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INDUSTRIAL POLICY IN INDONESIA: A GLOBAL VALUE CHAIN PERSPECTIVE

Julia Tijaja and Mohammad Faisal

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Julia Tijaja and Mohammad Faisal

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ABSTRACT

The gains of a country from participating in global value chains (GVCs) will depend on the productive activities taking place in its jurisdiction and their linkages to the domestic economy. Lead firms' decision on where to locate and how to coordinate production activities is influenced, among others, by industrial policies. On the one side, policy space provides governments with some leverage in guiding economic activities and influencing development outcomes. On the other hand, policy risks have the potential to adversely affect the outcomes. This study focuses on industrial policies in Indonesia, using the mineral sector as a mini case study. The case study assesses the Indonesian Government's recent effort to boost domestic value addition in the sector. This paper argues that the effectiveness of government policies in maximizing the gains from GVC participation depends not only on policy design, but also on policy consistency and coherence, effective implementation, and coordination.

Keywords: Industrial policy, Indonesia, global value chain, upgrading.

JEL Classification: F63, F68, L52, L76, O25,

I. INTRODUCTION

International production sharing means greater opportunity for country and firm participation in global value chains (GVCs). At the level of individual economic actors, the benefits and costs of such participation will depend on where and how they are involved in the GVC; rarely is this a free choice. The decisions by the lead firms on where to locate and how to coordinate various production activities are often key influencing factors, with implications for the development and diversification outcomes in the host countries.

Returns to different production activities are not homogeneous, and are reduced over time by new entrants and intensified competition. The speed with which this occurs is affected by a number of factors, both external and internal to value chains. Informed decisions by lead firms would take account of these factors. Among the external factors is policy, including industrial policy. Industrial policy is introduced by governments to guide resource allocation to specific industries or sectors, or activities.

The gains from GVC participation for each economy will depend on the productive activities taking place in its jurisdiction and their linkages to the domestic economy. Governments' concerns go beyond GVC participation and its immediate returns, but also include broader and longer term public policy objectives, such as the number and quality of jobs created, the non-economic impact of industrial activities, the dynamic scope for upgrading, skills and knowledge development, and more generally, contributions to economic diversification and resilience. Policy space provides governments with some leverage in influencing the outcomes, although policy risks have the potential to adversely affect them.

Industrial policy, or more precisely specific industrial policy, refers to non-neutral government intervention that seeks to alter market signals. The objective is to steer investment and production activities to industries or sectors that are deemed more beneficial to an economy in the longer term. Risks are present along the policy process and as early as the sector identification process. The costs of mistakes can be disproportionately high in resource-scarce developing economies. The risk of government failures has been commonly cited by the opponents to industrial policy, while its proponents argue that it is not necessarily higher than that of market failures. A second type of industrial policy refers to horizontal, broad-based policy that is relevant to industrial development, such as infrastructure, energy, business regulations, and connectivity. While this type of policy is more universally accepted, it may not be sufficient on its own to overcome market failures and spur industrial development.

From a GVC perspective, industrial policy can be targeted at specific activities in a particular sector or industry that are deemed to deliver greater benefits to the economy. Recognition of the organization and the working of GVCs mean that the aim should be to move toward international competitiveness rather than reckless domestic expansion behind a high wall of protection. This requires balancing the objective of maximizing domestic linkages with the pursuit of achieving international competitiveness, including through the use of competitive imported intermediates. Government capabilities are therefore imperative along the policy process, from design and administration to monitoring and evaluation.

The study focuses on industrial policies in Indonesia. It starts by providing a descriptive overview of the economic structure in Indonesia. It continues with a historical overview and the state of play of the country's industrial policy. The paper then focuses on policy relating to a priority sector.

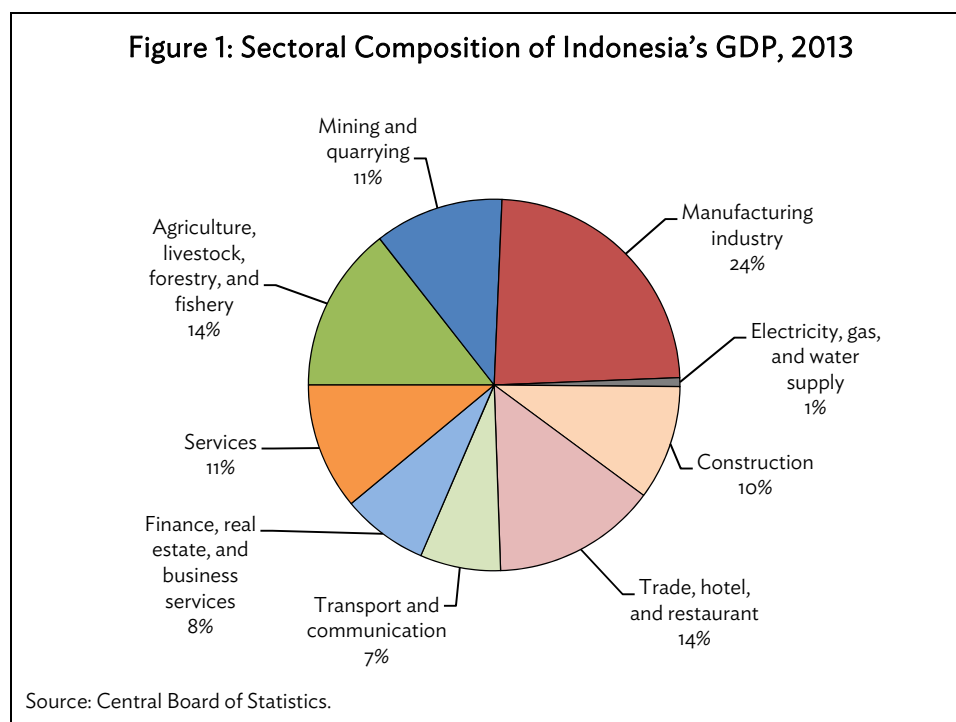
Specifically, the paper looks at the mineral sector as a mini case study. The choice of sector is made in light of the explicit aspiration of the Government of Indonesia (GOI) to boost domestic value added by encouraging downstreaming in the sector. It is also inspired by the shared aspiration of many other resource-rich economies to do the same. The study hopes to shed some light on the lessons and complexities that arise from the pursuit of this objective.

II. INDONESIA AND GLOBAL VALUE CHAINS

A. Economic Profile

Indonesia is one of the larger emerging market economies in the world and a member of the G-20 major economies. With gross domestic product (GDP) amounting to \$873 billion in 2013,¹ it becomes the largest economy in Southeast Asia, contributing nearly 40.0% to the region's GDP, and ranks 16th in the world. Indonesia has also become one of the fastest growing economies in the last decade and has demonstrated resilience through the global economic crisis in 2008. In 2013, Indonesia's GDP was growing at 5.8% after experiencing a higher growth (above 6.0%) in the previous years.

More than half of Indonesia's GDP was contributed by the services sector (Figure 1), while contributions of the manufacturing industry, agriculture and mining are 24.0%, 14.0% and 11.0%, respectively. Services have also become the fastest growing sector in the last few years, while manufacturing, agriculture, and particularly mining have been growing slower than GDP (Table 1). In 2013, for example, the growth of the manufacturing sector was merely 5.6%, lower than the total GDP growth of 5.8%. Given the slower growth of the sector compared to GDP, Indonesia has experienced de-industrialization in recent years.



¹ Central Board of Statistics, 2014

Table 1: Sectoral Growth, 2011–2013

Sectors	2011	2012	2013
Agriculture, livestock, forestry and fishery	3.4	4.0	3.5
Mining and quarrying	1.7	1.5	1.3
Manufacturing industry	6.1	5.7	5.6
Electricity, gas, and water supply	4.8	6.4	5.6
Construction	6.6	7.5	6.6
Trade, hotel, and restaurant	9.2	8.1	5.9
Transport and communication	10.7	10.0	10.2
Finance, real estate, and business services	6.8	7.1	7.6
Services	6.8	5.2	5.5
GDP	6.5	6.2	5.8

Source: Central Board of Statistics.

B. Trade Profile

Private consumption was the biggest contributor to GDP, accounting for 55.0% in 2013 (Figure 2). The role of trade has also been growing in significance, with export and import accounting for around 24.0% and 26.0% of GDP, respectively. Japan has traditionally been Indonesia's major trading partner for decades, but the role of the People's Republic of China (PRC) has become increasingly important in recent years. In 2013, Japan was still Indonesia's export market accounting for 14.4% of the total, followed by the PRC, 12.3% and the European Union (EU), 9.1%. As for imports, Indonesia's largest partner was the PRC with 16.8% share, followed by Singapore, 15.3% and Japan, 10.8% (Table 2).

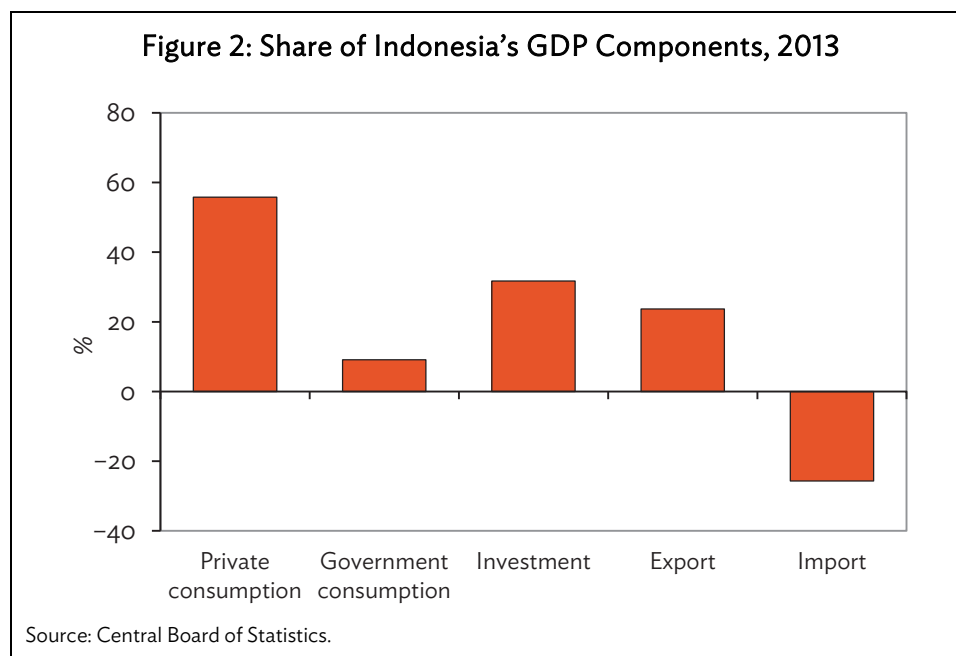


Table 2: Top Export and Import Partners, 2013

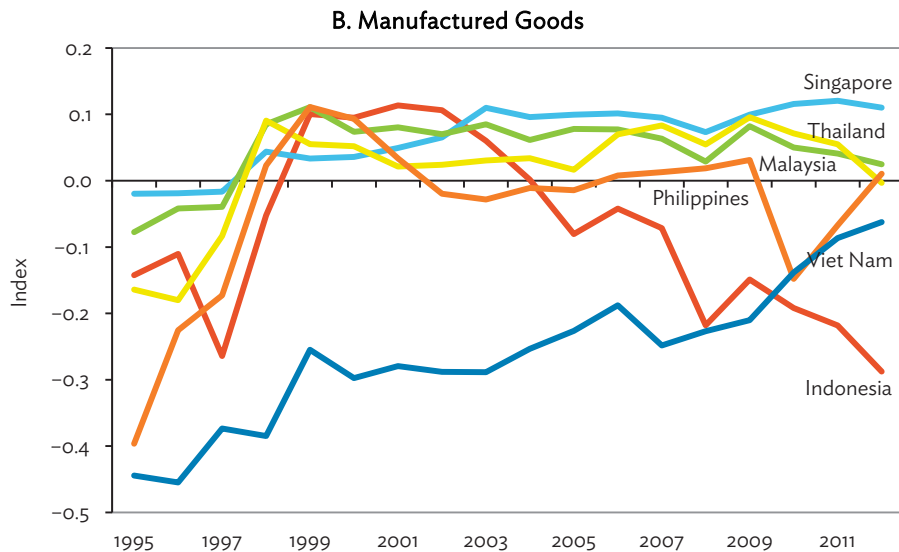
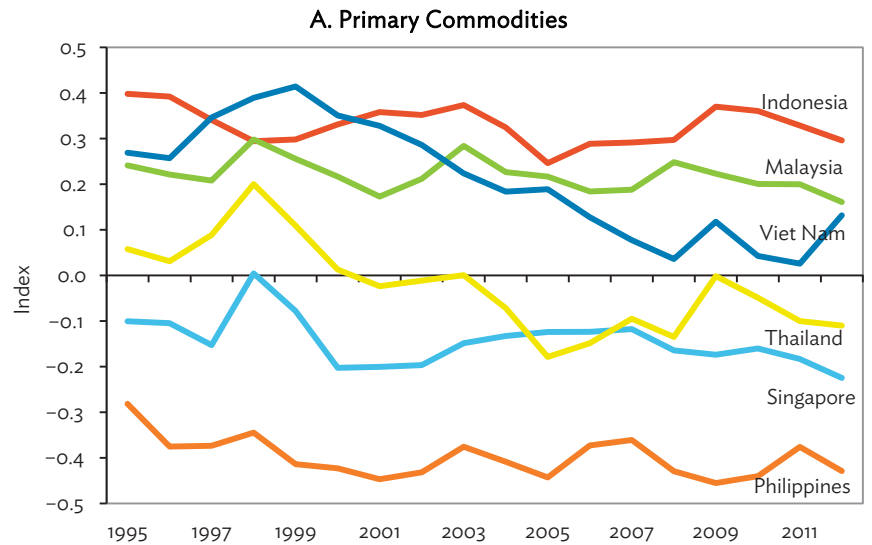
No.	Export			Import		
	Economy	Value (\$ billion)	Share (%)	Economy	Value (\$ billion)	Share (%)
1	Japan	26.4	14.4	People's Republic of China	29.8	16.8
2	People's Republic of China	22.5	12.3	Singapore	27.2	15.3
3	European Union	16.7	9.1	Japan	19.2	10.8
4	North America	16.6	9.1	Malaysia	13.9	7.8
5	United States	15.9	8.6	Republic of Korea	11.6	6.5
6	Singapore	14.9	8.1	Thailand	10.7	6.1
7	India	13.1	7.1	United States	9.3	5.2
8	Republic of Korea	11.2	6.1	Saudi Arabia	7.1	4.0
9	Malaysia	10.5	5.7	Australia	4.9	2.8
10	Thailand	6.3	3.4	Taipei,China	4.5	2.5
	Total of 10	154.2	84.0	Total of 10	138.2	77.9
	Others	29.4	16.0	Others	39.2	22.1
	Total	183.5	100.0	Total	177.4	100.0

Source: Central Bank of Indonesia.

Indonesia's exports have long been dominated by primary commodities, such as mineral fuels, lubricants, animal and vegetable oils, fats, and waxes (Figure 3). It has become the world's largest exporter of coal and crude palm oil in recent years. Among the Association of Southeast Asian Nations (ASEAN) countries, Indonesia is the most competitive trader in primary commodities (Figure 4a). In contrast, however, it has become one of ASEAN's least competitive traders due to its declining trade competitiveness in manufactured goods in the last decade (Figure 4b). Most of Indonesia's imports are intermediate goods to support its domestic industry, such as chemical products, machinery, and transport equipment. The dominance of low value-added commodities in Indonesia's exports and the country's high dependence on higher value-added manufactured imports have resulted in Indonesia's declining trade performance in recent years. It should be noted, however, that importing intermediate goods is not bad in itself, and in a world of GVC is even a key strategy for adding value to exports. The challenge is therefore to ensure the attainment of international competitiveness in parallel to climbing the value chain.



Figure 4: Indonesia's Trade Specialization Index^a Compared with other ASEAN Countries



^a Rumus: $z_{ij} = \frac{x_{ij}-m_{ij}}{x_{ij}+m_{ij}}$. The trade specialization index compares the net flow of goods (exports minus imports) to the total flow of goods (exports plus imports). This index removes bias of high exports values due to significant re-exports activities, thus is more suitable to identify real producers instead of any intermediate traders.

Source: UN Comtrade.

To give a better understanding of how Indonesia arrived at its current economic structure the next section looks into the evolution of the country's industrial policies and subsequent developments.

III. INDUSTRIAL POLICIES IN INDONESIA: A HISTORICAL OVERVIEW

The Indonesian economy had more or less stagnated since its independence in 1945. Until the mid-1960s, the process of modern industrialization had barely commenced in Indonesia (Aswicahyono et al. 2010, Rock 2003). By 1965, the economy was described to be in shambles. Modern industrial policies only started with the New Order² in 1966. In the second half of the 1960s, Soeharto's government was focused on putting the political house in order, and only afterwards was it able to push through with its economic development strategy.

For 3 decades up to the Asian Financial Crisis (AFC) in 1997, Indonesia enjoyed a rapid growth in manufacturing. From 1970 to 1996, the industry sector was growing at least 9.0% annually barring for 2 years. This was not, however, a linear period of growth as shown later. Following the AFC, Indonesia has yet to get back on its feet in terms of industrial development for various reasons. Recently, however, the GOI has started to demonstrate a more proactive approach to industrial policies. At the beginning some skeptics have argued that this was merely another pre-election³ populism, but others believed that these efforts might be more than just short-lived; so far the latter seemed to be closer to it. Seeing the structural implications that these may have and the current growth in the economy buoyed by relative political and macroeconomic stability, the stake is too high for any mistakes in policymaking.

Having weathered the 2008–2009 Global Financial Crisis (GFC) relatively well, the GOI's attention has shifted from improving economic resilience against external shocks to improving the balance of payments. At least for some sectors, the GOI sees greater domestic linkages and building international competitiveness to be a preferred strategy. The challenge is how to find the right balance to achieve the two.

A. Pre-crisis (1966–1996)

The first phase of Indonesia's modern industrialization effort started with the "New Order" in 1966 up to the AFC that culminated with the end of Soeharto's 32-year regime. From the second half of the 1960s to the early 1970s, Indonesia focused on stabilizing its macroeconomic environment and setting the foundation for future growth. In the late 1970s to the early 1980s, windfall from the oil price boom provided the GOI with the resources to proactively pursue economic development policies. The end of the boom led to a series of structural adjustment packages through the 1980s, putting the economy back on track until the AFC hit Indonesia harder than other Asian economies in 1997.

1966 to 1973: Stabilization and Adjustment

When the New Order came into power in 1966, the economy was in a less than ideal state. Between 1960 and 1965, real GDP per capita had been falling, inflation was running high and accelerating, and fiscal deficit was burgeoning from monetary expansion (Lewis 1994, Rock 2003). Indonesia was also facing capital flight as well as shortages in food, spare parts, and raw materials (Rock 2003). Among the government's first tasks was to address these problems. Balanced budget requirements were quickly put in place to prevent the deficit from worsening, and the country's debts were later rescheduled in 1976. The GOI also adopted an open capital account with full convertibility of the rupiah, which appealed to foreign investors.

² The New Order refers to Soeharto's regime (1966–1998), while the Old Order refers to Soekarno's regime (1945–1965).

³ Indonesia held its legislative election in April, and its presidential election in July 2014.

1970s to early 1980s: Assertive Intervention and Protectionism

Macroeconomic condition was stabilized by the time of the oil boom in 1973, allowing the economy to benefit from an inflow of resources. Further, in a rare case of preemptive adjustment, Indonesia prepared for the impact of the Dutch disease by undertaking devaluation in 1978 when its balance of payments was not under severe pressure (Lewis 1994). This preemptive exchange rate adjustment helped offset the impact of the real appreciation from the oil windfall. This technical control over macro policy was in contrast to Indonesia's micro policies, including sector policies, which often were heavily influenced by various considerations and interests (Rock 1999).

From the 1970s to the early 1980s, Indonesia's trade and industrial policy was largely set by the then Ministry of Trade and Industry, which was often seen as interventionist. Trade taxes were not an important contributor to the budget, overcast by significant contributions from the oil sector. The resources provided by the latter allowed the GOI to flexibly respond to whatever industrial policy that was being pursued, using trade taxes and non-tariff measures as policy tools. The choice of sectors or industries was rarely based on economic feasibility, but rather on those deemed to be of strategic importance, such as base metals, petrochemicals, and auto parts. This inevitably led to high business costs, exacerbated by complex and opaque administrative procedures, including customs clearance processes (Lewis 1994).

Industrial policies were also pursued through restrictive and discretionary investment procedures. Complex investment approval and licensing processes were in place, along with the proliferation of regulations and restrictions. Sectors were either open or close for investment, differentiated by the status of the firms, whether they are foreign, domestic or small-scale enterprises. Investment was open and import facilities were made available only for sectors on the investment priority list. Aspiring investors often had to devote substantial resources to have their sector of interest added to the list, after which the sector might be closed to others. This practice gave enormous discretionary power to the Investment Coordinating Body (Badan Koordinasi Penanaman Modal or BKPM). Investment decisions were often made based on what were considered as the 'right' sectors or industries rather than on the economic feasibility of the project. Protection was also provided to the domestic upstream industries through stringent local content requirements also known as "the deletion programme."⁴ Extensive regulations on foreign and domestic investments continued well into the 1990s (Rock 1999).

The GOI's pursuit of industrial development objectives was also done through its state-owned enterprises (SOEs). SOEs have played an important role in industrial deepening and high technology investment since Soekarno's era, partly because of Indonesia's weak domestic private sector, apart from few large family-run conglomerates. SOEs contributed a quarter of non-oil manufacturing value added during 1974–1975; the share would be even greater if the oil sector was taken into account (Lewis 1994). The GOI used the revenue from oil windfall to channel massive amounts of investments through existing or newly created SOEs, including those in oil refinery, petrochemicals, fertilizers, and steel. The primary goal was not always to foster competitiveness, but to meet production targets and create backward linkages. SOEs also often had to be concerned with non-economic objectives, such as regional development and price stabilization. Such strategy for industrialization had been inefficient and costly, not just to consumers but also to other downstream users.

⁴ This involved deleting the product from the list of components that can be imported once domestic suppliers were identified.

Another hallmark of the New Order was favoritism in preferential allocation of lucrative import and distribution licenses, and the rise of patrimonial network between the state (or high-ranking government officials) and the Indo-Chinese business community known as *cukongism* (Rock 1999). The relationship between stable macroeconomic situation and interventionist micro policies, however, was not as distant as some scholars claimed. The former facilitated the growth of the few conglomerates that in turn provided resources to the political elites. The business elites' dependence on the political elites helped guarantee their acceptance of the GOI's localization and rationalization policies. This interventionist and arguably inward-looking period nevertheless highlighted the general consensus that Indonesia should not limit the development of its industries to its short-term static comparative advantage (Rock 1999).

Mid-1980s to 1996: Rationalization and Export Orientation

At the height of the boom, the oil sector contributed up to 70.0% of total revenue, but the boom did not last forever. Oil price began falling in the early 1980s and accelerated in 1986 during which the price dropped by two-thirds in just 6 months. Indonesia was able to escape the worst by half, anticipating this in recognition of its excessive dependence on oil and implementing preemptive structural adjustments.

A series of structural adjustments was undertaken during 1983 and 1984, including the rationalization of a public investment program and the cancellation or rescheduling of projects. A comprehensive tax reform was also introduced, although it did not initially include tariff reform (Lewis 1994). The most fundamental change was the realization that industrial development cannot be achieved by leaving protection from import competition to work its magic, and there is a need to ensure the emergence of competitive firms.

The mid-1980s saw a period of reforms. Among the key reforms was the customs reform in 1985, which significantly reduced clearing time and import costs. This was soon followed by the adoption of the first deregulation package in May 1986, which included the Agency for Import Duty Exemption and Restitution (Pusat Pengelolaan Pembebasan dan Pengembalian Bea Masuk or P4BM). The P4BM put in place duty drawback facilities and tariff exemption to replace the export subsidy scheme which was General Agreement on Tariffs and Trade (GATT) incompliant. The scheme allowed firms to gain access to internationally competitive inputs. Unconditional *ex-ante* tax exemption or *ex-post* rebate, which replaced complex licensing, also significantly reduced business costs and uncertainties. Management of the scheme was placed under the Ministry of Finance, instead of the Ministry of Trade and Industry. The former was deemed more insulated from vested interests than the latter. Strict processing time reduced the room for rent-seeking behavior. These reforms contributed to boosting export competitiveness (Lewis 1994). The rupiah was further devalued by 45.0% in August 1986, after which the GOI pursued the policy of pegging the rupiah to the dollar with frequent nominal adjustment.

The May 1986 reform package was followed by more packages, each targeting a different sector or policy. These reform efforts substantially reduced non-tariff restrictions both in terms of coverage and degree. Between 1985 and 1992, the percentage of imports covered by quantitative restrictions dropped from 43.0% to 3.0%, as the average nominal tariff declined from 22.0% to 9.0%. The fact that the GOI chose to undertake reform in stages, without setting an initial target at the outset, reflected the only possible way to navigate through domestic politics. This strategy was successful in creating an expectation of continued reform.

The GOI also reformed its investment regime by replacing the investment priority list with the investment negative list (Daftar Negatif Investasi or DNI), and undertaking further deregulation. The reform efforts led to a prolonged investment boom, with the value of investment projects approved by The Indonesia Investment Coordination Board (Badan Koordinasi Penanaman Modal or BKPM) rising from \$1.7 billion in 1986 and peaking at \$12.5 billion in 1991 (Lewis 1994). This success could not be credited to a single factor, but rather an interplay of various reform packages with varying impacts across sectors and industries.

By mid-1980s, labor intensive exports had replaced inefficient SOE-led industries as the country's engine of economic growth. Indonesia also underwent a period of rapid structural change, as exports diversified from simple consumer goods and basic resource processing to a wider range of manufactures with increasing technological sophistication (Aswicahyono et al. 2010). The country soon emerged as a significant industrial exporter.

In 1996, Indonesia joined the middle-income group. This achievement, however, was short-lived as the country almost immediately fell back following the AFC during 1997 and 1998. It took another 6 years before Indonesia regained its middle-income status.

B. Economic Crisis (1997–1998)

In 1997, Asia faced a deep economic crisis, which started with the collapse of the Thai baht. Indonesia was among the worst hit in the region. It experienced a large scale capital flight in the second half of 1997, rapid depreciation and financial distress (Aswicahyono et al. 2010). There was a loss of macroeconomic control, as the rupiah depreciated from Rp2,500 per US dollar to Rp17,500 at its worst point, and inflation was running at over 100.0% on an annualized basis. By 1998, the economy had contracted by almost 14.0%. The economic crisis culminated with the end of Soeharto's 32 years of authoritarian regime in May 1998. The collapse of domestic and foreign investment continued for years after the crisis. Because the global economy remained buoyant despite the AFC, firms were impacted differently by the crisis depending on, among others, their market orientation.

C. Post-crisis (1999–2007)

2000 to 2004: The Recovery Period

Indonesia has struggled to regain its growth momentum in the period following the AFC. From 2000 to 2005, average growth was just at 4.5%, considerably lower than the pre-crisis average of 7.3% from 1990 to 1996. Performance varied across sectors, but the slowdown was even more pronounced in manufacturing, where output since 2000 had been growing at little more than half the pre-crisis rate (Aswicahyono et al. 2010). Indonesia was hit relatively harder than other Asian economies for a number of reasons. Some assumed that with sound macroeconomic management and relatively well-performing international economy, exporting firms in Indonesia would have enjoyed a boost of competitiveness from depreciation. However, many businesses also held foreign-denominated debts, which rendered them in trouble.

The first priority of the GOI post-AFC was to regain control over macroeconomic stability. The GOI sought assistance from multilateral institutions, including the International Monetary Fund (IMF). While Indonesia had kept a broadly open economy at the time of the AFC (after the 1980s reform), there was further liberalization during 1997–1998 as part of the conditions imposed by the IMF in

exchange for loans. The country exited the programme in 2003, and until very recently had continued with its policy. Both political and macroeconomic stability was restored by 2004.

Indonesia was unable to recoup the outflow of investment following the crisis. It was the only economy that registered net FDI outflow for several years. Indonesia enjoyed annual FDI inflows averaging \$2.7 billion before the crisis, but was experiencing average net annual outflows of \$1.4 billion for 5 years after the crisis (Aswicahyono et al. 2010).

Recovery performance varied across sectors. In general, sectors in which demand was less elastic and are more export oriented were able to recover faster, while sectors with elastic demand or protected sectors feeding into the domestic market took the worst hit. The food processing sector, for example, did not record negative growth, and growth declined less sharply during the crisis. The resource-based sector recovered slowly post-crisis despite the boost in competitiveness from real effective exchange rate depreciation, partly because of the difficulty in securing input supply. Chemical-related industries experienced only a mild decline due to a strong inelastic demand from the domestic-oriented fertilizer industry. Non-metallic mineral products took a bad hit, reflecting the collapse of the construction industry; similarly with basic metals, and machinery and equipment sectors, where the former fed into the latter with a high level of protection and dependence on the domestic market. The electronics sector managed to sail through the crisis due to its export orientation and the boost in competitiveness it received from exchange rate depreciation; its output has recovered by 2000. The automotive sector, which was also highly protected, was able to adjust better thanks to the agility of the private sector in deepening its technological learning and export orientation.

Some studies were fast to point at changes in labor market policies as the main cause for Indonesia's inability to recoup competitiveness. Prior to the crisis, real wages rose at a lag relative to Indonesia's rapid economic growth. Under Soeharto's authoritarian regime, trade unions were heavily managed. After the crisis, pro-labor pressures emerged, resulting in a sharp hike in regulated minimal wage and the introduction of rigidities in hiring processes. This led to an increase in wages but not in productivity. In reality, the labor market in Indonesia is less than perfect and there is definitely room for improvement. However, it is unlikely to be the main cause for the slow recovery. The inability to maintain, let alone invest in, infrastructure at the pre-crisis level was a strong factor in hampering the recovery process.

One thing unanimously agreed on was the cost of institutional uncertainty in Indonesia. Political and institutional infrastructure was imperfect even before the crisis, and profiteering was rampant. However, the highly patrimonial political system, and well-established connections between the political and business elites, had resulted in some certainties for those politically well-connected. After the crisis, this centralized structure has broken down, exacerbated by the decentralization process that started in 2001, which created a highly decentralized environment of 500 sub-national governments. As authoritarianism collapsed, the central government had less control in formulating and implementing a consistent development strategy across the vast economy, and in allocating the scarce resources (Kimura 2005). This had resulted in relative economic inertia, since the New Order until very recently, creating a very uncertain investment environment, particularly for foreign investors.

This situation hit the resource-based industry, such as minerals especially hard, partly due to the lower level of mobility of such value chains, hence adding to the picture the complexity of bargaining with local stakeholders and political interests. Despite Indonesia's strong comparative advantage in resource-based industry, their long term viability requires predictable and sustainable access to raw materials (Aswicahyono et al. 2010). There are also other key factors, such as the lack of

competitive supporting services sector as well as sufficient and well-maintained infrastructure. Foreign investors, but also small and medium enterprises (SMEs), local or foreign, are likely to require facilitation to navigate these institutional complexities. Facilitation is often just as, if not more, important than liberalization in attracting investment (Kimura 2005).

2004 to 2007: Recovery of Demand and the Start of Proactive Industrial Policy

Since 2003, the Indonesian economy has been showing some signs of recovery. Domestic demand for automobiles and motorcycles increased rapidly, the exchange rate stabilized around Rp9,000 to Rp10,000 per US dollar, and the inflation rate at around 6.0% (Kimura 2005). Supply capacity, however, did not recover as well as demand. While Indonesia has made a steady progress in its political reform, no clear plan was in place in terms of its medium- to long-term economic development. When the first Indonesian Unity Cabinet⁵ came to power, the GOI was determined to address this.

In 2007, the GOI introduced Law No. 27 on Long-Term National Development Plan (Rencana Pembangunan Jangka Panjang Nasional or RPJPN) for the period 2005–2025. RPJPN placed the industrial sector as the engine of growth for strengthening the economic structure. This is to be supported by agriculture activities in its broad term, the mining sector, and effective services provision. The law also included a commitment to apply industry and management best practices for robust economic security.

Improving efficiency, modernization, and value addition in the primary sector, including mining, was highlighted as the main target to promote local and international competitiveness, and strengthen the national industrial base. Reference was also made to the integration of SMEs into the value chains, stronger forward and backward value chain linkages, more balanced economic development outside the most populated island of Java, and a commitment to eliminate monopolistic behavior and other market distortions.

Value chain development through product processing and diversification (downstream development), structural deepening (upstream development), and vertical integration (upstream and downstream development) was expressly mentioned in the RPJPN. The plan also underscored the need to strengthen horizontal inter-industry relations, including with supporting and complementary industries, goods and services, and networks of relevant multinational firms.

In an encouraging development, RPJPN recognizes the institutional and infrastructural issues requiring urgent attention, including transportation, communication, energy, and technology. It also highlighted the need for calibration, testing, standardization, and quality control institution and infrastructure. This is particularly pertinent as standard compliance capacity is increasingly becoming a non-negotiable criterion for participating in GVCs. The desire not to be trapped in low value-added GVC participation was also reflected in the mention of the need for industrial education and training facilities.

The development of the manufacturing industry would be focused on subsectors that meet one or more of the following criteria: create employment, meet domestic needs (such as food or pharmaceuticals), process domestic natural resources, including agricultural resources in its broadest sense, and have export development potential. While minerals can be argued to meet at least two of

⁵ The first Indonesian Unity Cabinet referred to the first term of the current coalition government from 2004–2009 as led by President Susilo Bambang Yudhoyono.

the four criteria, it was not among the 10⁶ clusters listed as priority for the next 5 years under the first Medium-Term National Development Plan (Rencana Pembangunan Jangka Menengah Nasional or RPJMN).

Implementation of the RPJPN is operationalized through the 5-yearly RPJMN. The latter serves as a basis for ministries and government agencies in formulating their strategic and budget allocation plans. To ensure better central–regional coordination, regional governments are also required to take RPJMN into account when formulating and adjusting their Regional Development Plans (Rencana Pembangunan Jangka Menengah Daerah or RPJMD). To ensure the timely and effective implementation of the RPJPN, the RPJMN is further elaborated in the Annual Government Work Plan (Rencana Kerja Pemerintah or RKP) that will then become the basis for formulating the Draft Government Budget (Rencana Anggaran Pendapatan dan Belanja Negara or RAPBN).⁷ The second RPJMN covers the period 2010–2014.

The effectiveness of RPJPN and RPJMN would depend on their implementation. Inconsistencies and lack of coordination across ministries, between central and local governments, between theory and practice, still remain an issue. It is nevertheless encouraging to see recognition of some of the underlying obstacles to industrial development.

D. Global Financial Crisis (2008–2009)

The 2008 GFC did not have the same catastrophic impact on the Indonesian economy as the 1997 AFC due to its different nature. In 2008, the Indonesian domestic economy held up better than the international economy. The country's financial sector remained broadly intact, while the exchange rate depreciated only moderately. Export-oriented firms, particularly those focused on traditional markets which were hit worst by the recession, might have been affected more, while the effect on the domestic market was much less felt (Aswicahyono et al. 2010).

This historical overview of industrial policy in Indonesia showed that the country has not been following one linear policy trajectory. In general, however, there is a move toward greater export-orientation, a greater desire for maximizing domestic value added and realizing the benefits from the country's natural resources, a greater focus on employment generation, and SME participation. Macroeconomic policy tends to be more technically formulated, while the reverse might be observed for microeconomic policy. The country's recent move toward decentralization has, to an extent, contributed to increased policy uncertainty due to the increase in decision making points. Policy inconsistency and uncertainty remain a key outstanding problem.

The next section would focus on the current state of the industrial policy in Indonesia, starting with its National Industrial Policy as set out in the Presidential Regulation No. 28 in 2008.

⁶ The ten clusters are: (1) food and beverage industry, (2) marine resource processing, (3) textiles and garments industry, (4) footwear industry, (5) oil palm industry, (6) wood-products industry (including rattan and bamboo), (7) rubber and rubber products industry, (8) pulp and paper industry, (9) electric machinery and electronics industry, and (10) petrochemicals industry.

⁷ See <http://www.indonesia-investments.com/id/proyek/rencana-pembangunan-pemerintah/rencana-pembangunan-jangka-menengah-nasional-rpjmn-2010-2014/item307>

IV. CURRENT INDUSTRIAL POLICY (2008–PRESENT)

In addition to the RPJPN and the RPJMN, two other key documents have formed the basis of Indonesia's current industrial policy. The first is the 2008 National Industrial Policy and the second is the Indonesian Master Plan for Acceleration and Expansion of Indonesia Economic Development (MP3EI) launched in 2011. Both documents would be deliberated below. Indonesia has also just endorsed its new Industrial Bill in late 2013 and its new Trade Law in early 2014; many of their implementing regulations are still forthcoming.

A. National Industrial Policy (Presidential Regulation No. 28 of 2008 and Regulation of the Minister of Industry 41/M-IND/PER/3/2010)

The 2008 Presidential Regulation on National Industrial Policy has set a long-term industrial development vision for Indonesia to be a strong industrialized nation by 2025. This vision was elaborated further in the Regulation of the Ministry of Industry issued in 2010,⁸ which states that the vision of Indonesia to be a strong industrialized nation by 2025 would be achieved through becoming a new industrial developed country by 2020 (Vision 2020). The two different timeframes (i.e., 2025, for becoming a strong industrialized nation and 2020, for becoming a new industrial developed country) created some confusion as the difference between the two targets was not clearly articulated.

The document only stated that to be a new industrial developed country, Indonesia should meet the following broad criteria:

1. It has a huge role and contribution to the national economy,
2. SMEs have balanced abilities with large industries,
3. It has a strong industrial structure (Industrial Tree is complete and in-depth),
4. It has an advanced technology that has been at the forefront of development and market creation,
5. It has a tough industry services to support the international competitiveness of the industry, and
6. It has a competitive advantage to face full liberalization within APEC countries.

The policy has a target to increase the contribution to GDP of non-oil and gas industry from the current 24.0% to 30.0% by 2020.⁹ It also aims to raise the contribution of small and medium industries to be comparable to large industries. To achieve this, the sector will need to grow by 9.4% on annual average during 2010–2020, a very ambitious, if not impossible, target. The policy highlighted seven “strategic outcomes” required to achieve this target, which include increasing industrial value added, market share at home and abroad, innovation and technological capabilities, and broadening industrial development. Nevertheless, it was unclear how these outcomes are to be achieved and how the GOI plans to monitor when and whether the outcomes have been achieved.

The 2008 National Industrial Policy was launched a year after the RPJPN and the first RPJMN. The development of this policy has referred to and is in line with the RPJPN 2005–2025

⁸ Regulation of the Minister of Industry No. 41/M-IND/PER/3/2010 on Strategy Mapping and Key Performance Indicators for the Ministry of Industry.

⁹ See <http://www.kemenperin.go.id/artikel/19/National-Industrial-Policy>. Average contribution of non-oil and gas industry to GDP during 2010–2013 (Central Board of Statistics, Indonesia).

(Law 17/2006) and the RPJMN 2004–2009 (Presidential Regulation 7/2005). The 2010 Ministerial Regulation also refers to the more recent RPJMN 2010–2014 (Presidential Regulation 5/2010).¹⁰ It does not, however, clearly mention any reference to the 2008 Presidential Regulation in which the notion of industrial cluster development was initially suggested.

To operationalize the Plan, the Ministry of Industry has adopted a two-pronged approach. First is a top-down approach through the development of 35 priority industrial clusters planned by the central government, to be followed by local and regional participation. Second is a bottom-up approach through determining local industries that become core competencies in each region, followed by the development of provincial, or regency or municipal excellence industry. The second approach is pursued based on the spirit of decentralization and regional autonomy. Based on the website of the Ministry of Industry, 18 provinces and five regencies have developed their roadmaps of provincial excellence industry and regency roadmaps of industrial core competencies, respectively.

The 35 priority industrial clusters planned by the Central Government are further categorized into agro-industry (12 clusters), transportation equipment industry (4 clusters), electronics and ICT industry (3 clusters), base materials industry (4 clusters, one of which is iron and steel industry), machinery industry (2 clusters), labor-intensive manufacturing industry (2 clusters), supporting and specific creative industry (3 clusters), and specific small and medium industry (5 clusters). The rationale behind the adoption of this cluster approach is to achieve collective competitiveness through the establishment of networks.

In addition to the 35 clusters, future industries are also identified as industries with high competitiveness, based on the country's endowment (vast area, large number of population, and availability of natural resources) as well as less tangible assets, such as capability, creativity, skills, and human resource professionalism. These future industries are (i) agro-based industry, (ii) transportation industry, (iii) information technology and telecommunication equipment industry, and would be the first ones to be developed. This industrial group is considered more sustainable because it relies on knowledge and skilled-labor, renewable natural resources, and technological mastery.

Using different terms in the same document, such as “priority industrial clusters” and “future industries,” results in confusion as such terms are ambiguous in conveying the GOI's level of priorities. It might have been better to use the same term and indicate the level of priorities in terms of implementation timeframe. Maintaining consistency over the criteria for and the result of prioritization, and having in place a clear and transparent review mechanism is imperative to minimize the costs of policy uncertainty.

The development of these clusters has also been poorly coordinated across authorities as this initiative is regarded by other ministries as merely the domain of the Ministry of Industry, whereas the Coordinating Ministry for Economic Affairs seems to have a limited capacity in coordinating various ministries and sectors related to industrial development. The Ministry of Industry argues that it will take a few more years to see the results of the development of these clusters, considering several issues that have hampered industrial development in the country, such as limited infrastructure, increasing labor costs, increasing electricity tariff, limited supply of energy, e.g., oil and gas, the influx of illegal imported products as well as bureaucratic issues and red tape. However, they mention some

¹⁰ Based on interviews with the Ministry of Industry, Coordinating Ministry of Economic Affairs, National Development Planning Agency (BAPPENAS), and the Association of Indonesian Employers (APINDO) in April 2014

clusters of petrochemical industry in Banten Province and Bontang (East Kalimantan Province), which have shown good progress.¹¹

As for the development of provincial excellence industry, or regency or municipal roadmap of industrial core competencies, the Ministry of Industry has provided technical guidelines on the development of these industries. However, as this is a bottom-up approach, the initiative or proposal for the development of regency or municipal core competencies comes from the regencies or cities. This approach is aimed at accommodating Indonesia's decentralized system of governance implemented since 2000, where district and provincial governments have been given broad authorities in planning and managing various sectors of development in the regions.

B. Master Plan for Acceleration and Expansion of Indonesia Economic Development (MP3EI)

In 2011, Indonesia launched its Master Plan for Acceleration and Expansion of Indonesia Economic Development (MP3EI). The MP3EI aims to encourage rapid, balanced, equitable and sustainable economic growth. The goal of the MP3EI is for Indonesia to become a high-income country by 2025, and the world's 10th and 6th largest economy by 2025 and 2050, respectively.

The MP3EI is a working document and as such, will be updated and refined periodically. While it is a source of possible confusion, the GOI has claimed that the MP3EI is an integral part of the national development planning scheme and is not meant to substitute the existing Long-Term Development Plan 2005–2025 (Law No. 17 year 2007, RPJPN) and the Medium-Term Development Plans (Presidential Decree No. 7 year 2009, RPJMN). Like the RPJPN, the RPJMN, and the National Industrial Policy, the MP3EI also combines sector and regional approach, in its case, into the economic corridors strategy. The MP3EI also includes regulatory reforms as an integral step in accelerating economic development.

The MP3EI seeks to pursue its objective based on a three-pillar strategy:

1. Spreading economic development across the country through the development of six economic corridors,
2. Improving domestic and international connectivity, and
3. Enhancing technology and human resources.

To meet the goal of the MP3EI, Indonesia needs to achieve a quantitative target of GDP per capita of \$15,000 by 2025, a marked increase from its current \$3,500. This requires GDP to grow between 6.4% and 7.5% during 2011–2014, and between 8.0% and 9.0% during 2015–2025. To do so, Indonesia could no longer afford to rely on business as usual, and would require accelerated industrialization. The Ministry of Industry is targeting for the industrial sector to grow at 8.5% in 2014 and to continue until it reaches 9.8% in the years 2020–2025. The share of industrial products in total non-oil and gas exports is targeted to achieve 61.9% by 2014 and 95.0% by 2025, and the sector is expected to contribute 25.0% of total employment by 2025 (Ministry of Industry 2012).

In addition to six economic corridors, the MP3EI would focus on eight main programs of agriculture, mining, energy, industry, marine, tourism, telecommunication, and the development of

¹¹ Interview with the representative of the Ministry of Industry on 14 April 2014.

strategic areas. The eight main programs further consist of 22 main economic activities, which include nickel, copper, bauxite, and steel.¹²

Although different ministries and business associations have been involved in the design process of the MP3EI, there are no clear links at the technical level. Coordination across relevant stakeholders is also limited in its implementation stage. The major constraint in coordination is the lack of enforcement and leadership in synergizing efforts among line ministries or sectors. The Ministry of Industry suggested that a series of consultations has been conducted with the Coordinating Ministry for Economic Affairs during the development of the MP3EI, and the plan has taken into account the development of industrial clusters under the Ministry of Industry. However, it is not clear how the 8 main programs and 22 activities in the MP3EI are linked to the 35 priority clusters and the 3 future industries implemented by the Ministry of Industry.

Accelerated Industrialization in the MP3EI: From Theory to Practice

The MP3EI points to the critical importance of international competitiveness and the need to focus the industrial development strategy on developing sustainable competitiveness in the international market. This could be interpreted as the current GOI's commitment not to revert to an inward-looking approach to industrial policy. In doing so, the GOI seeks to optimize "all efforts to exploit the country's resource potentials and the capability to exploit every opportunity on hand, from inside and outside." This could also be understood as an aspiration to maximize the benefits from current endowments, such as natural resource endowments, and from accessing international opportunities, including access to external markets and competitive imported inputs.

The MP3EI seeks to identify potential strengths and constraints to determine the basic strategy of accelerating industrial development. The Plan aims to pursue accelerated industrialization through five main strategies:

1. Promoting participation of the business sector in infrastructure development,
2. Debottlenecking of bureaucratic barriers,
3. Re-orienting export policies of raw materials and energy resources,
4. Enhancing productivity and competitiveness, and
5. Improving domestic market integration.

The above strategies will be implemented through the application of six policy areas:

1. Domestic industry security, by enhancing industrial competitiveness in facing global competition and industrial restructuring,
2. Infrastructure development,
3. Improvement in the quality of service bureaucracy,
4. Improvement and harmonization of regulations,
5. Fiscal policy, and
6. Development of human resource-based industry (labor-intensive industry).

¹² The other 18 activities are: palm oil, rubber, oil and gas, coal, cocoa, animal husbandry, timber, fishery, tourism, food and agriculture, Greater Jakarta (Jabodetabeka) area, Sunda Straits strategic area, transportation equipment, ICT, shipping, textiles, food and beverages, defense equipment.

Based on these considerations, during 2012–2014 the MP3EI’s accelerated industrialization effort focuses on 15 subsectors under three major groups: mining industry group,¹³ agriculture-based industrial group,¹⁴ and human resource-based industry and domestic markets.¹⁵ How these selected subclusters are linked to the main programs and activities under the MP3EI, however, remains unclear.

MP3EI Implementation Framework

Apart from a departure from business as usual, the MP3EI also differs from previous initiatives in terms of the level of political support and an expressed desire for more inclusive coordination. On the apex of the MP3EI implementation framework is the Committee on Economic Development Acceleration and Expansion of Indonesia 2011–2025 (abbreviated KP3EI in Indonesian). The KP3EI was established under Article 4 of the Presidential Decree No. 32 of 2011. The tasks of the KP3EI are:

1. to coordinate the planning and implementation of the MP3EI,
2. to monitor and evaluate the implementation of the MP3EI, and
3. to outline the steps and policies in the context of solving problems and barriers to the implementation of the MP3EI.

The full structure of the MP3EI implementation committee comprises the following:

1. The Implementation Team is composed of Ministers, the Chair of Non-Ministerial Institutions, and representative agencies that shall contribute to the implementation of the MP3EI. The team is responsible for providing general guidance, approving strategic decisions, and solving strategic issues which may arise during the implementation of the MP3EI.
2. The Working Team is composed of high-ranking officials (echelon 1) and key officials from relevant agencies involved in the implementation of the MP3EI action plans. The team is responsible for coordinating the implementation of investment projects and infrastructure projects. This team will act in collaboration with relevant agencies and is also responsible for solving inter-ministerial problems, and ensuring government support for the implementation of the MP3EI.
3. The Secretariat is composed of a dedicated and full-time support team that is responsible for developing a monitoring and coordinating system for the MP3EI implementation. The Secretariat will actively support the Implementation Team and the Working Team by providing them with a clear analysis of, and technical proposal to overcome, the problems arising from daily monitoring.

The KP3EI is chaired by the President, while the Secretariat is chaired by the Coordinating Minister for Economic Affairs. This signifies the central government’s leadership and ownership of, and commitment to, the MP3EI (Strategic Asia 2012). It is yet to be seen if this structure would be carried on by the new government under the Jokowi’s administration. Ideally, any long term plan would be placed under the custody of able bureaucrats to insulate it from politically induced changes. One weakness highlighted in the implementation framework of the MP3EI is the limited involvement of

¹³ Four subsectors that come under this group: coal conversion industry, refining and oil refinery industry, basic chemical industry (including petrochemicals), and basic metal industries.

¹⁴ Five subsectors that come under this group: edible oils and fats industry, sugar cane-based industry, cocoa processing industry and chocolate manufacture, pulp and paper industry, and rubber goods-based industry.

¹⁵ Six subsectors that come under this group: textiles, apparel and footwear, industrial machinery and household appliances, electronic components and telecommunications industries, components and accessories of automotive and motor vehicle engine parts, shipbuilding industry, and furniture industry.

non-state actors, such as that reflected in the membership of the regional MP3EI working group (Strategic Asia 2012).

The implementation of the MP3EI is planned in three phases up to year 2025.

2011–2015: Phase 1 – Quick win implementation

1. Establishment and operationalization of the MP3EI Committee
2. Preparation of action plans regarding regulations, debottlenecking, permits, incentives infrastructure development, and the implementation of investment commitments (quick wins)
3. Establishment of international hubs – primary airports and seaports
4. Strengthening of research and development (R&D) institutions in every corridor
5. Human resource development for the corridor's main economic activities

2015–2020: Phase 2 – Strengthen economic and investment basis

1. Accelerate the development of long-term infrastructure projects
2. Strengthen the innovation ability to increase competitiveness of main economic activities
3. Improve economic governance in various fields
4. Expand the development of value adding industries

2020–2015: Phase 3 – Sustainable growth implementation

1. Maintaining sustainable national competitiveness
2. Promote the adoption of technologies that would support sustainable development

C. The New Industrial Bill (2014)

The draft new Industrial Bill was passed by the parliament on 19 December 2013. The bill is set to replace Law No. 5 on Industrial Affairs of 1984. It contains provisions on, among others, a master plan for industrial development, industrial zoning, the development of industrial resources, industry defence and safeguard, and green industry. The Minister of Industry highlighted the importance of the bill in determining the direction of industrial development, including downstreaming. Implementation of the bill would, however, require having derivative regulations in place.

Another priority stipulated under the bill is the development a long-term master plan on industrial development. The plan will be a grand 20-year strategy in 5 yearly phases and will consolidate various efforts that are currently being undertaken. The decision to follow a 5-year phase is part of the effort to enhance synergy with other policy documents (e.g., RPJMN). It is unclear, however, how the 2008 National Industrial Policy, and now the 2013 New Industrial Bill, would be linked to the MP3EI. Implementation of the bill will be supported by the so called national industry committee, which would be ad hoc in nature and will work in coordination with relevant stakeholders both within and outside the GOI.

Key articles in the new bill include increasing the added value of natural resources through the development of the domestic processing industry (Article 31), the GOI facilitation of competitive financing for industrial development through SOEs and private firms (Article 44–45), the development of certain industrial estates by the GOI (Article 63), control of strategic industries by the state (Article 84), industry defence measures to be determined by the President, with recommendations from

ministers (Article 97), and the scope for the GOI to defend any industry that suffers losses from global economic pressures through fiscal stimulus and credits (Article 100) (Yulisman 2013). The tone of some of the articles points to a policy direction that revolve more around protecting existing industry than promoting current and potential industry to better benefit from global competition.

Pursuant to the new Industrial Bill, the Ministry of Industry has recently indicated that it will build a large number (at least 36) of industrial estates outside Java in an attempt to spread industrial growth to the country's less-developed region. These industrial estates serve as public goods to help the government meet its target of raising the share of manufacturers outside the country's most populated and developed island from the current 27.0% of the total to 40.0% by 2025. To date, 55 of the country's total 74 industrial estates are located in Java, which represented three-fourths of the total size of industrial estates in Indonesia. Despite this encouraging move, it shall be noted that the Indonesian government's role in industrial estate development is relatively lagging compared to its peers, with involvement in only 6.0% of the total industrial estates compared to its counterparts in Malaysia and Thailand at 78.0% and 48.0%, respectively (Yulisman 2014d).

The websites of the European Chamber of Business and Commerce and the American Chamber of Commerce in Indonesia indicated that a consultation process took place during the development of the draft bill. However, both pointed out some concerns over the draft, and one specifically stated that the concerns they raised during consultation have remained unaddressed in the approved draft (Eurocham-Indonesia 2014).

The bill specified that the Minister of Finance will be responsible for setting tariff measures (Article 98.2) while the Minister of Industry, following consultation with other line ministries, will be responsible for setting non-tariff measures (Article 98.3). The mechanism and criteria for this will need to be further assessed. There are increasing concerns over the use of tariffs and non-tariff measures for protection. The latter, in particular, will violate Indonesia's World Trade Organization (WTO) commitments. The new bill also has more stringent provisions relating to compulsory national standards and competency standards, and prohibition over the use of foreign workers in select national strategic industries.

Concerns were also raised with regard to unclear definition of national products, in the context of the GOI's promotion of their use. The new bill also stipulates that the Ministry of Industry can set the minimum level of local content in selected industries (Article 87.4). Without further clarification on the criteria and process for the setting of local content, this could imply a source of business uncertainty.

D. Main Industrial Policy Trajectory

A brief analysis of Indonesia's main industrial policy documents indicated a trajectory towards greater government involvement in industrial development, and at the same time greater recognition of the imperative of achieving international competitiveness. Getting the maximum benefit from the country's natural resources has consistently been a key objective, as has enhancing domestic value addition, technological deepening, and human resource development.

A sectoral approach to industrial development has also been consistently used, although there is confusion over the different selection of sectors or industries and the different terms used to indicate prioritization. Sectoral approach is pursued in combination with regional approach in light of the country's vast area and in the spirit of decentralization and regional autonomy.

Up to now, the MP3EI appears to be the main document providing the overarching policy trajectory, as others, such as the RPJPN and the RPJMN, continue to provide guidance and implementation framework alongside the former. The new Industrial Bill appears to take a more defensive stance, in terms of protecting domestic industry from global competitive pressure. It is unclear whether this would change again under the new Jokowi's administration. Such changes will generate uncertainty, which will have adverse impact on business planning and investment. A greater attention to implementation and operationalization of policy objectives is needed.

E. Assessment of Other Policy Objectives

Outside these formal policy documents, there are other policy objectives implied in various documents and government statements. This subsection briefly discusses the main policy tones and objectives.

Concerns over the impact of import competition on domestic industry seem to be increasing, at least from the perspective of the Ministry of Industry. In addition to some of the articles in the new Industrial Bill, official document from the Ministry (2012) also indicated concerns over the impacts of Free Trade Agreement (FTA) implementation, with specific mention of imports from the PRC. Efforts toward monitoring and the establishment of an early warning system were mentioned as well as cooperation with authorities in charge of statistics, customs and excise, and trade. The Ministry of Industry also highlighted concerns over unfair trading practices from overseas companies. Since import tariffs in Indonesia for most commodities are already very low, the Ministry of Industry has mentioned the importance of using non-tariff measures to protect the domestic market from foreign penetration, and implemented in many developed and developing countries. Such trade remedy measures should be applied not only to merchandise goods but also to services sectors. The Ministry of Industry, which has established a new directorate i.e., international cooperation, also aimed at dealing with trade negotiation related to industrial sectors as an integral part of international industrial cooperation.¹⁶

Import substitution is another policy objective that appears to have transcended from the early days of Indonesian industrial policy. Increasing both domestic and export market shares has appeared as one of the objectives of the national industrial policy. The Ministry of Industry's Director General for international industry cooperation, Agus Tjahajana, had also said that the government would step up efforts to substitute imports with locally produced goods to curb overseas purchases, to attract new investments to produce raw materials, intermediary goods as well as capital goods locally (Yulisman 2014c). The Ministry of Industry is currently mapping out the sectors with heavy dependence on import components. It is yet to be known what and how the map, once completed, will be used for. In the case of the revitalization program for industrial machinery, there is an added incentive for using domestically produced machinery.¹⁷ It remains a question whether this is in compliant with Indonesia's current international commitments.

Indonesia's newly approved first ever Trade Bill will also give the GOI a greater role in restricting exports or imports to protect domestic industry. Deputy Trade Minister, Bayu Krisnamurthi, pointed that the new trade law, which was adopted in early 2014, underlines Indonesia's stance of not adopting a total free market. He further said that, "the government has been given the right to intervene to protect its people," and "what we seek is a balance between market efficiency and the protection of various local stakeholders" (Alford 2014, Moestafa and Sumarwan 2014). The new law

¹⁶ Interview with the representative of the Ministry of Industry on 14 April 2014.

¹⁷ See <http://www.kemenperin.go.id/artikel/20/Revitalization-of-Industrial-Machinery>

gives the GOI the power to impose tariff and non-tariff barriers on certain goods or commodities in order to protect local industries and markets from the influx of foreign goods (Yulisman 2014b).

The new Trade Bill also underscored Indonesia's other policy objective, which is to maximize value addition of its domestic resources. It does so by including provisions that would allow the GOI to limit or halt exports of strategic commodities to ensure adequate local supplies, including for the domestic industry. Recent policies have been applied on commodities, such as rattan, cocoa, and mineral ores, although another justification for this provision is to allow better management of trade balance, which we would return to later. While the Trade Bill is officially under the management of the Ministry of Trade, this is seen as complementary to the new Industrial Bill that was approved last year.

There are some who are concerned with the tone of both bills, which appears to indicate that Indonesia is shying away from global competition and turning more interventionist. Others, however, see this as a populist pre-election reaction and that they are unlikely to be implemented this year; as it would require having all the derivative regulations in place and operational; or that their final forms would depend on whichever government would come to power next (Alford 2014). So far, there appears to be a strong possibility of a merger of the Ministry of Trade with the Ministry of Industry under Jokowi's administration.

Increasing market access is also one of the Ministry of Industry's strategic outcomes, as is increasing access to sources of investment and technology, and strengthening international industrial cooperation. The Ministry seeks to achieve these outcomes through trade and investment promotion programs, where exhibitions are prioritized in countries that already have FTAs with Indonesia.

The other policy objective related to Indonesia's industrial development is macroeconomic consideration. One of the reasons for Indonesia's pursuit of industrialization is to improve its trade balance. Indonesia's exports rely more on natural resources than on manufactures, and efforts to diversify have not achieved much success. Commodity exports are much more susceptible to price volatility due to their less differentiated nature, both in terms of products and markets. In the 2000s commodity boom, Indonesia benefited from a strong demand for commodities, such as coal and crude palm oil, from emerging economies like the PRC and India, but when global commodity demand slows down or commodity price declines, Indonesia's trade balance is adversely affected (Wijaya 2013). The GOI hopes that as the economy industrializes and diversifies, the trade balance would be improved through export diversification, higher value-added exports, and less reliance on imports.

V. OTHER RELEVANT BROAD-BASED POLICIES IN PLACE

This section looks into other broad-based policies in place that are relevant to Indonesia's industrial development objectives.

A. Improving the Effectiveness of Policy Implementation

The GOI has placed a greater focus on policy implementation and effectiveness recently. The need to translate policies into well-formulated and administered regulations in order to effectively meet policy objectives is recognized, as is the need for better intra- and inter-ministerial and central or regional coordination for policy implementation.

The MP3EI has placed regulatory reforms (debottlenecking) at the heart of the GOI's efforts to accelerate economic development. In a number of cases, policy implementation failed due to lack of implementation regulations. In others, it is hampered by overlapping regulations between central and regional governments, sectors, and institutions. Implementation of the MP3EI would require establishment or revision of required regulations as well as acceleration and simplification of regulatory processes. Part of this effort is the ongoing exercise to identify relevant regulations, incentives, permits, and their status for the implementation of the MP3EI.

B. Infrastructure Catch-up

Indonesia has a long way to go in meeting the infrastructural needs of its industries and households, although the greater focus on infrastructure by the GOI recently is beginning to show some result. In the newly released 2014–2015 Global Competitiveness Index of the World Economic Forum, Indonesia ranks 56 out of 144 economies, or a score of 4.4 out of 7, a considerable increase from its previous ranking of 80 out of 148 but still lower than Malaysia (25), Singapore (2), and Thailand (48).

Any firm, no matter how efficient, will not become competitive without the support of efficient infrastructure. The GOI has shown commitment to tackle the problem of infrastructural shortcomings in Indonesia. At the same time, the GOI is aware of its own limitations and is therefore encouraging greater private sector participation in infrastructural development through public-private partnership (PPP). Presidential Regulation No.67/2005, later replaced by Presidential Regulation No.13/2010, concerns PPP on infrastructure provision.

The GOI has included 33 PPP projects in the MP3EI to accelerate infrastructure development. The National Development Planning Agency (Badan Perencanaan Pembangunan Nasional or BAPPENAS) has set a target of Rp327.8 trillion to finance these projects through PPP (IRSDP BAPPENAS 2011). Investors are being invited to participate in designing, financing, and operating in many areas of infrastructure projects. Infrastructure sectors that will be provided for in the short to medium term include roads and bridges, water supply, solid waste, air transportation, marine transportation, land transportation, railways, telecommunications, power, oil and gas.

The PPP infrastructure projects in the MP3EI are divided into three categories: potential project, priority project, and project ready for offer. Potential projects are projects planned by the government but still require completion of pre-feasibility documentation and risk analysis, while priority projects are projects that already have pre-feasibility studies, PPP modality, risk analysis, and government support (where necessary). PPP ready projects are those that already have tender documentation, market sounding reports, PPP procurement schedules, and government support (where necessary).

A number of other supporting regulations are in place to support infrastructure development. Minister of Finance Decree No.38/PMK.01/2006 provides clearer project risk allocation and risk guarantees. Presidential Regulations No.65/2006 and No.36/2005, which was later replaced with the Land Acquisition Bill of 2012, are intended to provide a clear direction and mechanism in land acquisition process. A number of new laws on rail, ports, airports, land transport, and electricity have also been issued reflecting a greater shift toward private sector participation.

The GOI's effort to promote PPP has faced two main challenges. First is the lack of institutional capacity in developing PPP projects. Second is the low interest of domestic capital resources to finance infrastructure projects. The GOI has finalized an integrated government support scheme for PPP

projects consisting of Project Development Capacity to assist PPP project preparation, Viability Gap Fund to increase PPP project financial viability, Infrastructure Guarantee Fund, Infrastructure Fund for long-term financing, and Geothermal Fund Facility to enhance PPP geothermal projects. Besides these schemes for PPP projects, there are also several fiscal supports for non-PPP projects, such as the Land Fund for toll road development, guarantee fund for electric power development, and fiscal support for local government water company.¹⁸

The first problem, which is the lack of adequate preparation of PPP projects, arises from the absence of adequate and reliable technical and financial information, particularly a detailed analysis of risk sharing and government contributions. Without support, potential investors, especially from overseas, will continue to be wary of investing. The GOI together with support from the Asia Development Bank (ADB) has been implementing the Infrastructure Reform Sector Development Project (IRSDP), managed under the Project Management Unit at BAPPENAS. BAPPENAS is also providing project preparation services through the Project Development Facility (PDF) to assist in the selection of appropriate private partners in infrastructure services. The PDF will also ensure that project preparation and transaction are in line with PPP principles.¹⁹

C. Economic Corridors

The MP3EI lists improving domestic connectivity as one of its main pillars. This strategy also has a special focus on improving connectivity to rural, less-developed areas of Indonesia. An important part of the MP3EI is the development of six economic corridors which are based on the potentials and advantages inherent to each region (Table 3). The decision on the six economic corridors also takes into account inter-region connection.

Table 3: MP3EI Six Economic Corridors

Sumatra	Center for production and processing of natural resources and the nation's energy reserves
Java	Driver for national industry and service provision
Kalimantan	Center for production and processing of national mining and energy reserves
Sulawesi	Center for production and processing of national agricultural, plantation, fishery, oil and gas, and mining
Bali–Nusa Tenggara	Gateway for tourism and national food support
Papua–Moluccas	Center for development of food, fisheries, energy, and national mining

Source: Authors' compilation.

The corridors will increase connectivity based on the GOI's holistic plan of an integrated system of national logistics (Sistem Logistik Nasional or Sislognas), national transportation system (Sistem Transportasi Nasional or Sistranas), the RPJMN, and communication and information systems. This is a highly challenging task due to the archipelagic nature of Indonesia. The GOI has indicated that effectiveness, efficiency, and global connectedness are key considerations in the development of the connectivity system in each economic corridor. So far, priority activities have been identified for each corridor, based on its specific needs and challenges.

¹⁸ Interview with a representative of the Fiscal Policy Agency, Ministry of Finance, on 11 April 2014.

¹⁹ transparency, accountability, competition, and public-private equality.

D. Power and Energy

Indonesia's total energy demand has been growing annually by around 7.0%, and is expected to increase to 9.0% by 2019 as transportation and industrial sectors grow and households become more affluent. A large proportion of demand is currently met by fossil fuels, mainly oil. Electricity demand represents a significant share of total energy demand.

Indonesia's electricity demand is estimated to grow at 9.5% annually for the next 5 years, and demand growth easily outpaces growth in power generation capacity. The country's electrification rate has been on the rise, standing at 80.1% in September 2013, a 13.0% increase from 2011, bringing Indonesia closer to its electrification target of 90.0% by 2020. Nevertheless, this rate remains relatively low compared to other ASEAN members, and there are still 50 million people without access to electricity.

The GOI has launched two 10,000 megawatt (MW) Fast Track Programs (FTPs) for completion in 2013 and 2015. Under the GOI's power generation development planning, 57,000 MW of power generation would be developed by 2021, 53.0% by the state-owned electricity company, Perusahaan Listrik Negara (PLN), and the rest by Independent Power Providers (IPPs).²⁰ The total investment required is \$77 billion. Anecdotes gathered from the field, however, suggest that only 30.0% to 35.0% of projects under FTP 1 were successful due to poorly written project proposals. FTP 2 also has not been progressing well, due to its high reliance on geothermal projects,²¹ few of which have materialized due to problems with the issuance of licenses.

In the MP3EI, additional electricity demand is projected to reach about 90,000 MW by 2025, a near doubling of the September 2013 total installed capacity of 46,420 MW. The GOI aims to increase electricity generation capacity by 5,000 MW per year to meet growing demand and support economic growth. The country's electrification drive had added 4,000 MW to 4,500 MW of capacity per year since 2011. From 2014 to 2020, the average annual capacity increase should be gradually increased to 5,000 MW per year if power generation capacity is to catch up with demand.

Apart from issues relating to infrastructural development, another (distorting) contributory factor to Indonesia's power problem is the strictly regulated and under-priced electricity market. The domestic political realities mean that the GOI faces great difficulty in bringing the current subsidized selling price of electricity closer to the market rate as any changes to the price require parliamentary approval and hence are prone to political decisions. Efforts to reduce fossil fuel subsidy have also been hampered by the difficulty in diversifying to more sustainable supply sources.

E. Global Connection

Understanding the value of global linkages, Indonesia has been actively participating in trade and economic partnership talks with partners around the world, either individually or jointly as a region with the rest of ASEAN member states.

²⁰ Jarman (2013) Indonesia's Electricity Policy and Cooperation between Japan and Indonesia, Presentation by the Director General of Electricity on the Occasion of Visit by FEC Delegation, 18 March 2013, Jakarta: Directorate General of Electricity, Ministry of Energy and Mineral Resources (MEMR).

²¹ Big players are involved in geothermal projects, such as Chevron and Medco.

Indonesia already has a number of agreements in place with bilateral and plurilateral partners and is also a signatory to the ASEAN Free Trade Agreement (AFTA). It also has its first economic partnership agreement (EPA) with Japan, implemented since 2008. Indonesia is currently negotiating bilateral agreements with Iran, India, Pakistan, Australia, and the European Free Trade Association (EFTA) countries, and undertaking joint studies on potential FTAs with Chile, Turkey, Tunisia, and Egypt. In July 2012, Indonesia held the first round of negotiations for a free trade and investment cooperation agreement with the Republic of Korea known as the Indonesia Korea–Comprehensive Economic Partnership Agreement (IK–CEPA).

Indonesia is one of the founding members of ASEAN. The ASEAN FTA is one of the pillars that would support effective implementation of the ASEAN Economic Community (AEC) in 2015. As a member of ASEAN, Indonesia is a party to preferential trade agreements with Australia and New Zealand (AANZFTA), the PRC (ACFTA), Japan, the Republic of Korea, and India. In November 2012, Indonesia, with ASEAN, started negotiations, with the six regional free-trade partners of Australia, the PRC, India, the Republic of Korea, Japan, and New Zealand under the Regional Comprehensive Economic Partnership (RCEP). ASEAN has also started FTA negotiations with Hong Kong, China as well as negotiations to upgrade the ACFTA with the PRC. A plan to commence negotiations for a comprehensive economic partnership agreement with the EU is also in the pipeline.

In multilateral negotiations, the Ministry of Industry is the lead negotiator of Non-Agricultural Market Access (NAMA), as its portfolio covers almost 80.0% of tariff lines. The new Industrial Bill states that the Ministry of Finance would be in charge of setting the level of tariffs. More information is needed on the consultation and decision making process, particularly among the relevant authorities, including Ministry of Finance, Ministry of Trade, Ministry of Industry, other line ministries as well as relevant non-state stakeholders.

VI. FROM POLICY TO IMPLEMENTATION

This section briefly discusses some of the policy instruments used by Indonesia to pursue its industrial policy objectives. The list is non exhaustive and is intended to give a broad outline of how the GOI translates these objectives into action and what are the likely implications. It serves as a precursor to the next section that focuses discussions on a specific sector.

A. Trade Taxes

The level of trade taxes, including import duties and export taxes, are influenced by a number of factors including fiscal consideration, trade facilitation, industrial policy objectives and international commitments. While there are currently no international rules governing export taxes, there are growing pressures for greater future export disciplines at various fora.

Under its WTO obligations, Indonesia has bound 96.6% of its tariff lines, with 94.6% at a rate of 40.0%. Its simple average bound tariff is 37.5%, with an average bound tariff for agricultural products of 47.7%. Despite the high bound rates, Indonesia's simple average Most Favoured Nation (MFN) applied tariff is only 6.8%, much lower than most of the ASEAN economies. Its simple average applied tariff for agricultural products is 8.4%, while its average applied tariff for non-agricultural products is 6.6% (Hidayat 2012).

As tariffs have minimal contribution to its tax revenue (only 4.0% in 2007), Indonesia has a greater scope to make tariffs as a main trade policy instrument for Indonesia. Other than domestic fiscal and real sector consideration, the ability of a country to use tariff-related measures is also restricted by its multilateral, bilateral and plurilateral commitments. As earlier shown, Indonesia has a wide binding overhang (the difference between its bound and applied tariff rates), which gives it considerable policy space. However, excessive, ad hoc, and inconsistent use of tariff policy would be costly to business and self-defeating to Indonesia's efforts to enhance GVC participation. Tariff policy, however, is one of the few industrial policy tools left for developing country governments to use. On the defensive side, tariffs are used to shield potentially competitive domestic industry from premature import competition. On the offensive side, lower or annulment of tariffs on intermediate goods can boost productivity of domestic plants.

Indonesia has become increasingly active in using its tariff overhang in recent years by periodically changing its applied rates. In 2009 and 2010, the GOI increased tariffs on a range of goods that directly compete with locally manufactured products, including chemicals, electronic products, milling machines, cosmetics, medicines, and a range of agricultural products. In December 2011, the GOI increased applied import duties for wheat and soybeans from 0.0% to 5.0% (Tijaja 2013a). While this might reflect efforts to promote domestic value addition, it would have short-term implications for domestic industries currently relying on imported inputs, and more critical long-term implications if not clearly articulated in the context of consistent and transparent policy objectives. More recently, ad hoc setting of tariffs has been more common, particularly for food products, with the main purpose of ensuring domestic price stability.

There has also been an increasing use of export taxes with the objective of ensuring sufficient domestic input supply to support domestic downstream industry. In a number of cases this objective has been made explicit, as in the case of export taxes on cocoa, rattan, crude palm oil, and mineral ores. In some cases, the use of export taxes has led to some success in promoting greater domestic processing, as in the case of cocoa. However, in others, it might suppress income for raw material producers and workers in the short term, and in the long term it might even reduce supply capacity due to a disincentive to produce and improve productivity. The exact implications vary from case to case and depend on manifold factors.

B. Non-tariff Measures

Indonesia has also introduced a number of non-tariff measures (NTMs) of late. The recent proliferation of regulations related to licensing is a cause of concern. Regulations on non-automatic import licensing were recently applied to a broad range of final consumer goods, and there is also a requirement for pre-shipment verification for some. In these cases, import licences will now be issued subject to the discretion of relevant sector ministries, and have become a source of business costs and uncertainty. Importation of certain horticulture products is now also restricted to specific designated ports and airports (Tijaja 2013a).

The GOI has also recently introduced separate import licences for goods imported for use in the production process (value-added manufacturing) and further distribution (not for further processing) applicable for some products. Various import restrictions are also in place for key commodities, such as rice, sugar, and salt as well as alcoholic beverages. The increasing use of NTMs has generated concerns among businesses and investors. NTMs are generally less transparent, harder to monitor, and less coordinated due to their cross-agency nature, as such, they are a potential source of business uncertainty. The GOI needs to communicate clearly and consistently the policy objectives

of any new measures that are being introduced, including NTMs. It needs to do so with an awareness of the implications they may have on current and potential business and investment, the longer term costs to value chain competitiveness, and their international obligations.

One type of NTMs is standards. Standards have become increasingly prevalent in GVCs. The capacity to meet the ever demanding standard requirements of international and other high-value markets, has become a criteria for participating in GVCs. Standards are also used by governments for the public policy objective of protecting the health and safety of their population and environment. Standards allow the codification of complex technical and quality information that would address information asymmetry and enable hands-off coordination among firms in GVCs, and as such, facilitate the fragmentation of production processes. Standards allow inter-operability in network economies and are also used by firms to signal the quality of their products. However, standards can also be used as a trade-distorting measure when they are introduced with the intent to deter access of competing imported goods and services, resulting in deadweight loss (Tijaja 2013b).

There are three key roles that governments can play in regard to standards. First is to strengthen the country's standards and conformance infrastructure. Second is to enhance the compliance capacity of domestic industry actors (particularly the smallholders). Third is to strategically participate in standards-setting bodies. Accessibility of conformity assessment services is critical, and while most can be competitively provided by the private sector, others might need to be provided by public institutions on a reasonable or concessional user-pay basis. The costs of standards compliance can also be prohibitive for smallholders, particularly for training and certification (Tijaja 2013b).

The new Industrial Bill regulates measures relating to standards compliance. One of the provisions stipulates that the implementation of Indonesian National Standard (Standard Nasional Indonesia or SNI) is voluntary. However, the other provision provides for mandatory adoption of SNI, with technical specifications and guideline procedures, as determined by the Minister of Industry, and the penalties for noncompliance.

The bill does not just regulate standards in relation to goods but also to services. Article 25.7 stipulates that administrative sanctions will be imposed on companies in industrial zone that are not complying with the National Standard for Work Competencies (Standar Kompetensi Kerja Nasional Indonesia or SKKNI). The SKKNI uses the same reference as the Profession Certification Institution (Lembaga Sertifikasi Profesi or LSP), where the GOI has been encouraging Indonesian workers to get certification from to prepare them for competition when the AEC is launched in 2015 (Jakarta Post 2014b). The transparency of requirements and the process of SKKNI are crucial in determining whether it will be trade facilitating or will act as a non-tariff barrier.

C. Tax Facilities

In 2011, the Ministry of Industry issued Regulation No. 93/M-ID/PER/11/2011 on guidelines and processes of applying for corporate income tax exemption or reduction facility for the industrial sector. The six pioneer industries eligible for tax facilities are base metal industry, oil refinery industry and/or basic petrochemical industry, machinery industry, renewable resources industry, and telecommunication equipment industry. The Minister of Finance may decide on other pioneer industries provided that they meet these criteria: industries that have wide networks, high value added and externalities, can introduce new technology, and have strategic value for the national economy.

The granting of tax facilities is subject to analysis and verification by a working team composed of the Director General of Industrial Development, Industrial Climate and Quality Policy Analysis Body (Badan Pengkajian Kebijakan Iklim dan Mutu Industri or BPKIMI), the Secretariat General, the Investment Coordinating Board (BKPM), and led by the Director General of Industrial Development for the relevant sector. Firms are required to submit an application for such facility to the Minister of Industry, copied to the head of the working team. The application will need to contain details on infrastructure availability in the location of investment, domestic employment absorption, assessment on how the criteria of a pioneer industry have been met, and proposed steps for technology transfer. The regulation sets out a strict timeline and steps for the processing of applications.

In addition to income tax facility, the GOI also offers fiscal incentives in the form of import duty exemptions to industries in certain sectors on an annual basis. The GOI reviews the list of eligible industries every year, taking into consideration the input from industry players. Exemptions are provided for industries using imported goods and materials to produce goods and/or services with the following criteria:

1. providing goods and/or services for public interests, being consumed by the general public, and/or protecting consumers' interests;
2. improving competitiveness;
3. creating more job opportunities; and
4. contributing to state revenues.

Goods and materials for which an application for exemption is made must fulfill the following conditions:

1. not yet produced locally;
2. already produced locally, but not yet fulfilling the specifications required; or
3. already produced locally but the volume is not sufficient to cover the industry's demands.

Import duty exemption is also available for the import of capital goods for certain business sectors, e.g. , by an independent power producer, or for a purpose. An example is the Minister of Finance Regulations No. 177/PMK.011/2007 that controls import duty exemption on goods imported for the purpose of upstream oil and gas, and geothermal business activities.

Import duty reduction facilities may also be granted to manufacturing or service companies that are developing or expanding their business in Indonesia. These incentives include a reduction of the duty rate to 5.0% on imported machinery (excluding spare parts and components) and raw materials for a specified period, e.g., 2 years²².

Import Facilities for Export Purpose (KITE) is also offered, and is defined as the granting of exemption and/or restitution of duties for imported goods and/or materials to process, assemble, or be installed on other goods, the products of which are mainly intended for export. KITE, however, is not applicable to raw materials and supporting materials that are not integrated with finished products (Deloitte 2012).

²² See <http://www.kpmg.com/cn/en/aspac-trade-and-customs/pages/trade-customs-indonesia.aspx>

D. Upgrading Support

Indonesia's industrial policy objectives point to the desire to achieve global competitiveness through, among other things, the application of appropriate technology and knowledge. The GOI is keen to support higher value added participation in GVCs, including through the building of technological capabilities and industrial upgrading.

One policy instrument that has been used by the GOI to facilitate upgrading is the provision of support for machinery upgrading of select industries. The objective of this measure is to improve the competitiveness of the sector by replacing old machinery with newer machinery that would be more productive and energy efficient. So far resources have been allocated for the textile, apparel, and footwear industry, and the sugar industry. In the case of textile, enterprises have the choice of receiving a rebate²³ for direct purchase of new machinery or soft credit.

Some questions were raised regarding the effectiveness of the measure. First is the issue of redundancy rate; that is, how much of those investments would have been made anyways without the measures (Thébault-Weiser 2008). Second, whether the measures evenly reach all firms in the sector, including small and medium enterprises or only relatively large firms would benefit from them. Last, but not least, it appears that the measures are currently targeted at existing rather than new (pioneer) industries, which raise the question of whether the right industries have been targeted.

E. Investment Regime

The Investment Law of 2007 sets the parameters of the investment regime in Indonesia. The law guarantees national treatment, protection against expropriation, and recourse to international arbitration in the event of a dispute with the government. The law also sets out the guidelines for investment incentives and institutional arrangements to administer investment projects. In a general sense, the law positively reflects the GOI's commitment to an open and transparent investment regime (Tijaja 2013a).

There are two priority areas that require addressing in Indonesia's investment regime. First is policy certainty. The review process for the investment negative list (Daftar Negatif Investasi or DNI) can be improved through better consultation, transparency, and link to current industrial policy framework. Under the current system, a sectoral ministry might introduce new restrictions to investment that are not timely incorporated into the prevailing investment negative list, creating uncertainties and confusion. Having a transparent review process for the negative list that would serve as the main mechanism for any changes to the investment regime in any sector will improve policy certainty.

The second area that needs addressing is the existence of inconsistencies between national and sectoral policy, and between national and subnational policy. Indonesia's decentralization effort may be aimed at reducing bureaucratic red tape and making investment more responsive to regional needs and priorities. However, the unintended consequence is increased uncertainties and inconsistencies for investors when there is discrepancy between subnational and national policies. This is partly due to the varying capacity of local authorities to formulate, interpret, implement and enforce the regulations, and the lack of a framework (or weak implementation of such a framework) to

²³ The rate of rebate is differentiated between domestic and imported machinery. This might be in violation of Indonesia's WTO commitments.

coordinate investment policies at all levels of government. Under the current Medium-Term Development Plan (RPJMN 2010–2014), the GOI, led by BAPPENAS, plans to conduct a comprehensive regulatory review of inventory, and review and simplify laws and regulations at all levels of government. This effort, if successful, will build on the current momentum of high investment flows.

F. Local Content

The new industrial bill includes a provision that would allow the government (through the Minister of Industry) to set local content requirements for selected industries.²⁴ The bill also contains a provision that would encourage government institutions and SOEs to use domestic products.²⁵ Details of the definition and criteria of domestic products and strategic industries are needed to allow for policy assessment. Depending on the definition, flexibility might also be required in light of the fact that some goods might not be domestically produced to the required level of quantity and quality.

The GOI also currently has a procurement program to promote the use of domestic products by obliging government authorities to maximize local content in procurement using public budget. To operationalize this policy, the GOI is providing free certification services for firms that would like to verify the level of local content in their products. This service is outsourced to two designated surveyors. Certified goods and services would be granted prioritization in the procurement process. In practice, implementation of this measure might have uneven implications, as it might be harder for smallholders or firms located in outer regions to benefit from such initiative.

G. The Weakest Link

The measures above highlight how the GOI has sought to pursue its industrial development objectives. Some measures are likely to be more effective than others, nevertheless, they all point to the government's effort to adopt a holistic and proactive approach to industrial policy.

There are two areas that appear to be the weakest link in this strategy. First is labor and human capital, and second is innovation; the two are related. It is commonly acknowledged that labor market instability is a key source of business uncertainty in Indonesia. The implementation of regulations relating to outsourcing and the setting of regional minimum wages has regularly led to workers' strikes. So far, discussion focuses mainly on reducing hiring (and firing) costs, particularly from the business perspective.

Due to a large number of unemployed persons (7.4 million in August 2013), the bargaining power of workers in Indonesia, particularly those in labor-intensive industries, is very low. They are not only forced to accept low real wages, but also a non-permanent, contract-based employment, which makes them even more vulnerable. They can be easily replaced by new job applicants, who are not inexperienced as the latter have been previously hired by another firm but, for some reason, had to leave and look for a new employer.

A minimum wage policy that is created by region is problematic for several reasons. First, the process of determining regional minimum wage, which is based on predetermined living cost indicators, has been more political than technical. Even though a survey has been conducted to assess regional living costs, which involve representatives from workers, employers and the local governments

²⁴ Article 87, verse 4.

²⁵ Article 86, verse 1.

(tripartite), the decision made by the local government on the minimum wage often does not refer to the survey. Instead, the government decision tends to be influenced mostly by an imbalanced negotiation between employers and workers. Second, once the minimum wage is decided by the local government, law enforcement for the policy is often weak. Many companies often request postponement to comply with the new minimum wage due to financial constraints. There are also some companies that still pay their laborers under the minimum wage without getting penalties.

In addition to the problem of low real wages, there have been very limited government incentives provided to workers relating to health, education for children, pension as well as accommodation and transportation costs. Except for those who live in Jakarta, there are no health or education subsidies provided by the local governments. There are also very limited subsidies provided by local governments and/or employers to cover accommodation and transport costs to and from the workplace while these costs may account for 35.0% of wages. Furthermore, because many firms impose a contract-based employment, there is no superannuation or pension provision, or incentives based on productivity and experience.

Vocational training for workers has rarely been found particularly in labor-intensive sectors. Training services provided by government-funded training centers are also very limited and often irrelevant to the needs of the industry. This is different from the situation in the 1980s and 1990s when there were many firms, especially Japanese firms, which conducted vocational training during the weekends for their laborers.²⁶

Policymakers and businesses should start to consider workers as assets and a source of productivity and innovation rather than costs to production. While having a stable labor market is important, the main objective should also include developing a competitive labor market. The latter should focus policy toward developing workers' productivity, including through education curricula and training centers, and also providing incentives to employers and workers to participate in on-the-job training and invest in productivity improvement. Labor policy should be an integral part of industrial policy as labor is an indispensable input to the industrialization effort. For instance, if the government has to raise minimum wage, they should prepare a set of policies to minimize the increase in other production costs, such as energy costs, loan interests, and deregulate to minimize logistics costs, etc. This burden sharing between the government and firms will be able to sustain or even increase industrial competitiveness.

On innovation, there has been an increasing awareness on the part of the GOI on the contribution of science and technology (S&T) on economic development. However, it was not until recently that there are focused efforts to integrate S&T into the national development strategy. The MP3EI expressly acknowledges increasing technology contribution as one of its three main strategies. Innovation-driven development underlies the third phase of the MP3EI implementation. Innovation is an underlying contributor to upgrading GVC participation at the firm and at the wider economy level. R&D in Indonesia had lagged behind other economies in the region. The two main reasons for this are the lack of synergy and awareness between research efforts and industry needs, and the low technological capabilities of domestic industries, as evidenced in the low adoption rate of developed technologies.

²⁶ Interviews with the Confederation of Indonesian Trade Unions (KSPI) on 5 March 2014 and the Confederation of National Trade Unions (KSPN) on 12 March 2014, in Jakarta.

R&D is still mostly undertaken as in-house efforts by individual firms, with few collaborations and sharing among industries, and between industries and research institutions. Better alignment of regulations, policies and incentives to promote innovation is also required, and would include regulations on S&T, finance and tax systems, manufacturing and service industries as well as trade, education, and intellectual property policy. The GOI should demonstrate commitment to supporting R&D, among other things, by meeting the current expectation to allocate a greater share of the GDP for supporting R&D.

Current efforts to boost innovation are centered on the development of a national innovation system as stated in the Ministry of Research and Technology's Strategic Plan 2010–2014. The establishment of National Innovation Committee was mandated by Presidential Regulation no. 32/2010, and the review process of S&T law and regulations is underway. There are also plans to revitalize the National Research Council, develop or revive S&T Park and research centers, and facilitate the formation of R&D consortiums (Pahlevi 2013). A regional and/or cluster approach to innovation will also be undertaken by putting innovation in the center of the development of the six economic corridors. Strong human resources, good information network, and established quality institutions were highlighted as imperative to innovation efforts (Pahlevi 2013).

VII. CASE STUDY: THE MINERAL SECTOR

A. Overview

The mining sector provides a concrete example of the GOI's effort to accelerate industrial development. It is a sector that Indonesia is blessed with natural comparative advantage in and one that is well-connected to GVCs. The GOI, however, does not want development of the sector to be constrained by static comparative advantage alone. This aspiration is not a new one, but one that has only recently gained momentum in its realization. The myriad of stakeholders and interests involved, and manifold factors for consideration point to the challenge of designing and implementing an effective industrial policy. This high risk, however, is no reason to fully abandon efforts. Under the right conditions, the potential benefits of intervention may more than offset the potential loss for leaving matters in the invisible hands of the, often imperfect, markets.

The mining and quarrying sector comprised 11.2% of Indonesia's GDP in 2013 (Bank Indonesia Real Sector Statistics 2014).²⁷ Indonesia is the world's largest exporter of refined tin and nickel ore and a significant exporter of iron ore and bauxite (Tijaja 2013a). Mineral ores have long been a key contributor to Indonesia's exports, which are still concentrated on energy and natural resource-based products (minerals), with little change over the last decade. In 2010, mining and quarrying (including coal) accounted for 27.0% of total exports, followed distantly by food, beverages and tobacco at 8.0%.

The share of mining in total exports has been on the rise lately at the expense of the shares of agriculture and industry exports. Overall mining exports amounted to \$31.32 billion throughout 2013, out of \$182.57 billion in total exports (Yulisman 2014c). This means mining accounted for 17.0% of total exports in 2013, a near tripling of the share in 2003 of 6.5%. The shares of agriculture and industry fell in the same period from 4.2% to 3.1%, and from 66.9% to 61.9% respectively (Kementerian Perdagangan 2014). As shown later, this is at least partly a short-term reaction to the GOI's policy of banning mineral ore exports by 2014.

²⁷ See http://www.bi.go.id/sdds/series/NA/index_NA.asp

B. Sectoral Policy Objectives

Earlier in the paper, we have highlighted Indonesia's industrial policy direction focusing on increasing the contribution of non-oil and gas manufacturing, maximizing the value adding potential of its domestic resources, including through ensuring domestic supply of raw materials and achieving international competitiveness. These are echoed in the sectoral policy objectives of the Ministry of Energy and Mineral Resources (Kementerian Energi dan Sumber Daya Mineral or KESDM). The vision of KESDM is to realize energy security, and improve energy and mineral value added to generate greater benefits for the Indonesian people.²⁸ Its missions include improving domestic supply security for mineral commodities, developing domestic capacity in processing minerals, and increasing value added from mineral resources.

The mining sector and its various subsectors have been highlighted as priority sectors in a number of policy documents. In the MP3EI mining is identified as one of the sectors that will be the focus of accelerated industrialization efforts. Of the 22 main economic activities under the MP3EI, four are directly related to the mining sector— nickel, copper, bauxite, and steel. The base metal industry is also identified as one of the six pioneer industries eligible for income tax facilities.

The GOI's decision to promote domestic refining of mineral ores is not without considerations. Indonesia is the world's main supplier of nickel (18.0% for ores and 5.0% for processed nickel), lead (20.0%), and bauxite (15.0%). Up to October 2013, Indonesia exported 46.5 million tons of nickel ores, 16.1 million tons of iron ores, 47.0 million tons of bauxite, and 1.0 million tons of copper. Global demand for various commodities, most distinctly from the PRC, has been on the rise, but this increase is not always reflected in the price. Despite this significant level of, and increase in, exports, there is also little increase in government revenue from the sector, either from royalty or tax income.

Promoting greater domestic value adding will increase the sector's income earning potential, and consequently, revenue potential. Taking the example of nickel, Indonesia exported 55 million tons of nickel ore at around \$35 per ton. This amount of nickel ore can be converted to half a million ton of nickel at \$18,000 per ton. The potential difference in the value of exports would be \$7.1 billion (Soelarno 2014). How this would be translated into economic returns, however, would depend on the costs of developing and operating the downstream nickel industry in Indonesia.

The short-term impact of the ban will be the upward impact on the world price of commodities, particularly for minerals, for which Indonesia is a major global supplier. Buyers that rely heavily on Indonesian ores would be among the worst affected. The PRC, for example, imported 70.0% of its bauxite from Indonesia (Sulistio 2014). At the same time, opponents to the ore export ban also point to the likely worsening of the country's trade balance due to the decline in ore exports. In one estimate, trade deficit will increase by \$5.0 billion to \$17.7 billion or from 1.1% to 1.7% of GDP (Sulistio 2014). This view is incomplete, however, as it does not take into account of the longer-term impact of the ban, which, assuming competitive downstream industries could be developed, would lead to an increase in processed mineral exports that would more than offset the initial loss.

Experts have also argued that due to the high capital requirement in setting up smelters, Indonesia cannot afford to further postpone the implementation of the ban, as the economic

²⁸ See <http://www.esdm.go.id/ministry-of-energy-and-mineral-resources/vision-and-mission.html>

feasibility of such investment would be reduced if the country's ore reserves have been significantly absorbed by global demand.

C. From Policy to Implementation

Efforts to meet above policy objectives have been intensified in the last 5 years, starting with the introduction of Law No. 4 on Mineral and Coal Mining in 2009. The law obliges mining licence holders and production sharing contractors to process and purify mineral ores domestically, in which export of ores was banned starting 12 January 2014. For a few years, the law did not catch people's attention, partly because of the delays in the introduction of regulations to implement it and partly because business expects the GOI to make last minute changes as the law was unlikely to proceed without opposition from the powerful industry lobby.

The inertia on the business part has not only created uncertainties to investors, but also left the industry unprepared for the 12 January 2014 deadline. Ministerial regulations on the technical details of the domestic processing of mineral ores were issued only in May 2012, giving only less than two years before the deadline. Building smelters is a big investment that requires significant infrastructural support, including electricity. Smelters would have to be built outside of Java, close to the source of materials, but where the condition of infrastructure remains wanting. This is not a problem that can be left to the private sector alone, as the investment for captive power unit is sometimes larger than the investment for the smelter itself (Lingga 2014). The regulation, among other things, also imposes an average of 20.0% export taxes on 65 types of raw materials, excluding coal, and the rate was expected to increase to 50.0% the following year, leading to a complete ban in 2014 barring some exemptions (Tijaja 2013a). The regulation also laid out the required purity level for each individual mineral (McBeth 2014)

As the deadline was looming, Susilo Bambang Yudoyono's (SBY) administration realized that the implementation of the law would face a high probability of failure, and submitted a request for a 3-year extension to the introduction of the ore export ban to buy more time for the industry to build smelters. This appears to be a time-buying strategy with no obvious plans on how to address underlying issues. On 5 December 2013, the Energy Commission decided to refuse the SBY's administration request. Skeptics were quick to point that the refusal was a reflection of pre-election populist campaign than a genuine reflection of policy consistency.

In anticipation of the export ban, businesses hiked up exports in the months preceding the ban. Major importers have also expressed their concerns, and Japan had signalled the possibility of taking the case to the WTO. The 2009 Mining Law also requires foreign majority-owned firms to divest majority ownership to national investors 10 years after commercial production.

As it was becoming obvious that the implementation of the ore export ban will be going ahead as scheduled, the GOI devised an 11th hour strategy to ensure implementation. It was obvious that the permitted mineral purity level set in the 2012 ministerial regulation is unlikely to be achieved under the current domestic smelting capacity. The responsible ministry, KESDM, issued Regulation No. 1 of 2014 in January setting out a revised purity level. The regulation maintains the obligation for the processing of five main mineral commodities of nickel, bauxite, lead, gold, silver, and chromium (to 99.9% purity level) because there are no semi-processed products. However, copper, lead, iron, zinc, and manganese can still be exported in concentrate forms up to 3 years. The watered down new allowable levels of purity were 15.0% for copper, 57.0% for lead, 62.0% for iron, 52.0% for zinc, 49.0% for manganese, and 56.0% for ilmenite (titanium).

The decision on the new minimum purity levels led to protests by some as the new levels were seen to favor US-based giant mining companies PT Freeport Indonesia and PT Newmont, which together hold a dominant share of 97.0% of the country's total copper output. Both companies have already passed the minimum level (15.0% for copper concentrates) with their current processing level of around 22.0% for Newmont and 27.0% to 30.0% for Freeport (Jakarta Post 2014a; Pattiradjawane 2014).

A new twist to the story came soon with the imposition of progressive export tax obligations by the Ministry of Finance on mineral concentrate exports. Progressive export taxes started with 20.0% (25.0% for copper) in the first year until 31 December 2014, rising in half yearly increments to a prohibitive 60.0% in the second half of 2016. All minerals are to be refined in domestic smelters by 1 January 2017. The relief of PT Freeport Indonesia and PT Newmont from being allowed to export copper concentrates for another 3 years was short-lived. Both saw the imposition of progressive export taxes as a violation of their contracts, which prescribe no new taxes. Legal opinion, however, highlighted that the claimed violation might not be valid as the new taxes are being applied indiscriminately to all firms, not just to Freeport and Newmont, and are part of Indonesia's legal framework, which the contracts would need to adhere to. Informed analysis would require assessment of the actual contract terms.

Firms that do not have the capacity to build their own smelters would have to cooperate with others that do. Many foreign-based mining firms insisted that building smelters were commercially unfeasible, with some threatening closures or layoffs if implementation of the law is to go ahead. However, there is variation in private sector response, as shown later.

In addition to the obligation to pay progressive export taxes, exporters of processed minerals like copper iron or manganese concentrates, are also required to obtain export permit, but not those exporting refined minerals, such as nickel matte and ferro nickel (Yulisman 2014a). All mineral exporters, however, have to be registered exporters at the Ministry of Trade and undergo pre-shipment verification. The export permit is required to acknowledge that exporters have met the minimum processing level set by the KESDM, with a recommendation on their volumes and types of products from the said ministry. The GOI also requires firms that have committed to building smelters to deposit some funds as a guarantee of their commitment. The fund will be deposited into a bank and monitored by the KESDM. The amount of guarantee has yet to be set, but is estimated to be around 5.0%–10.0% of project value.

Whether the industry will be able to build sufficient domestic smelting capacity in time for the 2017 deadline remains to be seen. But failure to implement this obligation will adversely affect the credibility of the GOI's policy. Currently, out of a total of 4,458 mining permit holders, only 66 are committed to building smelters, with 12 others currently conducting feasibility studies to build smelters. Of the 66, 25 are in the final stage of constructing their smelters, 10 are in the middle of construction, 15 have just started, and 16 are still awaiting government approval of their environmental impact analysis (Jakarta Post 2014a).

Some mining companies still think twice about developing smelters for various reasons, including economic infeasibility. The Indonesian Employer Association (APINDO) is concerned that the development of smelting facilities may not be effective to increase export earnings considering many countries have developed a mineral processing industry and this may result in an oversupply of processed minerals in the international market. On the other hand, Indonesia, as one of the world's

largest mineral ore exporters, already had established markets and trading partners for these commodities. APINDO suggests that even if giant mining firms, such as PT Freeport Indonesia and Newmont, were able to develop new smelting facilities as required by the new policy, they are not sure whether the products can be marketable enough in the international market given the abundance of these processed products, and the fact that overseas buyers for these products are yet to be identified. APINDO suggests that the government should allow some flexibility in the implementation of the 2009 Mining Law.²⁹

The strong response from the private sector has led to yet another backtracking on the part of the GOI. The GOI is revising the progressive export tax and is currently drafting a new regulation on export duties that would more than halve the base rate to be paid by miners (Reuters 2014). The current export tax kicks in at 20.0% to 25.0% and rises to 60.0% in the second half of 2016, before a total concentrate export ban in 2017. The new reduced export taxes will be available only to eligible mining companies that have agreed to build a smelter in the country. Additionally, the policy would also include tax incentives for the construction of smelters within the country (Dezan Shira & Associates 2014).

While the most audible response from the private sector has been the reaction from mining giants, such as Freeport and Newmont, reactions actually vary even among the private sector. PT Freeport Indonesia started off as one of the more aggressive firms in opposing the policy. It has been threatening arbitration, output cuts or suspension, and layoffs (Jensen 2013). A subsidiary of US-based Freeport McMoran Copper and Gold is currently working to get its export licence to enable it to continue exporting copper concentrates (Cahyafitri 2014a). Freeport produced 915 million pounds of copper in 2013 and is currently supplying 40.0% of its annual sales to PT Smelting in Gresik, East Java, which has been operating since 1999, valued at \$1.7 billion in 2013, 400 million less than in 2012. In a positive development in July 2014, the GOI announced that it has successfully reached an agreement with the firm in a form of a memorandum of understanding (MoU), which would help smooth the path for the firm's contract renegotiation with the new government. Contract renegotiation is mandated by the new law and will center on six issues: the company's value-added obligation, contractual period, size of operation, local content obligation, government revenue and divestment. In the MoU, Freeport Indonesia has agreed to reduce its operation size, increase royalty payments, and pay export taxes in accordance with the progress of the construction of its smelter. It has also been given the permission to resume exporting its copper concentrate as soon as the Finance Ministry completes revising its regulations on export duties.

Newmont initially appeared to be taking a more conciliatory approach by seeking ways to find a solution together with the GOI. However, it then took a hard stance by first suspending its operations at its Batu Hijau mines, following the halt in the production and processing of copper concentrate. Its copper concentrate storage facilities have reached full capacity as it was unable to export without paying export taxes (Forbes 2014). Like other firms, Newmont insisted that the GOI export restriction policies violate the agreed contract. In July 2014, Newmont decided to lodge an appeal to international arbitration against the GOI. In response, the GOI expressed its disappointment with Newmont's appeal, as it was done in the course of negotiations to look at the possibility of jointly building a smelter with Freeport and the majority GOI-owned PT Aneka Tambang (PT ANTAM), and asked Newmont to withdraw this or face ramifications (Cahyafitri 2014b). Following further negotiations, Newmont agreed to withdraw the arbitration case after reaching an agreement with the GOI on outstanding

²⁹ Interview with Sofjan Wanandi, Chairman of the Indonesian Employer Association (APINDO) on 8 April 2014.

issues, such as export taxes and royalties, which will enable them to resume exporting copper concentrate (Sudrajat and Otto 2014).

PT Smelting is currently the only company that has built a large copper processing facility in Indonesia. The only other copper smelter that is built in Maluku by PT Batutua Tembaga Raya has a relatively small capacity. Since PT Smelting is only able to process one-fifth of Indonesia's output of copper concentrate, several companies have started to build new copper processing facilities as a response to the new policy. However, the development of these facilities will take a few years, leaving very little possibility that it will be up and running at full capacity by 2017.³⁰

PT ANTAM is among the first company that started processing and refining bauxite into alumina in 2013 in preparation for the ban, although its smelter will only start to operate optimally by the second quarter of 2014. PT ANTAM has set up a smelter in Tayan, West Kalimantan, to process bauxite into chemical grade alumina (CGA). The smelter is set up as a joint venture between Antam and Showa Denko K.K. (SDK) Japan (Kota, 2014). This is Indonesia's first bauxite smelter and is the biggest in Southeast Asia, with annual capacity of 850 thousand tons of bauxite or 300 thousand tons of CGA. West Kalimantan, along with North Sumatra, has been identified by the Ministry of Industry as the location for aluminium industry cluster.

Firms from the PRC have also stepped up plans to build refineries for nickel pig iron (a substitute for higher grade refined nickel in stainless steel), although plans for more expensive alumina refineries have progressed less quickly. One firm indicated that it would be ready to export nickel pig iron from its new facility in the second half of 2014, which will be further processed in the PRC into 10%–15% grades. One firm, Bosai Minerals, pulled out its plan to build alumina plant that was expected to produce 2 million tons per year, while Hongqiao Group expects its alumina plant to be completed by the end of 2014 (Yam 2014).

The mining sector accounted for one-fifth of total realized foreign direct investment (FDI) in 2013. The GOI claims that the policy will attract more investment into the smelting industry in the future. The Investment Coordination Board (BKPM) estimated that prospective investments in the construction of mineral smelting amounted to \$12.36 billion (Sambijantoro 2014). It further predicted that total realized investment in local smelters could increase up to threefold within the next few years if the Mining Law is implemented consistently. Any inconsistency in policy implementation, on the other hand, will result in a set back as investors will be unwilling to commit themselves to high investment in the midst of policy uncertainty. The recent backtracking was necessitated by poorly designed initial policy and time constraints. It is hoped that any future backtracking would be minimal and the GOI will be able to stand its ground to give better assurance of policy certainty.

Support to the policy has also been expressed by a number of parties. The Research and Technology Application Body (BPPT = Badan Pengkajian dan Penerapan Teknologi) expressed its readiness to provide technical support in the development of mineral processing and refining industry (Kompas 2014). It has provided similar support in the past, such as the development of nickel processing technology in Pomalaa, Southeast Sulawesi, and iron ore processing technology in South Kalimantan. The Indonesian Science Institute (LIPI = Lembaga Ilmu Pengetahuan Indonesia) also has the potential and capacity to provide similar support through its research center for metallurgy.³¹ A number of universities in Indonesia have also developed prototypes of mineral processing and refining

³⁰ The Jakarta Post (2014c).

³¹ <http://www.metalurgi.lipi.go.id/industrial-research-partnership-and-support/>

equipment, but none of which have been applied by the industry. This nevertheless points to a potential area for future collaboration.

D. Lessons for Policy Recommendations

While there is a general agreement to the spirit of the policy, the case study has shown the challenges and complexities in its implementation. The GOI appears to lack a well-formulated comprehensive strategy to implement the policy as evidenced in the ad hoc last minute responses to ensure the timely implementation of the export ban. There is however, growing evidence of increased coordination across ministries, in particular among the ministry responsible for the sector (KESDM), the Ministry of Industry, Trade, and Finance.

Reactions to the policy vary even among the private sector, reflecting the diverse business interests in any particular sector or industry. Some have embraced the policy as demonstrated in the increased realized investment in local smelters, while others have adopted a more aggressive stance. Further, as it was becoming more obvious that the GOI will consistently implement the policy, there were observed shifts of the industry's response toward finding a solution to deal with the situation. Equally important is the GOI's future management of the policy. Sustainable upgrading of the sector would require a more holistic approach and a greater focus on innovation and industry collaboration. The underlying issues of infrastructural deficiency and cumbersome regulatory process also need to be addressed.

VIII. CONCLUSIONS

The paper has attempted to do an in-depth comprehensive assessment of the evolution of Indonesia's industrial policies and recent efforts to enhance GVC participation. It has highlighted the complexities and challenges in policy making and implementation. While the challenge is not exclusive to industrial policies, increasing complexities and interdependencies in global trade and production networks, the role of external governance, and the cross-cutting nature of relevant support policies further reinforce the challenge. In a world of GVCs, competition is intensified while at the same time new opportunities emerge. With many countries the world over seeking to enhance their GVC participation, a better understanding of the working and configuration of GVCs as well as recognition of the inevitable necessity of international competitiveness and the amplified costs of inefficient policies become more important. While policy risks raise caution on the costs of policy mistakes, leaving matters entirely to markets carries as much a risk.

The role of government policies, both broad-based and specific policies, remains important. Their effectiveness in maximizing the gains from GVC participation depends not only on policy design, but also synergies across supporting policies. Effective implementation requires intensive coordination among stakeholders, both in the government and the business community. In the case of Indonesia, along with the fundamental problems of infrastructure and energy deficiency, the double-calamity of volatile labor market and low productivity, bureaucratic red tape, lack of synergies in government policies as well as lack of coordination among implementing agencies have all taken their toll on the competitiveness of the industry sector.

Successful industrial policy in a world of GVCs requires a few ingredients. First, government capabilities are required along the policy process, from design, translation into operating regulations, interpretation, and administration. Second, the willingness of the government to monitor policy

outcomes and change its policies as needed, including to revisit, stop, fine-tune programs with poor results, is required. To do so, there needs to be some distance between policy decisions and business interests, and this is a question of governance. Third, often, the most important change is simple. Consistency, transparency, and clarity of policy and policy process are extremely important, especially for an economy as big and as diverse as Indonesia. Clear leadership and effective coordination is key for consistency of policy, and include intra- and inter-ministerial coordination, sectoral-functional coordination, central-regional-local coordination, domestic-external coordination as well as inter-government coordination. Last, but not least, good policies are only half the battle won. Implementation is just as, if not more, important. The capacities of bureaucrats and administrators are crucial to effective implementation, while dedicated resources and efforts are necessary.

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Industrial Policy in Indonesia

A Global Value Chain Perspective

This paper traces the evolution of industrial policies in Indonesia from a global value chain (GVC) perspective. As the gains of a country participation in GVC are influenced, among others, by industrial policies, an understanding of both policy leverage and risks is imperative. Using the mineral sector as a mini case study, the paper assesses the Indonesian Government's recent effort to boost domestic value addition in the sector. It argues that the effectiveness of government policies in maximizing the gains from GVC participation depends not only on policy design, but also on policy consistency and coherence, effective implementation, and coordination.

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