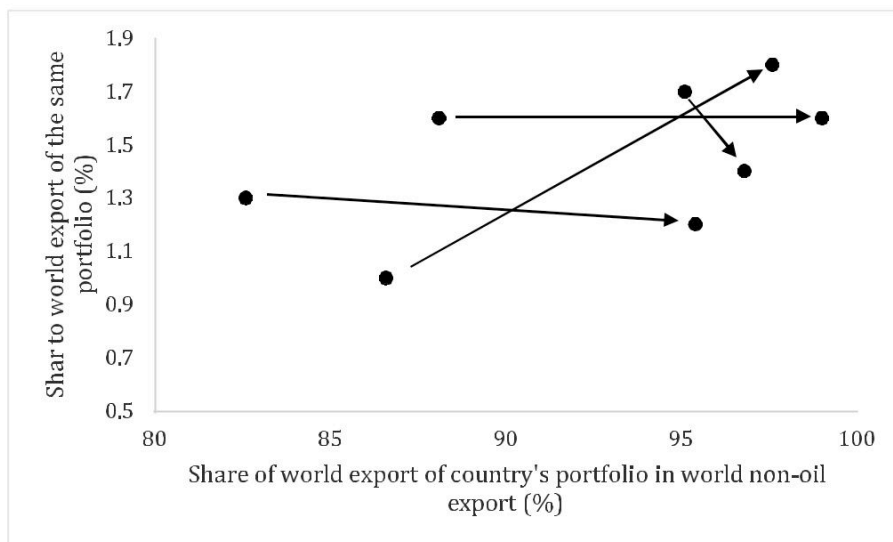
Improvement in hard and soft infrastructure in logistics can tip Indonesia's comparative advantage in manufacturing exports. Indeed, the rupiah depreciated by 32.9 percent between 2011 and 2014, more than the increase in nominal wages, and this makes labor costs in Indonesia attractive for manufacturers. Nevertheless, without reliable logistics, manufacturers will end up spending more on keeping inventory and managing the distribution of goods. An improvement in logistics is expected to improve efficiency and the reliability of supply chains for exports through regional production networks. It will also facilitate "fragmentation" of different manufacturing activities—for example, assembly facilities in Java where agglomeration produces externalities from a large market and a pool of labor whereas production of raw or semi-processed materials remains in areas where natural resources are abundant.

3.2 Lack of innovation: Exporting, but not so much innovating

Indonesia, like Malaysia and Thailand, used an export-oriented strategy in the early 1980s to accelerate industrialization and structural changes. It implemented relatively ambitious reforms at that time to simplify trade procedures and reduced investment permits, encouraged FDI, and liberalized the banking sector. The unilateral reforms in the mid 1980s yielded results predicted by the standard Heckscher-Ohlin model: thriving labor-intensive export sectors (garment and footwear) contributed significantly to export-led industrialization (Hill 1996). It also allowed Indonesia's economy to dramatically reduce dependence on oil exports (Basri and Rahardja 2011). The progress in export performance boosted Indonesia's confidence in participating in regional economic integration, such as through Asia-Pacific Economic Cooperation and later on the establishment of the ASEAN Economic Community, with the expectation that those commitments can further drive domestic reforms (Pangestu, Raharjda, and Ing 2015).

Figure 5 plots the position of Indonesia's share of non-oil export portfolio in the global market and the relative size of world exports of that portfolio to the world export of non-oil products. Movement toward the lower right suggests that a country's export portfolio is losing market share while the world export of the same portfolio is increasingly important in the global export market (that country becomes a "smaller fish in a bigger pond"). Movement towards the upper right suggests that a country's export portfolio is gaining market share while world exports of that portfolio is also increasing (the country becomes a "bigger fish in a bigger pond").

After the twin crises, Indonesia became less competitive in non-commodity and non-natural resources exports (Basri and Rahardja 2011). Share of Indonesia's non-oil export portfolio in the global market (for the same portfolio) only slightly declined from 1.3 per-cent to 1.2 percent in 1992 and 2012, respectively, and similarly to Thailand (Figure 5). Malaysia is showing a decline in its share of non-oil exports, mainly because Malaysia is increasing specialization towards manufacturing and services.

Figure 5. Indonesia's position in global non-oil export market

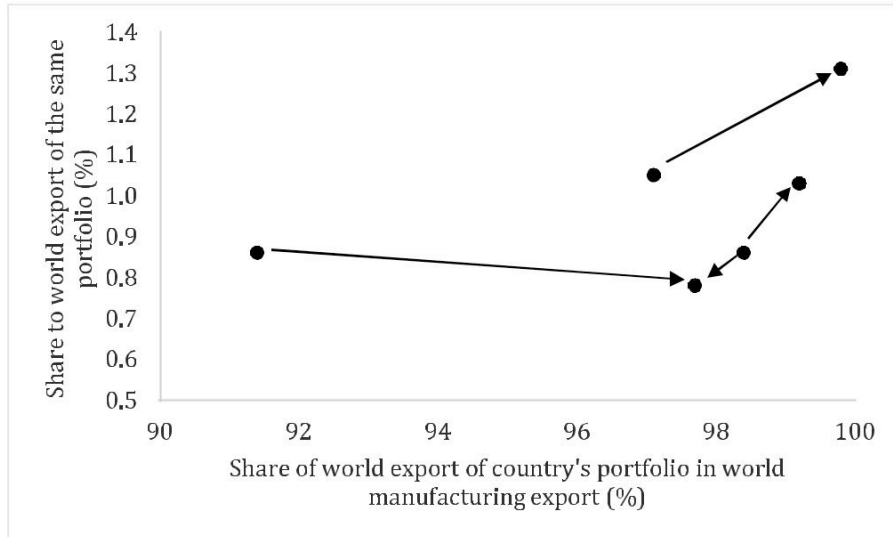
Source: Authors' calculation based on UN-Comtrade (SITC rev. 2).

But a boom in commodity prices have led to an increased concentration of Indonesia's exports of commodities and raw materials (mining and minerals, palm oil). A similar plot of non-food and resource-based manufacturing (STIC classification groups 5–8 except products under heading 68)⁶ are presented in Figure 6. It suggests a declining share in Indonesia's export portfolio of manufacturing products in the world market (vertical axis) while the portfolio has become increasingly important in global export of manufacturing (horizontal axis). The situation is in contrast to Malaysia and Thailand. Both countries have increased the share of their portfolio of manufacturing exports in products that are increasingly important in global manufacturing trade. Indonesia's lagging performance in manufacturing exports is likely to reflect supply-side competitiveness problems that undermine its manufacturing industries.

Figure 7 presents the evolution of an "economic complexity" index for Indonesia and selected comparators. The index takes into account diversity of products and ubiquity (state of being present everywhere) to come up with a measure of capability to produce complex products that require more sophisticated procedures, management, and logistics (Hausmann et al. 2011). We believe such capability matters because it reflects stock of knowledge in the economy and an ability to channel and tap that knowledge into

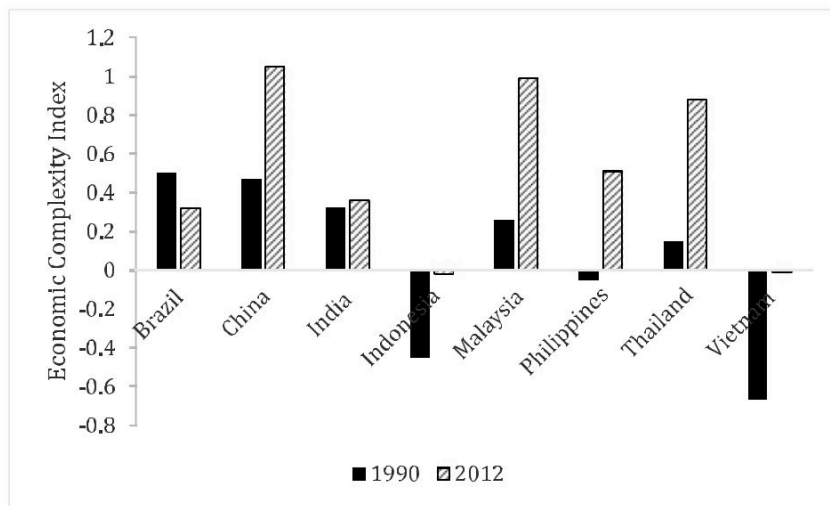
⁶ We take out resource-based manufacturing such as dairy products, vegetable oil, beverages, and processed minerals.

Figure 6. Indonesia's position in non-resource-based manufacturing export market



Source: Authors' calculation based UN-Comtrade (SITC rev. 2).

Figure 7. Economic complexity index: Indonesia not yet able to manage complex tasks



Source: Atlas of Economic Complexity (Hausmann et al. 2011).

exportable products.⁷ Capability also matters because global competition and the learning process to enter the export market is also associated with productivity gains (Melitz 2003).

Not only is Indonesia experiencing a declining share in the world's manufacturing export, it is still lagging in the capability to produce internationally competitive products that require more complex tasks (e.g., R&D, financing arrangements, trade in parts and components, customer and distribution services). Figure 7 shows that between 1990 and 2012, Indonesia was still behind most middle-income countries in terms of capability to produce complex products. Vietnam in 1990 was behind Indonesia, but by 2012 managed to catch up capability in producing goods with complex tasks.

This situation might shed some light on the broken transformation of Indonesia's industrial development after the twin crises. In the 1980s and mid 1990s Indonesia's footwear and garment industries were competitive in the world export market and contributed significantly to job creation. But tasks in these industries were relatively less complex and other developing countries (such as China, Dominican Republic, Mauritius, Thailand) were also competing with Indonesia in those industries. Indonesia's bid to promote more sophisticated manufacturing activities in the 1990s failed after the currency crises and the collapse of its banking sector in 1998 (Aswicahyono, Hill, and Narjoko 2010). Unlike Thailand, Indonesia's effort to revive its manufacturing activities faced multiple challenges such as labor issues, lack of infrastructure, and a boom in commodity prices, which depressed relative returns of investing in non-commodity-related sectors (World Bank 2012). Since the mid 2000s, coal, mining ores, and crude palm oil dominated Indonesia's exports to drive FDI and investment in portfolio. Massive capital flows caused the real exchange rate to appreciate by 15.7 percent from 2001 to 2007 (yearly average), increased wages and prices of non-tradables (property, service), and eroded competitiveness in the non-resources tradable sector.

Should Indonesia try to do another "leapfrog" in developing advanced manufacturing industries? History teaches an important lesson. Indonesia embarked in state-sponsored aircraft manufacturing through PT Nurtanio in the 1980s. This venture, which was to market locally designed and produced aircraft, was not commercially successful. Interestingly, the firm, which is now PT Dirgantara Indonesia, has shown considerable success in manufacturing aircraft parts and components while assembling commercial and military aircrafts. With accumulation of stock of knowledge in aeronautics and aircraft manufacturing, Indonesia unintentionally shifted its strategy from solely manufacturing aircraft towards joining the global production network of aircraft parts. With experiences and

⁷ We note, however, that this measure may not capture the fact that manufacturing products are currently produced through a complex trade of parts of components (production network) involving many countries.

reputation, it is likely a matter of time before Indonesia can finally succeed in producing and marketing its own designed commercial aircraft.

Instead of leapfrogging, which carries a huge risk of failure, we believe that Indonesia should accelerate the build-up in stock of knowledge and explore ways to commercially embed knowledge in production of goods and services that would yield desirable productivity gains. Growth from labor accumulation will diminish because of rising wages and declining marginal returns from physical investments. Improving labor productivity is required to increase the impact of labor and capital accumulation on growth. The scope for Indonesia to benefit from imitating foreign technology will be limited because its industries need to introduce innovation for them to become important players in a competitive and rapidly changing market. Therefore, it is also important to encourage and facilitate homegrown innovation in production process and product design.

3.3 Public infrastructure and institutions

Without underscoring the importance of sociopolitical background, we present several indicators that may have contributed to the overall low result of Indonesia's capability in organizing production of outputs that require complex tasks compared with other middle-income countries in the region.

Compared with most middle-income countries, Indonesia is lagging behind in building up its stock of human capital. The importance of human capital in driving productivity that matters for sustaining long-term growth is well documented. We complement findings by Woo and Hong (2010) and present results from the Program of International Students Assessment, which surveyed high school students aged 15 and 16 years in math and science (OECD 2012). On average, Indonesian students lack understanding of math and science compared with their Malaysian and Thai counterparts. Similar to Woo and Hong (2010), improving the overall health of the population should also be part of accumulating the stock of human capital.

Two other issues are important for the human capital accumulation strategy to be effective in growth. Investment in human capital is an endogenous individual decision that is affected by the expected return from education versus other activities. Connectivity infrastructure can increase returns of investment in human capital because it provides individuals possibilities to connect with economic opportunities in the nearest growth poles.⁸ Poor connectivity infrastructure limits growth, depressing investments and limiting opportunities, which in turn can have an impact on individual decisions to invest in

⁸ Skoufias and Olivieri (2013) found that fiscal transfers to improve opportunities for population to access growth across districts is much more welfare-enhancing than transfer focusing on equalizing welfare across districts.

Table 2. Several competitiveness indicators

	Brazil	China	Indonesia Vietnam	India	Malaysia	Philippines	Thailand	
Characteristics (2014)								
Population (person mn)	202	1364	1267	253	30	100	67	91
GDP per capita (in PPP, US\$ thousand)	6.0	3.9	1.3	1.9	7.3	1.6	3.5	1.1
Density (person/sq km)	24.2	145.3	426.3	139.6	91.9	335.7	131.6	292.6
Real exchange rate movement (%)								
2000–2003	30.4	24.6	-1.7	31.7	2.5	20.4	20.1	36.1
2003–2013	68.3	31.4	-0.3	6.4	2.5	39.2	25	50.9
2004–2013	61.1	35.5	-1.6	11.4	7.3	45.9	25.6	53.7
PISA test score (2012)								
Math	391	613	351	375	421		427	511
Science	406	580	348	382	420		438	528
Broadband penetration								
Fixed (wired)-broadband subscriptions per 100 inhabitants (2014)	11.5	14.5	1.2	1.2	10.1	23.2	8.2	6.5
Logistics Performance Index (2014)								
Percentage of shipment met quality	2.94	3.53	3.08	3.08	3.59	3	3.43	3.15
	82	76	67	70	97	71	83	76
Government effectiveness score	-0.08	-0.03	-0.19	-0.24	1.1	0.06	0.21	-0.3

Source: World Bank, OECD, CEIC, Bank of International Settlements, International Telecommunication Union.

Note: PPP: purchasing power parity.

human capital. Agenor and Canuto (2012) also argue about the need to ensure functioning of input markets in incentivizing knowledge accumulation. When labor markets function well, firms have more flexibility to take chances hiring workers and explore their latent capabilities and knowledge.

Table 2 presents indicators on the logistics performance index. It shows that Indonesia's overall logistics performance index is lower than Malaysia and Thailand. It also shows the low reliability of shipment in domestic logistics in Indonesia, which can have an impact on the competitiveness of manufacturing operations, product distribution, and sourcing of inputs in Indonesia. Three out of ten domestic freight shipments failed to meet quality (broken or lost). Penetration of information and communication technology connectivity in Indonesia is also lower than in Vietnam. Without information and communication technology, it would be difficult to envisage a substantial presence of modern logistics operations, such as tracking, tracing, and interchange of freight manifests.

It is also important to note that successful public intervention requires effective institutions. Indonesia should continue establishing public institutions that respond to Indonesia's development interest. The governance indicator for Indonesia suggests that effectiveness of government institutions in Indonesia are behind other middle-income countries in the region with the exception of Vietnam. Through an independent Anti-Corruption Commission (*Komisi Anti Korupsi* or KPK) Indonesia has made progress in institutionalizing anti-graft and corruption practices. Reforms in the Ministry of Finance should be taken as an example of reforms for other government agencies. Nevertheless, the task and challenges are huge and more needs to be done for government agencies to be able to do their work effectively with minimal interference. This is certainly a big

challenge that cannot be addressed in a short period, and it requires strong political support for reforms.

3.4 Economic reform and political reality⁹

The main challenge for Indonesia is how to increase productivity. Efforts to improve productivity can be achieved several ways, including improving human capital skills through technology spillover from FDI (Blostrom and Sjöholm 1999), improving institutions by pursuing a better governance system, and increasing productivity through industrialization (Rodrik 2015). Nonetheless, the fact is that resistance to FDI remains high—as seen in the various obstacles to ownership. Increases in productivity can also be achieved through asserting Indonesia in the Asian and global production network. This requires an open trade regime. Unfortunately, trade obstacles and protectionist policies continue to hold sway in Indonesia's trade policy (Patunru and Rahardja 2015). Given this, the question is thus whether economic reform in Indonesia aimed at increasing productivity through a more open economic policy can happen.

Interestingly, in many cases, economic policy implementation does not follow economic rationality. Why is it that in reality the policies taken differ from rational solutions? Why is it that planned reforms cannot be realized or implemented? To answer these questions, it is necessary to understand the political reality of economic reform.

It is important to understand the existing political system in Indonesia. Currently, the president and parliament members are directly elected. Indonesia has a multi-party presidential system. In a presidential system, executive power is in the hands of the president, but political parties dominate both houses, and the president's party has thus far not enjoyed a majority (Basri and Hill 2011). Therefore, although a presidential system is in place, the power of the president is limited because the president must be ready to compromise to get the support of various political parties in passing laws through parliament. Consequently, the role of political parties is increasingly dominant. For example, to garner strong political support in parliament, Susilo Bambang Yudhoyono (SBY) during his 2004–14 term as President was forced to form a “rainbow coalition” in his cabinet. President SBY realistically understood that his cabinet could not consist solely of meritocratic technocrats as it was necessary to consider political equality. Given this political background, any success from economic reform will depend highly on political support from these actors.

Thus, it is worth examining the taxonomy of economic reform in Indonesia. Although economic reform can be explained through a simple, short-run, profit-seeking political economy model, the reality is far more complex. It is necessary to understand the

⁹ This section is heavily drawn from Basri and Patunru (2012).

Table 3. Taxonomy of economic reform in Indonesia

Actors	Stance on economic reform
Technocrats	Pro-reform, but limited in number and do not have political back-up
Politicians	Will push reform only so long as it does not jeopardize their political support (tend to support populist policies)
Bureaucrats	Tend to preserve status quo
Media	Strong political interests
Civil society	Support reform, but do not tend to support “market approach–based reform” for ideological reasons

Source: Basri and Patunru (2012).

distributive consequences of reform, as the benefits or losses experienced by various actors will determine whether they support or reject the reform process (Rodrik 1998).

Although there is no well-defined categorization, the important actors that influence economic reform in Indonesia are summarized in the taxonomy in Table 3. Here we define reform as minimizing market distortion, opening the trade regime, investing to increase productivity, as well as allowing more competition and more roles for market economy.

In this context, the “most reliable” proponents of economic reform in Indonesia are technocrats. Although it is true that the government’s economic ministerial posts are held by technocrats, the number of technocrats in the cabinet is quite limited and they do not have a strong base of political support.¹⁰

What about the role of politicians, bureaucrats, the media, and civil society in pushing for economic reform? Politicians tend to maximize their political interests in gaining support from voters. As a result, their support for economic reform is often ambiguous. They support economic reform if it strengthens their political position, for example, support for allocating more money on infrastructure spending. On the other hand, they tend to reject unpopular economic reform measures including opening up the trade and investment regime and reducing the fuel subsidy in the government budget.

How about the bureaucrats? They tend to maintain the status quo, as they know that political leaders and ministers come and go. They adopt the policies set by political leaders. Although it is true that there are some groups of bureaucrats who want to push economic reform further, this group is limited. The majority maintains the status quo and is concerned that economic reform will ultimately cost them by lowering their power and reducing the potential to earn “extra income.”

¹⁰ For example, the Finance Minister from 2006–10, Sri Mulyani, was forced to step down because of political conflicts (*Wall Street Journal*, “Where the power lies in Indonesia,” 17 May 2010. Available at <http://www.wsj.com/articles/SB10001424052748703745904575247840785876832>).

Media and civil society in Indonesia are widely divided on the issue of economic reform. There is a tendency to reject reform because of the basic ideology that views granting a wider role to the markets or trade liberalization and investment as part of the global capitalism scenario. Also, one cannot ignore the political interests of media owners, who themselves may be hurt by trade reform through their business networks.

Still, it should be noted that in the cases of eradicating corruption and improving institutions, the media, and particularly civil society, are important proponents of reform. Implementing governance reforms and combating corruption, however, may be more challenging for Indonesia. Improving the quality and transparency of government bureaucracy and political process in the Parliament on subsidies and budgeting of government projects is crucial.¹¹ The KPK was quite effective in bringing high profile cases of corruption scandals of senior officials and parliament members. But efforts to institutionalize this process are now subject to “high politics,” which is often difficult to manage.

One of the dilemmas of economic reform is being able to endure present sacrifices to reap benefits later. Thus, there is a tendency for the various actors described earlier to avoid economic reform in the short term. Given this background, it is clear that economic reform in Indonesia—as elsewhere—is not easy. The influence and number of technocrats is severely limited. In general, technocrats play an important policy role only when an economic crisis strikes. At these times, politicians provide technocrats with the room and support they need to fix the situation. But during good economic times, politicians are reluctant to sacrifice their political capital by adopting unpopular policies in the short term, even though they are vital in the long term.

Furthermore, the decline of competitiveness due to supply-side constraints such as logistics, quality of human capital, and current external challenges, as well as the trend of the economic slowdown will make the process of further trade liberalization more difficult.

4. The way forward

The discussion here shows that Indonesia must do several things to speed up its transition to a high-income country. In terms of infrastructure, Indonesia has already taken several steps, such as improved efforts to secure land clearing, the allocation of fuel subsidies to infrastructure development, and improvements in the tendering process. It is premature to make any conclusions at this time, as the success of these steps will depend

¹¹ For example, the budget saga in the Jakarta province in which the governor accuses local parliament members of illegally inserting dubious projects in the local government budget <http://www.thejakartapost.com/news/2015/03/12/2015-city-budget-saga-escalates-legal-war-looms.html>.

on their implementation. It must be acknowledged that improvements to Indonesia's infrastructure have been relatively slow. In fact, there is a lot of interest in infrastructure development and open access to financing, but the biggest obstacles remain in land clearing and the long tendering process. After nearly three years, the law to clear land will come into full effect in 2015, sparking hope that infrastructure improvements can be realized.

In terms of human capital, Indonesia will require a relatively long time frame to transform itself into a knowledge-based economy. Woo and Hong (2010) argue that to move forward Indonesia must emphasize the role of a science-based economy. Indonesia has tried to leapfrog ahead, but has failed in the past. This is because what Indonesia needs is not to jump into the deep end of high technology by trying to build airplanes. Rather, Indonesia needs to develop agricultural technology such as new seed varieties (agro biotechnology), new approaches in water and environmental management as well as mechanization, improvements in livestock products, and infrastructure, which all support agriculture. This will also require a long period to fully develop.

In terms of the diversification of exports and innovation, a study by Basri and Rahardja (2011) shows that Indonesian's export concentration index (Herfindahl index) has increased since 2003. Indonesian exports are increasingly concentrated in primary exports. This has been due to, among other things, the real appreciation in the rupiah's exchange rate. To push export diversification, Indonesia must maintain a competitive exchange rate by not intervening too much in the forex market.

In terms of innovation, Indonesia still lags far behind in product diversification and innovation. Basri and Rahardja (2011) show that the main drivers of exports are old products and markets. Their analysis of export growth from 1990–2008 demonstrates that the majority of increases in Indonesian exports over the last 18 years has been driven by the same products sold to the same markets. New discovery accounts for less than 5 percent—and the contribution of new products to new markets in export growth is minimal.

In the end, all of the above must be supported by economic reform. Although it is true that given the complexity of its political economy problems, Indonesia has made significant progress in recent years, we conclude that the process of transition toward high-income growth will not be easy for Indonesia, and will depend on the successful implementation of economic reform. Additionally, given the dominance of political interests, it is difficult to expect bold reform and a clear position on globalization. But it would be wrong to conclude that Indonesia is incapable of reform. As stated by Basri and Hill (2011), there are at least two factors preventing "back-tracking" in economic reform. First, Indonesia has signed international trade agreements, making it difficult to

retreat to a more protectionist stance. Second, competitive liberalization in Asia will force Indonesia to engage in trade agreements. If Indonesia is left behind, it will lose as a result of trade diversion.

References

- ADB. 2011. *Realizing the Asian Century*. Manila: Asian Development Bank.
- Agenor, Pierre-Richard, and Otaviano Canuto. 2012. Middle-Income Growth Traps. World Bank Policy Research Working Paper No. 6210. Washington, DC: The World Bank.
- Ando, Mitsuyo, and Fukunari, Kimura. 2005. Two-Dimensional Fragmentation in East Asia: Conceptual Framework and Empirics. *International Review of Economics & Finance*, 14(3):317–348.
- Aswicahyono, Haryo, Hal Hill, and Dionisius Narjoko. 2010. Industrialization After a Deep Economic Crisis: Indonesia. *Journal of Development Studies* 46(6):1084–1108.
- Basri, M. Chatib, and Hal Hill. 2011. Indonesia Growth Dynamics. *Asian Economic Policy Review* 6(1):90–107.
- Basri, M. Chatib, and Arianto Patunru. 2012. How to Keep Trade Policy Open. *Bulletin of Indonesian Economic Studies* 48(2):191–208.
- Basri, M. Chatib, and Sjamsu Rahardja. 2010. Indonesia Beyond the Recovery: Growth Strategy for Archipelago Country. In *Growth and Sustainability in Brazil, China, India, Indonesia and South Africa*, edited by Luis de Mello. Paris: OECD. Available at <http://www.oecd.org/indonesia/growthandsustainabilityinbrazilchinaindiaindonesiaandsouthafrica.htm>
- Basri, M. Chatib, and Sjamsu Rahardja. 2011. Should Indonesia Say Good Bye to Its Strategy to Facilitate Exports? In: *Managing Openness: Trade and Outward Growth Strategy after Crisis*, edited by Mona Haddad and Ben Sheperd, pp. 217–231. Washington, DC: World Bank.
- Blomstrom, Magnus, and Fredrik Sjöholm, 1999. Technology Transfer and Spillovers: Does Local Participation with Multinationals Matter? *European Economic Review* 43(4–6):915–923.
- Bulman, David, Maya Eden, and Ha Nguyen. 2014. Transitioning from Low-Income Growth to High-Income Growth: Is There a Middle Income Trap? World Bank Policy Research Working Paper No. 7104. Washington, DC: World Bank.
- Eichengreen, Barry, Donghyun Park, and Kwanho Shin. 2012. When Fast-Growing Economies Slow Down: International Evidence and Implications for China. *Asian Economic Papers* 11(1):42–87.
- Felipe, J. 2012. Tracking the Middle-Income Trap: What is It, Who is in It, and Why? Part 1. ADB Economics Working Paper Series No. 306. Manila: ADB.
- Gill, Indermit, and Homi Kharas. 2007. *East Asian Renaissance: Ideas for Economic Growth*. Washington, DC: World Bank.
- Hausmann, Ricardo, Cesar A. Hidalgo, Sebastian Bustos, Michele Coscia, Sarah Chung, Juan Jimenez, Alexander Simoes, and Muhammed A. Yildirim. 2011. The Atlas of Economic Complexity: Mapping Paths To Prosperity. Harvard Center for International Development and the Macroconnections Group MIT Media Lab. Available at: <http://www.hks.harvard.edu/centers/cid/publications/books/atlas>
- Hill, Hal. 1996. *The Indonesian Economy Since 1966*. New York: Cambridge University Press.

Melitz, Marc J. 2003. The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity. *Econometrica* 71(6):1695–1725.

OECD. 2012. Pisa 2012 Results. Available at <http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm>

Pangestu, Mari, Sjamsu Rahardja, and Lili Y. Ing. 2015. Fifty Years of Trade Policy. *Indonesia: New World Trade, Old Treatment Bulletin of Indonesian Economic Studies* 51(2):231–261.

Patunru, Arianto, and Sjamsu Rahardja. 2015. Trade Protectionism in Indonesia: Bad Times and Bad Policy. Available at www.lowyinstitute.org/publications/trade-protectionism-indonesia-bad-times-and-bad-policy

Patunru, Arianto, and Tarsidin. 2012. Recent Indonesian Economic Development and the Urgent Need to Remove Key Growth Obstacles. *Asian Economic Papers* 11(3):57–77.

Rodrik, Dani. 1998. The Rush of Free Trade in the Developing World: Why So Late? Why Now? Will It Last? In: *The Political Economy of Reform*, edited by F. Struzeneger and M. Tomassi, pp. 207–239. Cambridge, MA: The MIT Press.

Rodrik, Dani. 2015. Premature Deindustrialization. NBER Working Paper No. 20935. Cambridge, MA: National Bureau of Economic Research.

Skoufias, Emmanuel, and Sergio Olivieri. 2013. Sources of Spatial Welfare Disparities in Indonesia: Household Endowments or Returns? *Journal of Asian Economics* 29(C):62–79.

Wilson, D., and R. Purushotaman. 2003. Dreaming with BRICs: The Path to 2050. Global Economics Paper No 99. New York: Goldman Sachs.

Woo, Wing Thye, and Chang Hong. 2010. Indonesia's Economic Performance in Comparative Perspective and a New Policy Framework for 2049. *Bulletin of Indonesian Economic Studies* 46(1):33–64.

World Bank. 2012. How Macroeconomic Environment and Investment Climate Have Affected the Manufacturing Sector. Policy Note 3. Available at <http://siteresources.worldbank.org/EASTASIAPACIFICEXT/Resources/226300-1349835451376/Full-PN3-Manufacturing.pdf>

World Bank. 2014. Development Policy Review on Indonesia: Avoiding the Trap. Available at www.worldbank.org/content/dam/Worldbank/document/EAP/Indonesia/Indonesia-development-policy-review-2014-english.pdf

