

Chapter 5A

Engendering Inclusive and Resilient ASEAN

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Chapter 5A

Engendering Inclusive and Resilient ASEAN

Introduction

Equitable economic development and narrowing development gaps have been part and parcel of ASEAN lexicon in moving the region towards an integrated economic community. ASEAN Leaders have always been cognisant of the need for equitable development or inclusive growth in order for the benefits of regional integration to be fully realised and shared by virtually all the people in the region. Indeed, Pillar 3 of the AEC Blueprint, Towards a Region of Equitable Economic Development, clearly shows the high importance ASEAN Leaders put on equitable development or inclusive growth. ASEAN Leaders have also increasingly emphasised the importance of resiliency of ASEAN to both economic and non-economic shocks.

Chapter 1 of this Integrative Report shows that the case for inclusive growth in ASEAN remains compelling for the region post 2015. There is still a huge number of poor and marginally non-poor in most of ASEAN: in the late 2000s, about two-quarters of ASEAN population lived below \$ 2 PPP per day per capita, and of which about 100 million lived below the poverty line of \$1.25 PPP per day per capita. The poor and the marginally non-poor tend to be more vulnerable to significant price hikes and supply shocks of food products, to natural disasters, and even to energy shortages. In addition, AMSs have mixed records on income inequality, even if the record of ASEAN is decidedly better than China and major Latin American countries with respect to income inequality. Thus, engendering an inclusive and resilient ASEAN remains a major challenge for ASEAN moving forward beyond 2015.

Pillar 3 of the AEC Blueprint 2009-2015 focuses on two major measures, namely, SME development and the Initiative for ASEAN Integration (IAI). This chapter on engendering inclusive and resilient ASEAN expands the focus. In addition to SME development, the chapter discusses geographic inclusiveness and the importance of connectivity to geographic inclusiveness,

a special emphasis on Myanmar as a major means to narrow development gap in the region, the importance of agriculture to inclusive and robust growth as well as to food security, and disaster management and safety net issues as part of enhancing social inclusiveness and resiliency in the region. The next chapter, Chapter 5B, focuses on energy for a resilient and green ASEAN.

SME Development in ASEAN¹

Significance of, and importance of supportive policy environment for, SMEs in ASEAN.

Small and medium enterprises (SMEs) play an important role in ASEAN economic integration since between 95-99 percent of firms in the ASEAN Member States (AMSs) are SMEs. Together, they create between 43-97 percent of employment, contribute between 23-58 percent to the GDP, and 10-30 percent in total exports of AMSs (see **Table 5A.1**).

Table 5A.1 provides an indication of why development of SMEs would directly contribute towards achieving the implementation of the third pillar of the AEC Blueprint: they account for much of employment in AMSs, and employment creation is a key means of eradicating poverty. At the same time, because most firms are in fact SMEs, the dynamism of the economy is also dependent on the growth and dynamism of SMEs. That is, because the region's business players are preponderantly SMEs (including micro enterprises), the pursuit of SME development is in fact not just for equitable development in the region under the Third Pillar of the AEC Blueprint. The competitiveness and robustness of the region's economies depend to a large extent on the competitiveness and robustness of the region's small and medium enterprises.

¹ This section is largely contributed by Oum, ERIA.

Table 5A.1: Significance of SMEs in the Economy (Selected Years)

Country	Share of Total Establishment		Share of Total Employment		Share of GDP		Share of Total Exports	
	Share	Year	Share	Year	Share	Year	Share	Year
Brunei Darussalam	98.4%	2008	58.0%	2008	23.0%	2008	-	-
Cambodia	99.8%	2011	72.9%	2011	-	-	-	-
Indonesia	99.9%	2011	97.2%	2011	58.0%	2011	16.4%	2011
Lao PDR	99.0%*	2006	81.4%	2006	-	-	-	-
Malaysia	97.3%	2011	57.4%	2012	32.7%	2012	19.0%	2010
Myanmar	88.8%**	-	-	-	-	-	-	-
Philippines	99.6%	2011	61.0%	2011	36.0%	2006	10.0%	2010
Singapore	95.9%	2011	43.6%	2011	45%	2012	-	-
Thailand	99.8%	2012	76.7%	2011	37.0%	2011	29.9%	2011
Viet Nam	97.5%	2011	51.7%	2011	40.0%	-	20.0%	-

Note: * ADB (2013), ** Based on officially registered number of firms.

Source: Country's Reports, ERIA (2013c).

However, SMEs in the region are reported to face difficulties in access to finance, technology, and competitive markets. Entrepreneurship, compliance with standards, marketing and management are some of the other problems faced by SMEs in ASEAN. In addition, SMEs are in a much weaker position than large firms to deal with the vicissitudes of economic volatility. They will be forced to respond to these developments by implementing risk management strategies, speeding up customer payments, focusing on the retention of skilled staff where possible and critical for high tech SMEs, cutting costs, diversifying into new markets, and improving their corporate governance. However, this is unlikely to be an adequate response and will need to be supplemented by appropriate policies aimed at addressing these generated vulnerabilities.

Consequently, an appropriate SME policy framework is important to the growth of the private sector and development of SMEs, as is the need to ensure that the adverse consequences of external or exogenous disturbances emanating from regional trade partners have a minimal disruptive impact on domestic and regional economies. The policy regime for SMEs in the region is determined by both ASEAN initiatives and agreements as well as by national policies and programs. Towards this end, it is necessary to have a consistent SME policy framework in the ASEAN at both the national and regional levels. Additionally, there needs to be a comprehensive and effective monitoring tool

on whether the policies, programs and institutions are supportive of the development of SMEs in the region.

Strengthening of ASEAN SMEs requires improvement of human resources, provision of access to finance, technology and innovation, market internationalisation through policy support, measures, supplementary activities and appropriate communication. Providing access to finance for start-up SMEs is important in strengthening SME development in ASEAN.

ASEAN SME Initiatives and the ASEAN SME Policy Index. The AEC has focused on SME development through the ASEAN Policy Blueprint for SME Development (APBSD) 2004-2014 and the Strategic Action Plan for ASEAN SME Development (SAPASD) 2010-2015. The APBSD laid out strategic programs and policy measures that focus on five main priorities: (i) Human resource development and capacity building; (ii) Enhancing SME marketing capabilities; (iii) Access to financing; (iv) Access to technology; and (v) Creation of a conducive policy environment. Concrete and detailed policy measures, implementation time frame, and indicative outputs have been identified.

The APBSD was later replaced by the ASEAN Strategic Action Plan for SME Development (2010 – 2015) which outlines the framework for SME development as a key measure for equitable economic development in the ASEAN region. The Strategic Plan laid out policy measures to address: (i) Access to finance; (ii) Facilitation; (iii) Technology development; (iv) Promotion; and (v) Human resource development.

The APBSD and the Strategic Plan focus primarily on regional initiatives, with less emphasis given to consistent national SME policies. The development, however, of SMEs in the region is affected by both national and regional policy regimes and program initiatives. In addition, there seems to be no systematic mechanism to track the progress and effective implementation of the APBSD and the Strategic Plan. The results of the review of the APBSD implementation for the Mid-Term Review of the AEC Blueprint Implementation shows modest success at best based on the perception of key stakeholders on SME development in each AMS.

In order to contribute to the strengthening of policy and institutional environment for SMEs in ASEAN, the ASEAN SME Working Group and the Economic Research Institute for ASEAN and East Asia (ERIA) have been developing an SME Policy Index, inspired by the OECD SME Policy Index. The OECD SME Policy Index has been successfully used in the Western Balkans and Turkey as a monitoring tool as well as a tool for facilitating policy dialogue, program coordination and the promotion of good practices in the region.²

The ASEAN SME Policy Index would improve on the APBSD and the Strategic Plan by incorporating dimensions and initiatives at both regional and national levels. Drawing from the OECD SME Policy Index and insights from the studies done at APEC, the ASEAN SME Policy Index will have more policy dimensions than what are indicated in the APBSD and the Strategic Plan to attain the goals of ASEAN SME Development.

The ASEAN SME Policy Index can be expected to have useful functions to the ASEAN SME Working Group and the ASEAN member states, similar to the functions of the OECD SME Policy Index (OECD, 2009), which include:

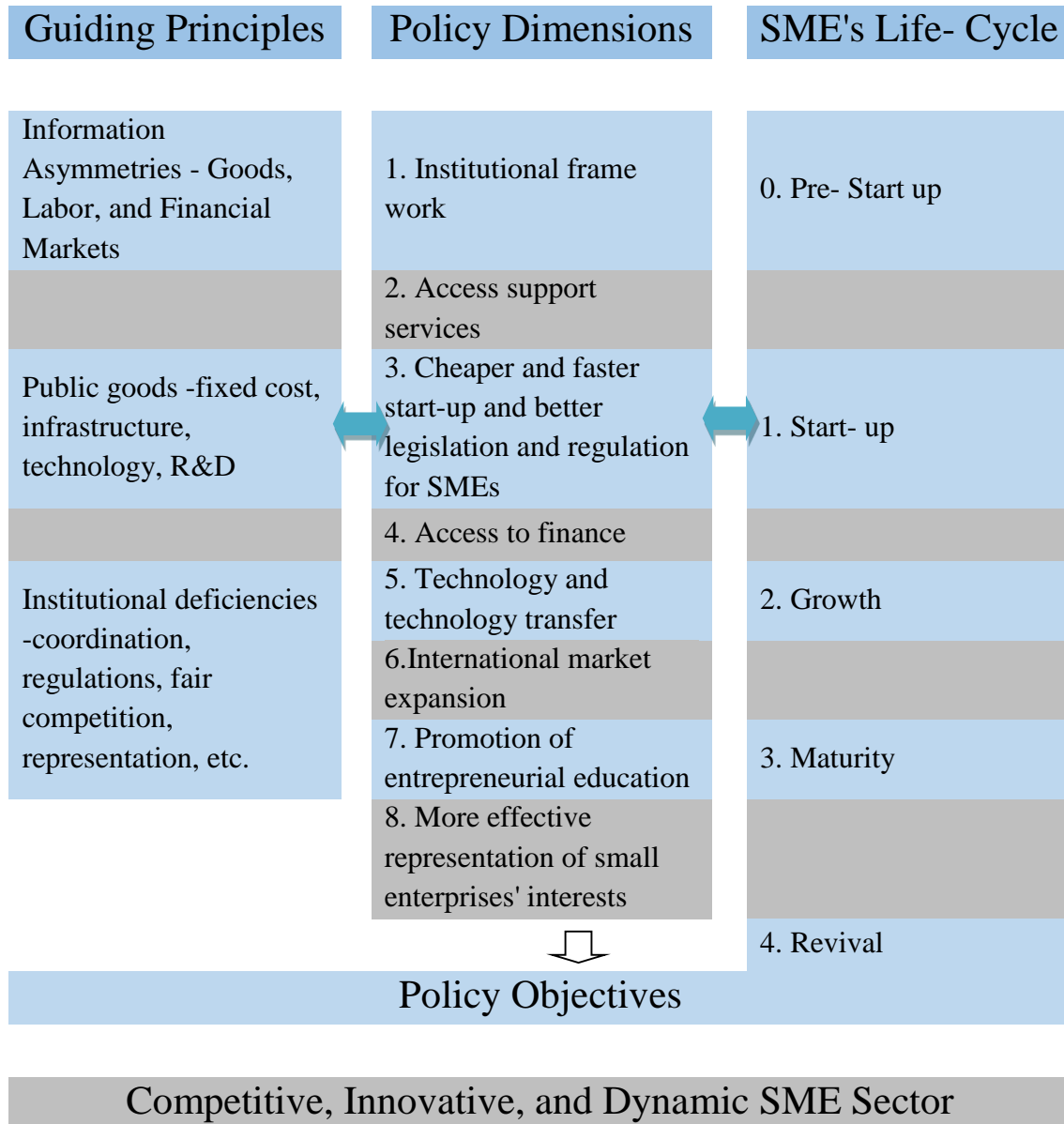
1. an analytical and dynamic tool to review SME policy developments on a number of policy dimension and across countries;
2. a process by which a group of countries sharing common policy goals agree on developing a joint framework for monitoring and comparing SME policy developments; and
3. a framework to exchange experiences, good practices and foster policy dialogue.

In order for SMEs to become more competitive, innovative, and dynamic, the ASEAN SME Policy Index is designed to improve the business environment that must be relevant to SMEs in any of the five stages of their life cycles (pre-start up, start-up, growth, maturity, and revival). The Policy Index is a comprehensive and effective monitoring tool. It also facilitates policy

² The OECD SME Policy Index has also been adapted and replicated in North Africa and the Middle East region, the Eastern Partnership countries of the EU (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) and country-specific assessments in Egypt, Morocco and Moldova.

dialogues and connects the regulatory and policy environment towards good practices (**Figure 5A.1**).

Figure 5A.1: SME Development Policy Framework and Firm Life-Cycle



Source: ERIA (2013c)

The Framework for ASEAN SME Policy Index follows the approach of the OECD SME Policy Index; that is, the Index is composed of a number of policy dimensions, each of which is subdivided into a number of sub-dimensions. Each sub-dimension is in turn composed of a number of indicators. Finally, each indicator will have a number of levels of policy reform or a set of policy reforms.

The following is a list of eight policy dimensions of the ASEAN Policy Index based on the ASEAN SME Blueprint, the Strategic Plan, and the OECD:

1. Institutional framework;
2. Access to support services;
3. Cheaper and faster start-up and better legislation and regulation for SMEs;
4. Access to finance;
5. Technology and technology transfer;
6. International market expansion;
7. Promotion of entrepreneurial education; and
8. More effective representation of SMEs' interests.

The ASEAN SME Policy Index is different from the OECD SME Policy Index in its policy dimensions, sub-dimensions, indicators, and levels of policy reform because its design needs to reflect more specific circumstances of the ASEAN region.

Each of the policy dimensions is further divided into sub-dimensions in each specific area. Furthermore, the sub-dimensions are broken down into indicators. Finally, the indicators are structured around six levels of policy reform, starting from 1 for no specific policy measure or institution (poor) to 6 for a well-functioning institution or effective implementation of each policy measure (best practice). For example, in order for business registration as one of the indicators in the policy sub-dimension 3 for cheaper and faster start-up to qualify as best practice, level 6, the registration process must take less than 5 working days, require only one administrative step, and cost less than US\$50.

The assessment of the ASEAN SME Policy Index was conducted by an independent research team from each AMS through a questionnaire survey and in-depth interviews. The assessment, in the process, draws inputs from government agencies, private sector and other SME stakeholders. The results of the assessment from each country are put together for consultations with

government agencies and are compared and discussed at the workshop for refinement. The results are then internally reviewed by the panel of experts from the OECD and ERIA to ensure their consistency between countries and across the region.

The process to come up with the SME Policy Index therefore is participatory in its nature. At the same time, it offers a fair evaluation of policy implementation through independent and peer-review process.

The method measuring policy implementation by means of the indicators offers flexibility for a country to choose policies that suit well with the country's situation. This flexibility also means that the SME Policy Index is adaptable to different policy processes and institutional settings, given a wide difference in development and political settings of the AMSs.

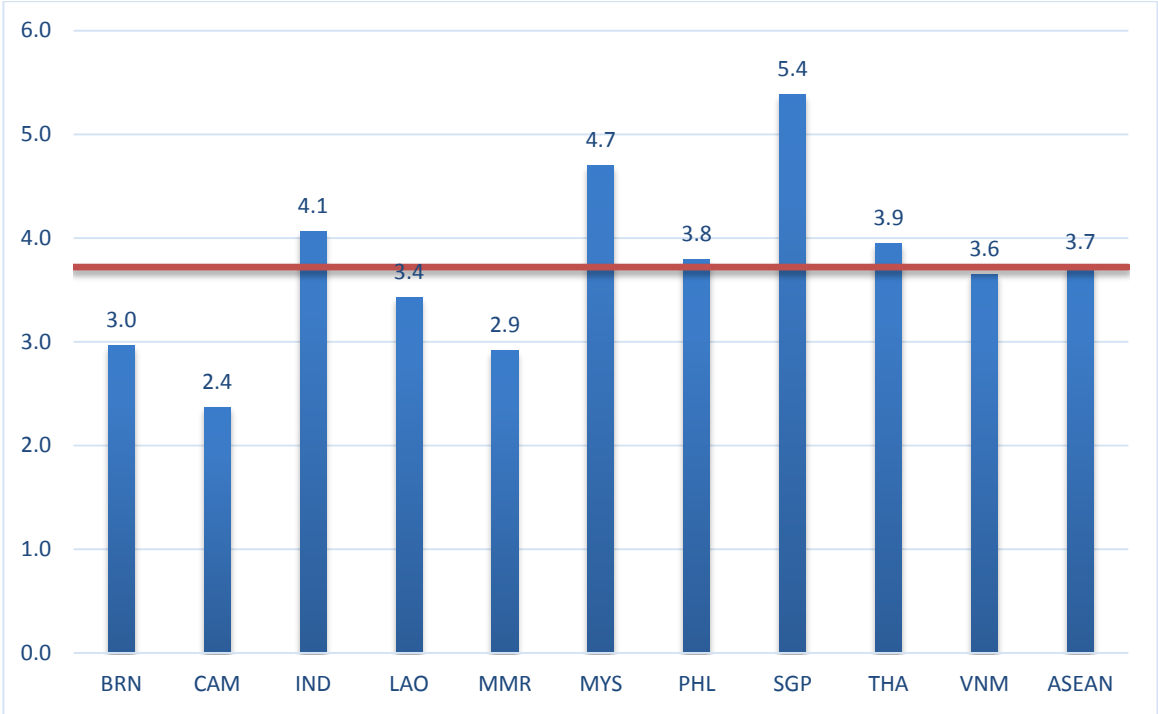
General Findings from the ASEAN SME Policy Index. The results from the Policy Index suggest an uneven level of performances in the implementation of SME development policy at the national level between the two traditional groups of the AMSs, namely, the less developed members (Cambodia, Lao PDR, Myanmar, and Viet Nam or the CLMV countries) and the more advanced members which include Brunei Darussalam, Indonesia, Malaysia, the Philippines, Thailand, and Singapore or the ASEAN-6, with the exception of Brunei Darussalam which has a relatively lower score compared with Viet Nam and Lao PDR (see **Figure 5A.2**).

On average, Singapore, Malaysia, Indonesia, Thailand, and the Philippines have aggregate index scores above the ASEAN average, followed by Viet Nam, Lao PDR, Brunei Darussalam, Myanmar, and Cambodia whose aggregate index scores are below the ASEAN average.

Across the eight policy dimensions, there are big gaps between the ASEAN average, ASEAN-6 and the CLMV countries. The most significant gaps and low regional standing are found in five policy dimensions. They are: (5) *Technology and technology transfer*, (4) *Access to finance*, (7) *Promotion of entrepreneurial education*, (3) *Cheaper, faster start-up and better regulations*, and (2) *Access to support services* (see **Figure 5A.3**). Underlying the gaps of performances between AMSs in these key policy dimensions would be

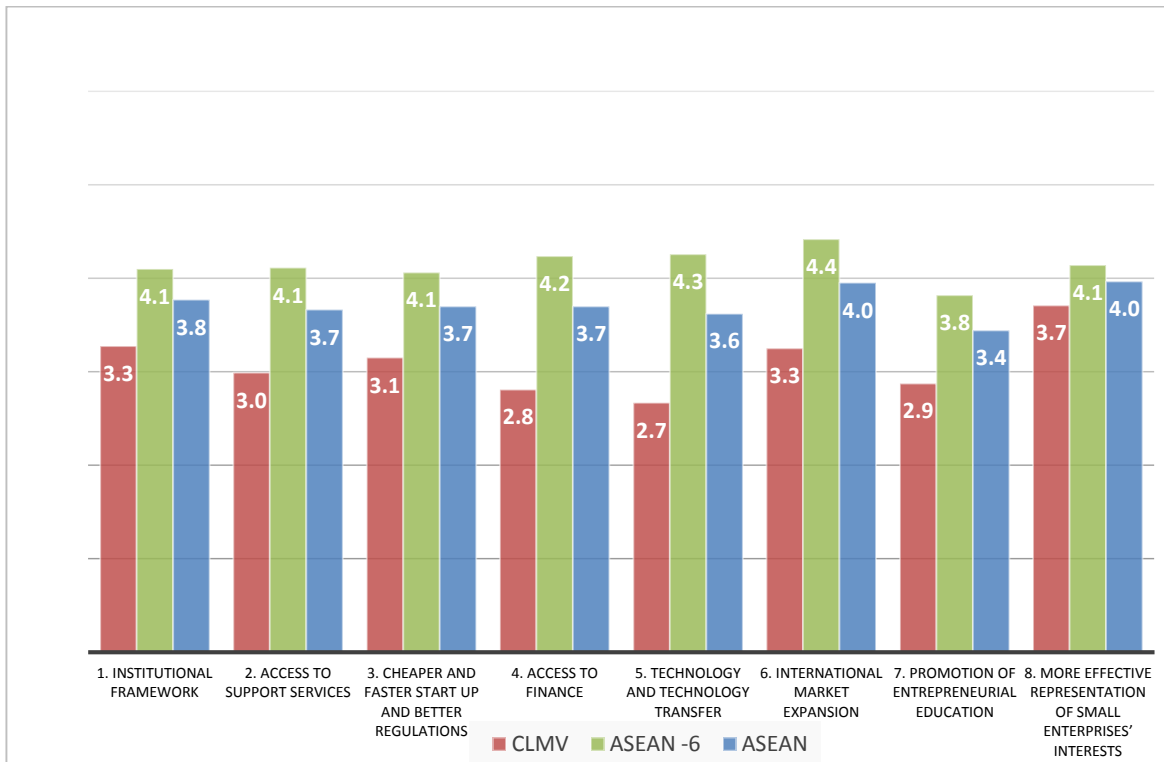
explained further by the status of legal frameworks, institutional arrangements, and the elaboration and implementation of specific policy measures in each AMS.

Figure 5A.2: ASEAN SME Policy Index - Average



Source: ERIA (2013c)

Figure 5A.3: ASEAN SME Policy Index - By Group of Countries and Policy Dimension



Source: ERIA (2013c).

The biggest gap is in the policy to promote *technology and technology transfer* due to the lack of strategic approach to innovation policy for SMEs, poor provision of information on innovation support services, limited access to standard certification services, lack of technology support in universities, and R&D labs and incubators with little linkages with SMEs. Other contributors to the large gap are poor protection and promotion of intellectual property rights (IPRs), lack of broadband infrastructure, underdeveloped science/industrial parks, less competitive clusters, and insufficient financial incentives in technology development and R&D activities.

The gap in *access to finance* is exacerbated by the poor functioning of the cadastre system, stringent collateral requirements and inadequate protection of creditor rights. In addition, credit risk guarantee schemes and central bureau for credit information, which are essential to promote collateral-free finance, are not well established. The legal framework/policy to promote alternative finances and diversified financial markets (ranging from microfinance to

leasing to factoring to venture capitals, equity funds, business angels, to stock markets) is inadequate or lacking in a number of AMSs.

Access to support services to SMEs is severely hampered in the CLMV countries by the lack of action plan for the provision of support services, poor services of business development centres (BDS), lack of legal framework, underutilisation of E-commerce and E-government services, and unreliable on-line portal for SMEs.

There are also variations between AMSs in making ***cheaper, easy start-up, and better legislation and regulations for SMEs***. Procedures for business registration and overall process for SMEs to entry into operation are, in general, simpler, faster, and cheaper in more advanced AMSs than in the CLMV countries. Most of the ASEAN-6 can provide online registration, one-stop-shop services, and varieties of financial support for start-ups.

The capability to provide ***facilitating support for international market expansion*** is relatively wide between the two groups of AMSs. It is because export promotion programs, provision of advice and high quality information are better structured in the ASEAN-6. They have also developed and run export capacity building programs nationwide in a well-coordinated manner. More financial facilities such as trade credits, grants, and insurance schemes are in place in the ASEAN-6 to encourage SMEs to expand their market overseas, with a faster and cheaper custom clearance.

Promotion of entrepreneurial education exhibits both gaps between AMSs and lowest standing at the ASEAN level because most AMSs have not clearly articulated entrepreneurial promotion policy and integrated it into their national development plans with adequate budget, monitoring and evaluation. Key competencies of entrepreneurship learning programs are not well introduced into the general and higher education system. There is also not much active collaboration with the private sector in curricular development, research, customised training, coaching, internship, business awards and scholarships. Non-formal education in entrepreneurship and management of SMEs is not well promoted.

The overall development of *institutional framework* is progressing relatively more evenly among AMSs. A common SME definition has been applied in relevant government agencies in the implementation of the SME development strategies in most of the ASEAN-6. In addition, AMSs tend to have a multi-year SME development strategy that is implemented by a single institution responsible for SME policy formulation and which is the executing agency with an effective coordinating role. The mechanism for review, monitoring, and evaluation of the strategy is clearly in place. Programs and measures are put in place to facilitate the movement of SMEs from the informal to the formal sector.

The gap in promoting an *effective representation of SMEs' interest* is the smallest in the region due to the active role of industrial, business or SME associations in setting up structured consultation mechanism with government agencies in policy formulation and advocacy process to represent SMEs' voice and interests domestically and internationally. However, most SME associations still lack resources as well as technical and research capacity to provide high quality services to help member firms gain access to regional and global production networks.

Way forward engendering supportive policy environment for SMEs. The results of the ASEAN SME Policy Index show that there is a lot to be done in order to go towards the best practice in each of the policy areas. At the same time, it is unrealistic to expect that the gaps can be addressed adequately soon. It is best to view the Index as a mechanism for a **step by step process** of improving the policy and institutional environment, and setting targets and time line. In addition, the detailed nature of the ASEAN SME Policy Index allows for a **participatory approach** to developing the way forward in each AMS involving important stakeholders. Although the Index implicitly presumes equal weighting of all the policy areas, it is likely that the areas of technology, access to finance and easier and faster start-ups would be especially important. Thus, for example, as the discussion in **Chapter 4** of this Report shows, support by China's local governments to industrial clusters (which are likely mainly SMEs) to strengthen their innovation capabilities has been an important reason for the dynamism and global competitiveness of many of China's industrial clusters.

At the same time, it is not efficient and effective to just focus on one or two for high scores; this is because the levels 5 and 6 in a number of the policy areas would likely need resources and skills and regulatory capability that would be difficult to obtain and develop soon, especially in the CLM countries. In the end, a **more balanced, gradual but consistently improving** approach may be the appropriate one to engender a supportive policy environment for SMEs, with the relative prioritisation among the policy areas and indicators to be dependent on the stakeholders' assessment and judgment in each AMS. Moreover, it is best that the exercise of **stakeholder participation, specific targets, time line, and action plans** is done in a concerted manner among all the AMSs in moving forward towards a more supportive policy and institutional environment for SMEs in the region. In this way, there would be greater coherence between the national SME policies and the ASEAN regional initiatives under SAPASD.

Narrowing Development Gaps within ASEAN: IAI and Myanmar

In addition to SME development, the Initiative for ASEAN Integration (IAI) is the other major measure under Pillar 3 of the AEC Blueprint. IAI is essentially a technical and development cooperation program to help the new and poorer members of ASEAN, i.e., CLMV countries, accelerate their economic integration and thereby share the expected benefits from ASEAN integration. The results of the survey of key stakeholders in the CLMV countries on the effectiveness of the IAI program as part of the Mid-Term Review of the implementation of the AEC Blueprint indicate that the majority of the respondents claim that (ERIA, MTR 2012):

- The IAI projects contributed moderately or substantially to narrowing the development gap with ASEAN-6 countries;
- The performance of the IAI projects has lived up to expectations;
- The IAI projects are relevant to the development needs and priorities of the CLMV countries, even if they are less relevant to the needs of the implementing agencies; and
- The funds allocated to the IAI program are not sufficient.

It must be noted that the CLMV countries have integrated well with the rest of ASEAN and the world during the past one and a half decades. The CLMV countries have in fact been more forthcoming in their liberalisation commitments in services and investment than a number of the ASEAN -6 countries, as the results of the ERIA AEC scorecard projects and the AEC Mid-Term Review show. Where the CLMV countries lag behind the ASEAN-6 countries has been primarily in the areas of facilitation where financial and technical resources are needed to implement the needed initiatives. Arguably, the accelerated opening up of CLMV countries is due to fundamental country level development strategy decisions and strong desire to integrate more with ASEAN and the rest of East Asia and the world. Providing them support for the integration process are the IAI program and the programs of the international donor community in the individual CLMV countries.

The CLMV region has in fact been the remarkable story of ASEAN during the past one and a half decades. As **Table 1.2** of Chapter 1 of this Report shows, Cambodia, Viet Nam and Lao PDR (especially during the past half-decade) have been the star growth performers in ASEAN during the past one and a half decades.³ Moreover, the drivers of such stellar growth performance are all related to the accelerated economic integration with the region and the world; that is, the sharp rise in foreign direct investment and international trade during the period. Thus, for example, the average share of foreign direct investment net inflow to GDP during 2006-2011 in Viet Nam, Cambodia and Lao PDR is substantially higher than the ASEAN average, and very much higher than in countries like Indonesia and the Philippines. Indeed, only Singapore, the ASEAN's perennial dominant FDI destination, has higher FDI share to GDP than the CLV countries (ASEC, 2013, p. 41).

Similarly, Cambodia and especially Viet Nam have seen dramatic increase in the share of exports and imports to GDP, an indication of the successful integration of the two countries (but most especially Viet Nam) into the regional production networks or (for Cambodia) global value chain mainly in the garment industry. In either case, it is a strong indication of the countries'

³ **Table 1.2** shows very high growth rates for Myanmar during the same period, in fact, the highest average growth rate among AMSs. However, the quality of national income accounts of Myanmar is highly suspect, and as such, it is not really clear what the true picture of the economic performance of Myanmar is. Nonetheless, it is likely that the country experienced very robust growth during much of the past decade in part because of the expansion in energy exports and the growth of agriculture.

greater economic integration with the rest of the world. As shown in Chapter 1 of this Report, the strong economic performance of the CLV countries is mirrored to a large extent in the marked reduction in poverty rate and significant rise of the middle class in the countries, most especially Viet Nam. Indeed, Viet Nam stands tall among the emerging economies because of its strong economic growth together with relatively equal distribution of income; in contrast, the high growth in China was accompanied by an apparent marked deterioration in the distribution of income.

The discussion above shows that ASEAN has seen some narrowing of the development gap between the ASEAN -6 and the newer CLMV countries, even if there remains a huge gap between the richest AMS, Singapore, and its poorest, Myanmar.

Making Myanmar a star growth and development performer in ASEAN⁴.

Based on Myanmar official statistics, Myanmar is already the growth performer in ASEAN during the past decade with an average growth rate in the double digits. However, the official growth performance is generally viewed to be a serious overestimate because the exchange rate is controlled with a huge divergence between the official rate and the “black market” rate. Adjusting for the currency overvaluation, the economy is estimated to have grown by about 2.3 times during the 2000s instead of 4.2 times. With poor statistics, it is difficult to determine what the true situation was in Myanmar until 2010.⁵ It is likely that the true picture is in between the two extremes stated above in part because a poor statistical system would likely underestimate the output of un-marketed output from agriculture and the informal manufacturing and services sectors which are very large segments of the economy in poor countries. Nonetheless, even at the overestimated official GDP per capita, Myanmar’s per capita GDP was only 0.2 percent of Singapore’s and 8.6 percent of Malaysia’s in 2010.

Thus, one element of narrowing the development gap in ASEAN is to pull up Myanmar to be the top performer in the growth arena during the next one and half decades in ASEAN, and thereby reduce the development gap in the region.

⁴ This subsection draws heavily from Kudo (2013) and Kudo, Kumagai and Umezaki (2013).

⁵ In view of the seriousness of the data problem, President Thein Sein included accurate and reliable statistics as one of the pillars of economic policies of the new Myanmar government (Kudo, Kumagai and Umezaki, 2013).

Myanmar has the potential to be the star performer in ASEAN given its resources, but more importantly, “there is a new dawn in the political and economic landscape of Myanmar, with the country moving toward political and civil reforms and economic growth” (Kudo, Kumagai and Umezaki, 2013, p.1).

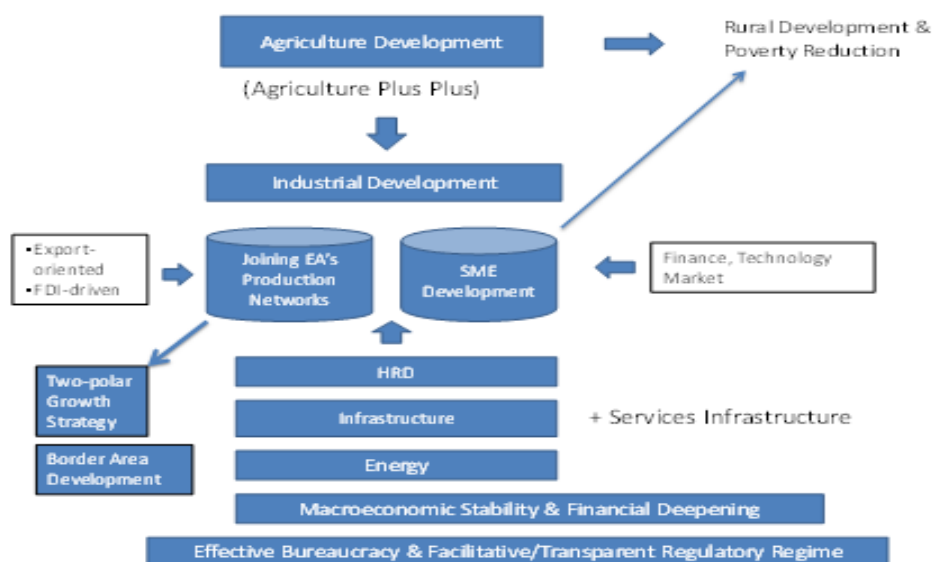
In support of the new dawn in Myanmar, the Economic Research Institute for ASEAN and East Asia (ERIA) worked with the Myanmar Ministry of National Planning and Economic Development (MNPED) in undertaking the Myanmar Comprehensive Development Vision (MCDV) to provide a framework and strategy for medium to long term development planning in the country. The MCDV project was headed by Dr. Toshihiro Kudo, Japan’s foremost expert on Myanmar.

Figure 5A.4 presents the overall framework of the MCDV Growth Strategy. It is anchored on the following (see Kudo, 2013):

- “Agriculture Plus Plus,” which is agriculture development focused on rising agriculture productivity (one plus) and growing value added activities in the agriculture-processed manufacturing value chain (another plus). The agriculture plus plus pillar is supplemented by a rural development strategy focused on poverty reduction and greater participation of stakeholders.
- “Industry Plus Plus,” which is industrial development that is anchored on Myanmar joining and embedding itself in East Asia’s production networks (one plus) and SME development (another plus). Myanmar’s success in joining and participating in East Asia’s regional production networks entails FDI-driven, export oriented and private sector led industrial development.
- Two-polar growth strategy plus border area development, to ensure balanced development. “Myanmar is composed of geographically and ecologically diversified regions with a number of ethnic groups. Therefore, growth should be inclusive for all people and balanced among every region and state” (Kudo, Kumagai and Umezaki, 2013, p.2).

- Development of domestic economic corridors to be linked with the East Asia regional economic corridors. This is to effect and benefit from the re-emergence of Myanmar from a “missing link” to being the “connecting node” of the regional economic corridors.
- Supporting the abovementioned major growth pillars are human resource development, infrastructure development including energy, macroeconomic stability and financial deepening, and an effective bureaucracy and facilitative and transparent regulatory regime.

Figure 5A.4: Growth Strategy for Myanmar



Source: Kudo, 2013.

Myanmar remains essentially agricultural at present and about 85 percent of the poor in Myanmar live in the rural areas. Thus, agricultural development is a critical pillar of any sustained economic growth in the country. It is also the most effective way of reducing poverty at the early stages of economic surge in the country as the experiences of countries like China and Viet Nam show. The country has huge potential in agriculture and agri-based processing because of its vast water resources in large rivers and underground water basins and because of its wide agro-ecological environments that allow the cultivation of temperate, sub-tropical and tropical agricultural crops. The challenges are equally huge, however, including inadequate infrastructure, uncertain land rights, poor varietal stock, weak agricultural research and extension system, and poor post-harvest and processing system. Finding the right balance and/or

synergy between empowering small farmers with clearer land tenure and much improved government support services including good seeds (which may take a long process) and the possibly quicker growth spurt from encouraging large plantations with private corporate support (but which is likely less inclusive) would possibly be another challenge for the country.

Myanmar needs a dynamic manufacturing sector in order to attain growth rates averaging about 7.5 percent per annum for the next two decades or so in order to transform Myanmar's economy dramatically. This requires an FDI-driven growth; the huge surge in foreign investors' interest on Myanmar -- in response to the ongoing reforms and opening up -- not only in resources-based industries but also in other industries especially manufacturing suggests that such FDI-driven growth is already emerging for the country. The relatively liberal investment regime as well as the effective lifting of the sanctions on the country can be expected to put Myanmar well into the global value chains in such labour intensive products like garments, and later with much better connectivity, and bring Myanmar into the regional production networks. For the latter to happen, however, Myanmar would need to markedly improve its connectivity and logistics performance. Myanmar's ranking of 129 in the World Bank's logistics performance index in 2012, which is way below Viet Nam's 53rd ranking or Indonesia's 59th ranking and significantly lower than the rankings of Cambodia and Lao PDR suggests the large challenge for Myanmar to have a well- functioning logistics system that is needed in order to participate actively in regional production networks.

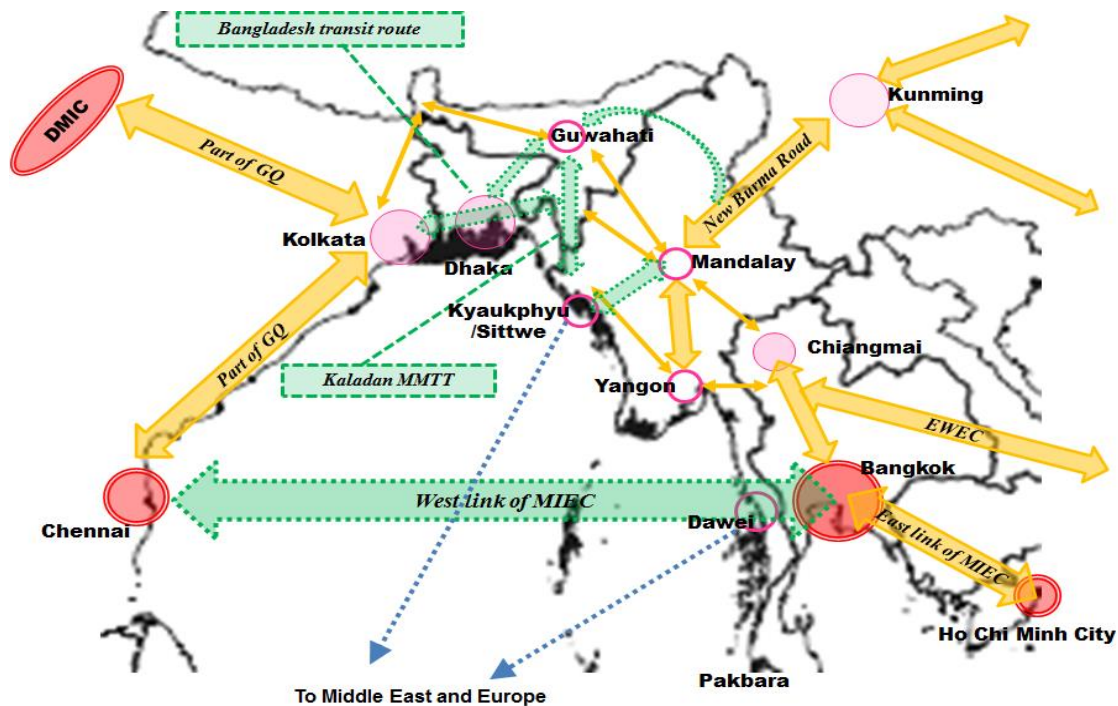
Managing a transition from a closed economy to a liberalised economy for the manufacturing sector has historically been difficult. It is worth noting that Myanmar does not appear to experience large industrial restructuring challenges in the face of the marked liberalisation of the Myanmar economy. This suggests that the hitherto supposed "closed economy" was possibly a heavily porous one because of porous borders with its neighbours like Thailand. This bodes well for Myanmar as it moves forward into and beyond 2015. Nonetheless, a proactive role in providing a more supportive environment for SMEs, as indicated by the significant rise in Myanmar's scoring in the ASEAN SME Policy Index, would help induce Myanmar's SMEs to adjust better to a more competitive investment and market environment in the country.

The proposed two growth poles are Yangon and Mandalay, the two main economic centres of Myanmar at present. Note that the capital Nay Pyi Taw is in between the two centres, so linking the two would ultimately create one big growth corridor for the country. Simulation results show that a two-polar growth strategy would result in higher national output than a growth strategy focused solely on Greater Yangon. Border area development is important for Myanmar for two reasons: (1) the border areas are populated mainly by ethnic groups other than the main ethnic group and thus neglecting them would create a serious socio-political problem; and (2) the border areas are nearest to robustly growing economies like Thailand and China, with the attendant economic opportunities that they offer to the border areas of Myanmar.

The MCDV framework does not explicitly consider tourism services. Yet Myanmar's cultural and natural assets for tourism are huge, and the country is a prime tourism destination hotspot in terms of tourism interest. It is best to embed the tourism element in the growth strategy in the two-polar cum border area development. This is because it would be Yangon and Mandalay that would likely be the country's gateways to the major tourism draws of the country, including the two cities themselves and places like Bagan.

Finally, the remarkable changes and economic opening up that is on-going in Myanmar have meant the "re-emergence of Myanmar from a missing link to a connecting node" (Kudo, Sumagai and Umezaki, 2013, p.49) in the expanding and deepening production networks in East Asia. This is because geographically, Myanmar strategically connects India, China and the rest of ASEAN, the three major growth regions in the developing world. The connecting node function of Myanmar can enable it to participate more actively in the production networks in the region (see **Figure 5A.5**).

Figure 5A.5: Myanmar as an Emerging Connecting Node



Source: Kimura, *et al.* (2011) reprinted in Kudo, Kumagai and Umezaki (2013)

Nonetheless, it requires much improved domestic infrastructure, development of domestic economic corridors, and much reduced logistics and other service link costs to link up Myanmar cities to the major regional corridors and benefit well from the connecting node function for the regional economic corridors. Given that there are binding resource constraints, it is indeed necessary to undertake some prioritisation of investment projects. As the simulation results suggest, it is best for Myanmar to prioritise the Yangon and Mandalay growth poles in the meantime (Kudo, Kumagai and Umezaki, 2013).

In summary, the MCDV presents a cohesive framework for Myanmar to consider in order for it to become the star growth and development performer in ASEAN in the next two decades. This will follow up the sterling growth performances of Cambodia and Lao PDR lately and Viet Nam early on. In the process, development gaps within the region between the ASEAN -6 and the CLMV countries can be expected to further narrow in the next two decades.

Connectivity, Geographic Inclusiveness and Infrastructure Investments

Inclusive growth includes a better spatial balance of economic activities within a country or across countries, that is, geographic inclusiveness. At the same time, because there are societal benefits from economies of scale and agglomeration economies, the complete equality across regions in a country is not optimal. Thus, for example, the simulation results in MCDV for a two-growth poles growth strategy in Myanmar give higher GDP than many more growth poles in the country. At the same time, inclusive growth cannot be achieved without thinking of interdependence between large cities and rural areas or advanced economy and lagging economy. And it is connectivity enhancement which is the key word for better balance between higher economic growth and inclusive development. Connectivity enhancement involves investment in infrastructure as well as improvement in trade facilitation and logistics system and services.

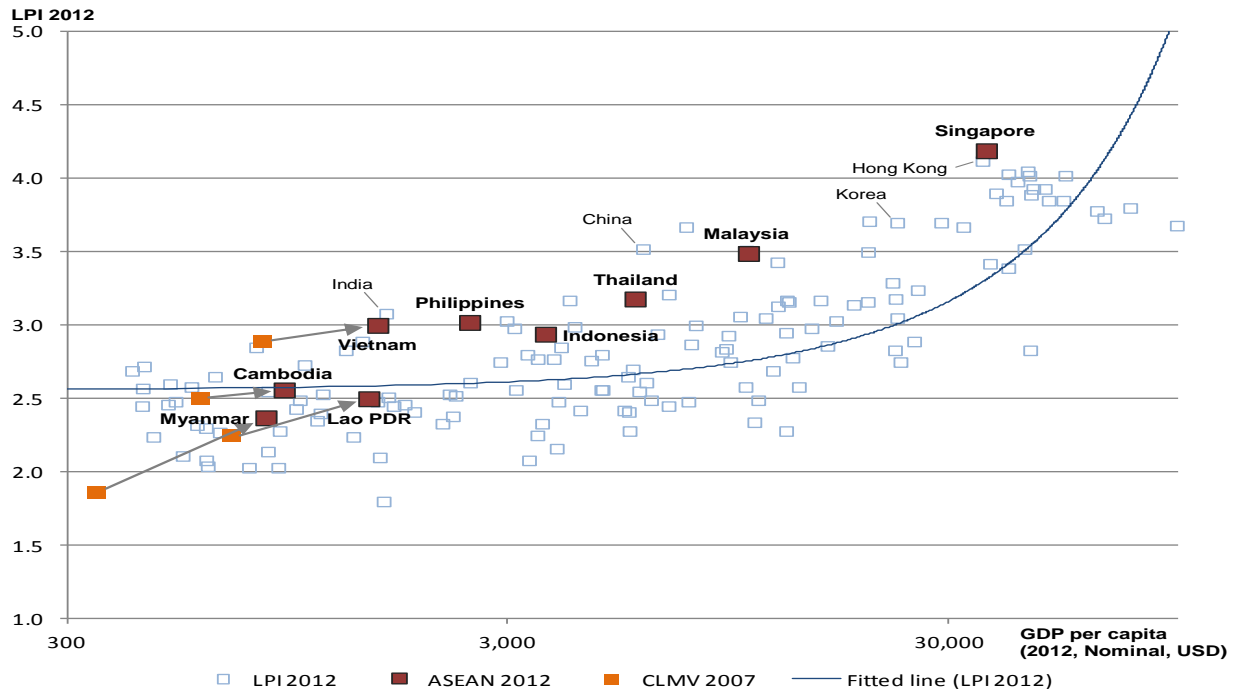
An indication of the importance of connectivity is in the working of regional production networks discussed earlier in Chapter 4. Better connectivity directly reduces service-link costs in production networks, thereby allowing the geographic expansion and deepening of the networks. Moreover, better connectivity induces agglomeration of some industries to bigger cities as well as dispersion of some labour-intensive industries to rural regions and/or ASEAN poorer countries (i.e., CLM countries). Narrowing development gaps between the ASEAN 6 and Viet Nam and the CLM countries includes better connectivity of the latter countries that would enable them to participate in the regional production networks.

The ASEAN-5 countries and Viet Nam initiated trade and FDI driven industrialisation from their primary cities. The fact can be supported by **Figure 5A.6**. The figure plots the correlation between international logistics performance index (LPI) and gross domestic products (GDP) per capita⁶. We find a high correlation between them, which is not very surprising. What is noteworthy about the figure is that the AMSs more deeply involved in regional production networks (i.e., Singapore, Malaysia, Thailand, Philippines, Viet

⁶ We use 2012 LPI data and 2012 GDP data. Data for Brunei are not available.

Nam and Indonesia) have LPs that are significantly higher than what is expected given their levels of per capita incomes. In contrast, Lao PDR, Cambodia and Myanmar are on the line or below the line. Considering that LPI is constructed based on the logistics performance data between primary cities and primary ports, we observe that ASEAN forerunners and Viet Nam have much better logistics performance between their primary cities and primary ports than the international average. In fact, they developed international standard ports, industrial zones and better access roads between them, substantially improved customs procedures (and in two AMSs, adopted state-of-the-art customs systems) and gave better incentives so that the countries could attract large MNEs, many parts and components suppliers, multinational logistics forwarders and world-class vessels. We can claim that there is a challenge of raising logistics performance in the CLM countries for them to attract production blocks and be firmly part of the regional production networks.

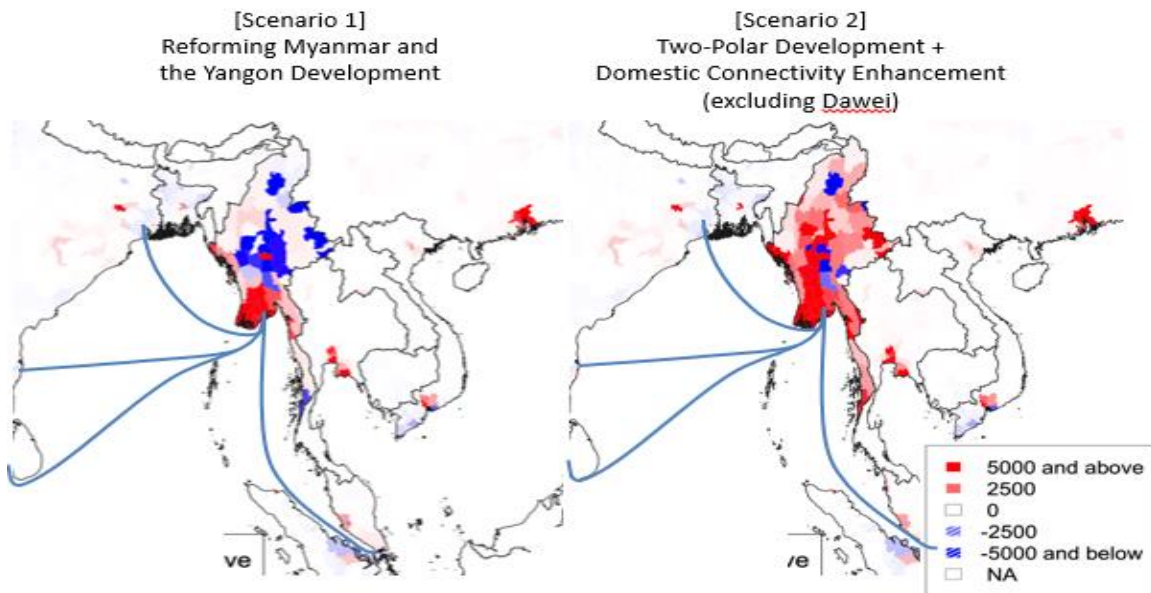
Figure 5A.6: Logistics Performance Index (LPI) and Gross Domestic Product (GDP) Per Capita



Source: Modified from ERIA (2010a).

Just as enhanced connectivity between countries allows for dispersion of economic activities to more countries under regional production networks, enhanced connectivity within a country disperses economic activity to wider geographical areas in a country. Isono and Kumagai (2013) discussed how domestic economic corridor development in Myanmar disperses the benefit of a rapidly opening economy to the northern areas. The left figure of **Figure 5A.7** depicts the on-going plan as of 2013 where Myanmar proceeds with all-round reforms. The simulation result of the scenario shows that reforming Myanmar and completing the Yangon/Thilawa development will stimulate the economic activities of Yangon and the Irrawaddy delta areas, and those areas will attract firms from other regions, especially from Northern Myanmar, to Yangon. The hard and soft infrastructure development in the scenario significantly increases Myanmar's net GDP. The impacts on other countries are relatively small because of the small economic size of Myanmar. However, the Yangon development and Myanmar reforms will generally induce the formation of a cluster in Yangon and lead to an outflow of firms/households from the northern areas of the country.

Figure 5A.7: Economic Impacts of Myanmar Development (Impact Density, USD per km², 2030)



Source: Isono and Kumagai (2012).

The simulation result implies that the Yangon development and Myanmar reform would lead to a higher level of economic growth in Myanmar but not enough to achieve the narrowing of development gaps. The alternative scenario (Scenario 2) that includes the development of Mandalay region in addition to Yangon, together with connectivity enhancement in the country and border facilitations at the main border crossings with surrounding countries, achieves high economic growth and inclusive development in Myanmar.

The importance of linking peripheries to growth centres is also indicated in **Table 5A.2**. For instance, we may consider an economic corridor connecting Hong Kong – Manila – Davao – Manado – Surabaya – Jakarta when we implement and utilize the Roll-on/Roll-off (RoRo) between Davao and Manado (Bitung). As shown in **Table 5A.2**, the Hong Kong – Manila – Davao – Manado – Surabaya – Jakarta corridor will bring much larger economic impacts on Indonesia and the Philippines and also increase the positive impacts of the RoRo project on Manado and Davao themselves, as compared to a Roll-on Roll-off between Davao and Manado alone.

Table 5A.2: Economic Impacts of RoRo between Davao and Manado and Hong Kong – Manila – Davao – Manado – Surabaya – Jakarta Link (Cumulative impacts of 2016-2025 compared with the GDP/GRDP of 2010)

	Indonesia		Philippines	
		Kota Manado		Region XI (Davao Region)
Roll-on/Roll-off (RoRo) between Davao and Manado	1.3%	94.6%	0.0%	0.4%
Hong Kong – Manila – Davao – Manado – Surabaya – Jakarta	18.1%	192.5%	11.2%	12.1%

Source: IDE/ERIA-GSM 5.0.

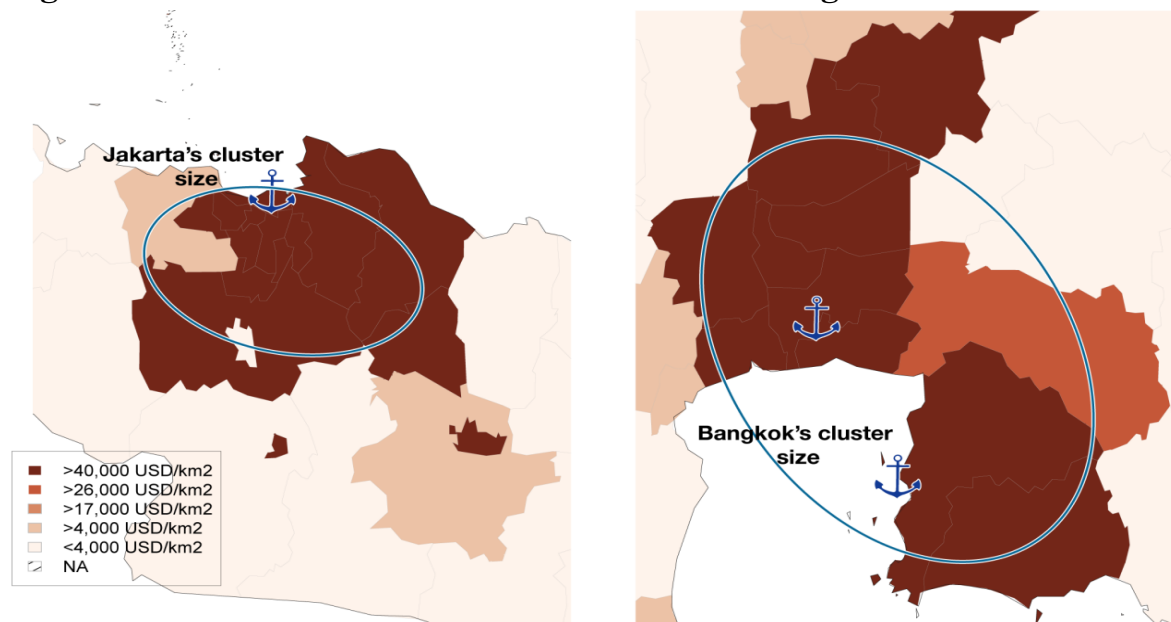
Interestingly, improving the connectivity around the primary city can also lead to inclusive growth. Thus, for example, the size of the clusters or dispersion of the industry depends on the quality of the infrastructure in the primary city. **Figure 5A.8** draws the cluster sizes of Jakarta and Bangkok in the same scale. In case of auto and E&E clusters, the east edge of Jakarta’s industrial cluster is Tangerang, south edge is Bogor and west edge is Cikampek and Purwakarta. Meanwhile, Bangkok has a much larger cluster in geographic size. Bangkok’s east edge is Samut Sakhon, the north edge reaches Ayutthaya, the east edge can include Prachin Buri, and the south edge is some part of Rayong province. Just-in-time production which is broadly adopted in auto and E&E industries can only be achieved with better infrastructure in the cluster. As discussed in **Figure 5A.4**, Bangkok has better LPI than Jakarta. Particularly, heavy traffic jams in Jakarta impede firms to operate just-in-time operations. Moreover, Jakarta has only one gateway port in the Jakarta cluster and it is too close to the city centre, while Bangkok has two gateway ports, i.e., Bangkok port and Laem Chabang port⁷.

The discussion above highlights the importance of connectivity in bringing

⁷ Isono and Kumagai (2012) showed that the proposed Cilamaya New International Port and an access road between Cikarang and Tanjung Priok in Jakarta will bring large economic impact not only on the industrial cluster in Jakarta but also on the Indonesian economy as a whole.

about inclusive growth. Much of that connectivity is linked to infrastructure. As **Table 5A.3** indicates, the CLM countries are comparatively more deficient in infrastructure than the rest of the AMSs. The same holds true with respect to ICT infrastructure and services, as **Figure 5A. 9** brings out.

Figure 5A.8: Cluster sizes of Jakarta and Bangkok



Note: Maps with GRDP density in automotive industry in 2005 are adopted from Kumagai *et al.* (2013) (USD per km²).

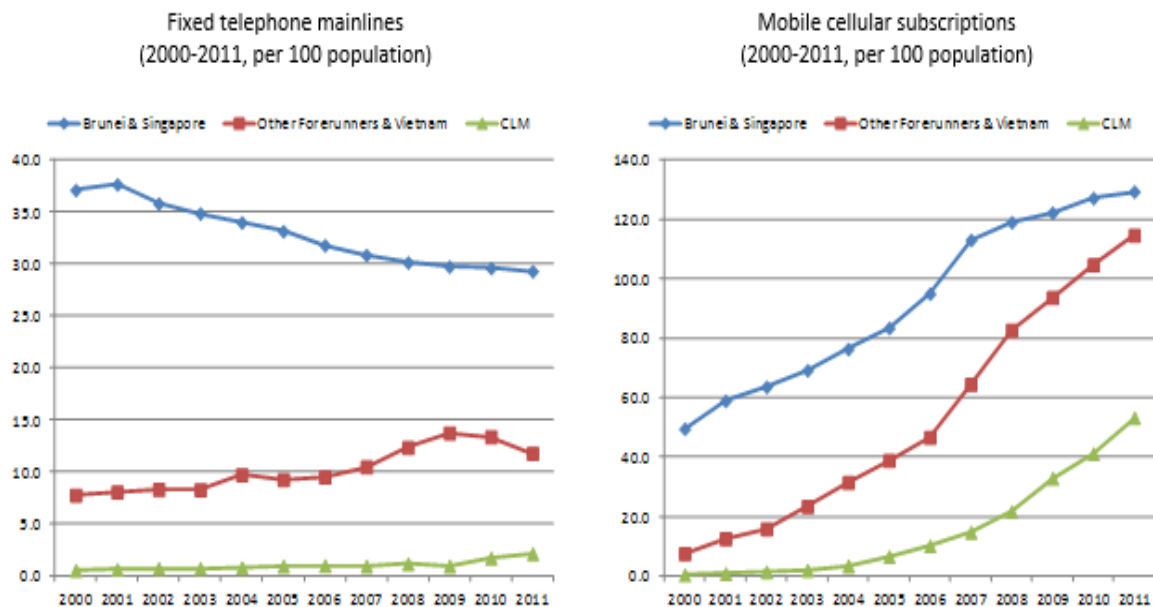
Source: Isono (2013).

Table 5A.3: Connectivity related indicators in ASEAN

	Railway density	Road density	Paved road	Passenger cars	Air passengers carried	Port container freight	Asian Highway	
							Total	Below class III
	(2010)	(2010)	(2010)	(2010)	(2010)	(2010)	(2010)	(2010)
Brunei	-	564.0	77.2	485	1,263	0.09	-	-
Cambodia	3.7	216.7	6.3	18	455	0.22	1,347	0
Indonesia	1.9	262.9	59.1	45	52,283	8.37	4,091	0
Lao PDR	n.a.	171.4	13.5	2	444	-	2,857	306
Malaysia	5.1	300.5	82.8	313	30,997	18.25	1,673	0
Myanmar	5.1	41.3	11.9	5	396	0.17	3,009	1,064
Philippines	1.6	670.9	9.9	8	21,024	4.95	3,367	451
Singapore	n.a.	4794.3	100.0	121	26,709	29.18	19	0
Thailand	8.7	352.4	98.5	57	27,162	6.65	5,111	2
Viet Nam	7.6	516.3	47.6	13	14,407	5.98	2,597	264
Unit	km per 1000 km ²	km per 1000 km ²	%	per 1,000 population	1,000	million TEU	km	km

Source: UNESCAP (2012).

Figure 5A.9: ICT related indicators in ASEAN (2000-2011)



Source: Kumagai, *et al.* (2013)

Investing in infrastructure and PPP. Infrastructure will likely be a major constraint to the realisation of an ASEAN Miracle in the next two decades. An integrated, connected and robustly growing ASEAN requires good quality infrastructure. Competitive industrial clusters require good quality infrastructure. And geographic inclusiveness requires good connectivity of the peripheries to the growth centres, which means good quality infrastructure. With the exception of Singapore, Malaysia, Brunei and Thailand, good quality infrastructure is particularly wanting in ASEAN. ASEAN compares less favourably than the average for Asia, Latin America and OECD in terms of coverage of infrastructure, i.e., roads, rail and phones per 1,000 people as well as in the percentage of electrification and clean water (Shishido, Sugiyama and Zen, 2013, p.2). Given the high growth targets set out in Chapter 2A of this Report, it is apparent that the infrastructure supply is far less than the infrastructure needs in the region.

Given the limited fiscal space that middle income AMSs have in the light of the demands for prudent macroeconomic management as well as their declining access to official development assistance, public private partnership (PPP) offers one major mechanism of addressing the large infrastructure gap

in the region. While PPP projects are not expeditious than ODA funded projects, PPP projects tend to be delivered more on time and more on budget. However, the actual use of PPP in ASEAN is low relative to the infrastructure needs of the region. A major reason for this limited use of PPPs in the region is that PPPs are not easy at all; indeed, they can be complex, requiring good institutional capability of governments to oversee and manage for the countries' benefit.

The following are major ingredients for successful PPPs (see Shishido, Sugiyama and Zen, 2013, pp. 11-14)⁸:

- Strong government commitment to PPP framework is needed given that PPP projects are by nature long term contracts. In many cases, the social benefits of PPP projects are substantially higher than the financial benefits. The concomitant calls for the provision of subsidies and guarantees for the PPP projects need to be balanced by the imperative of fiscal sustainability. It is for this reason that the more experienced AMSs on PPP tend to depend on quality feasibility analyses and high-calibre professional advice to help them on their decisions on PPP projects.
- The government sector needs to have the capacity to select, develop and manage PPP projects. Lack of appropriate skills has led to delays, inefficiencies and even failures in the past.
- The government needs to have an enabling environment for PPP with appropriate legal, regulatory and institutional frameworks. This would also call for the PPP units to have the necessary authority to move the PPP projects forward.
- The PPP project must have high socio-economic returns, and this is only determined after careful and good pre-feasibility studies and feasibility studies.
- The PPP projects need to be developed and structured well so that risks are allocated properly. The experience of AMSs with more extensive

⁸ The following is drawn from Shishido, Sugiyama and Zen (2013).

exposure to PPP is that the AMSs need high quality but expensive professional, financial, legal, and technical, transactions, and other advice. Though PPP is expensive and time consuming, it does not pay, however, to cut corners.

- Given the above, it is clear the PPP partners need to be capable.

The above list shows that PPPs are complex and sophisticated contracts. At the same time, in view of the huge infrastructure needs of many AMSs to support high target growth rates, it is apparent that AMSs need to invest in making the appropriate policy, institutional, and human resource foundations for the successful implementation of PPPs for the development of AMSs. And *when the PPP system is well performing, infrastructure as a constraint ends up becoming infrastructure as an investment opportunity*. Indeed, infrastructure investments become a growth driver for many AMSs in the years ahead.

Towards a well performing PPP system in AMSs and the region, Shishido, Sugiyama and Zen (2013) have the following recommendations:

- Given that proper project development is crucial for attracting private resources, AMSs need to **invest more funds for PPP project development**. Project development costs account for 5-10 percent of total project costs, much of it for expensive but necessary expert advice. In contrast, AMSs tend to spend only 1-2 percent of the total cost.
- For AMSs still learning the PPP ropes, **unbundle larger PPP projects** into smaller and simpler projects to allow AMSs with limited experience to understand the PPP structure and the underlying risks. This learning by doing would help AMS government units gain more experience in designing, implementing and managing PPP projects.
- Establish an **ASEAN Centre of PPP Excellence** at the regional level, staffed with high calibre experts in areas like finance, fiscal analysis, and others. The PPP Centre of Excellence can disseminate best practices and other lessons to AMSs, provide assistance to AMSs through advice on areas (e.g., risk analyses and allocation) that are important in project selection and development, and give advice to AMSs units on how to

enhance PPP-readiness (e.g., legal, regulatory, institutional) based in part on discussion with potential private partners on the constraints they face and their preferences. India's Infrastructure and Leasing and Financial Services (IL & FS) can be a model to consider for the ASEAN Centre of PPP Excellence.

- Engender a **robust and enabling legal, regulatory, and institutional environment** in developing and implementing efficient PPP infrastructure projects.
- Create financial instruments that could mitigate project risks in light of the changing capital markets in the aftermath of the global financial crisis. Example is the Project Bond Credit Enhancement (PBCE) of the European Investment Bank (EIB) for bond-financed projects. It is useful to explore such an enhancement scheme for loan financed projects.

Agricultural Development and Food Security

Agricultural development is critical for inclusive growth in many AMSs with a substantial rural sector. Rural poverty is significantly higher than urban poverty, and the rural poor accounts for the vast majority of the total number of poor in some AMSs. For Myanmar, Cambodia and Lao PDR where the agriculture sector constitutes a large share of national output, agricultural development is both a key growth driver for the whole economy and a powerful instrument of poverty reduction. Studies have shown that agricultural growth gives more poverty reduction bang than a corresponding percentage growth in manufacturing or services. The impressive pace of poverty reduction in China in the 1980s and in Viet Nam in the 1990s can be attributed mainly from the marked increase in agricultural output and incomes together with the marked increase in employment in labour intensive manufactures. The marked increase in agricultural output in both countries arose largely from substantial rise in agricultural productivity that ultimately allowed for a reduction in agricultural labour force for shifts in employment in the growing manufacturing and services sectors.

Although China and Viet Nam are highlighted above, the reduction in the absolute employment in the agriculture sector, facilitated by productivity

growth in the agricultural sector, is part of the structural transformation of the successful economies such as Thailand, albeit more gradually. Thus, agricultural development through productivity growth reduces poverty directly through the rise in incomes from farming (and fishing) and indirectly through the release of labour from the agricultural sector and rural areas to the growing non-agricultural sectors. Agricultural development through productivity growth has a third channel of reducing poverty, i.e., agricultural productivity growth tempers food prices and therefore pressures for wage increases which, without corresponding productivity growth, can hurt significantly the competitiveness of labour intensive manufactures and thereby of overall employment prospects.

Agriculture sector performance of AMSs has been remarkable during the past few decades, anchoring the region's overall robust economic performance. Agriculture GDP at constant 2000 prices grew in the 6.0 to 6.6 percent range on the average per year for Indonesia, Malaysia and Thailand from the 1960s up to 2010, an average of 6 percent per year for Cambodia during 1993-2010, an average of around 5.5 percent per year for Lao PDR during 1984-2010 and for the Philippines from the 1960s to 2010, and an average of 4.9 percent per year for Viet Nam from the mid- 1980s to the mid-2000s (World Bank as reported in Poapongsakorn and Nitthanprapas, 2013, p.3). Available data and estimates suggest that productivity growth has been an important driver of the robust growth of the agriculture sector in a number of AMSs (see **Table 5A.4**). The table shows the marked improvement in agricultural total productivity during the post reform period for the CLMV countries. Notice also the robust growth of total factor productivity in Indonesia and Thailand in the decades prior and during ASEAN's first "golden decade" of 1985-1995 when Indonesia and Thailand, together with Malaysia and Singapore, registered very high overall economic growth rates. The poor total factor productivity growth of Philippine agriculture underpinned to some extent the difficult economic adjustment and mediocre overall economic performance of the country during the 1980s through the 1990s and early 2000s. The Philippines had the slowest rate of poverty reduction among the AMS during the period.

Table 5A. 4: Total factor productivity growth of ASEAN agriculture and China (% per annum)

Country	1929-2004	Pre-reform	Post reform
1. Supawat (2009)			
Cambodia	0.446	-0.320	0.829
Laos	0.335	-0.559	0.558
Myanmar	0.988	0.199	1.383
Thailand	1.043	-	-
Viet Nam	0.969	-1.702	1.637
China	-	-	-
2. Mundlak, et.al.(2002)	(1961-98)	(1961-80)	(1980-98)
Indonesia	1.49	1.58	1.49
	(1971-98)	(1971-8)	(1981-98)
Philippines	0.25	0.98	0.13
	(1971-95)	(1971-81)	(1981-95)
Thailand	1.16	1.28	1.02
Share of growth			
Indonesia	43.9	42.9	48.8
Philippines	10.0	25.6	9.1
Thailand	47.7	47.3	45.5

Source: (1) Rungsuriyawiboon. (2) Mundlak, Poapongsakorn and Nitthanprapas, 2013, p.7

Moving forward beyond 2015, ASEAN agriculture continues its structural transformation because of (1) dietary transformation in the region leading to shifts in food demand away from cereals and towards animal products and more processed food, (2) food marketing transformation away from wet markets and towards supermarkets with greater assurance of food safety, thereby affecting the domestic supply chain in AMSs, and (3) agricultural production transformation towards greater mechanisation and, for countries like Thailand, greater land consolidation, as wages rise and labour shifts to industry and service sectors (see Poapongsakorn and Nitthanprapas, 2013). Such pressures for transformation provide impetus for the more agriculture-dependent AMSs at present to continue improving the policy and institutional regimes as well as increase productivity enhancing investments in the agriculture sector (e.g., R & D in CLM countries, irrigation especially in Cambodia, rural roads and rural education especially in Lao PDR) in order that the countries benefit more from the opportunities offered by the changing economic and demand landscape in ASEAN and East Asia.

In addition, improvements in trade facilitation and infrastructure (including modern wholesale markets and logistics facilities) as well as harmonisation of standards and more streamlined SPS procedures discussed earlier would encourage the further development of the agricultural supply chain not only domestically but also regionally within ASEAN. Using gravity model, Okabe and Urata (2013) show that intra-ASEAN agricultural trade would increase substantially if the time and cost to import and export would be reduced significantly (of which the latter is affected especially by the efficiency of customs procedures, transparency of border administration, availability and quality of transport services and infrastructure, and the quality of the regulatory environment). This process of growing modernisation and integration of ASEAN agriculture would help ensure that the region remains a competitive global agricultural producer and possibly remains a net exporter of agriculture products, unprocessed and processed.

The above implicitly assumes that the policy regime and incentive structure in AMSs would encourage the agricultural sector in each AMS to adjust according to each country's comparative advantage. This means that distortions within the agriculture sector are virtually eliminated. However, there are in fact some policy distortions within the agriculture sector in some AMSs, primarily through the protection from import competition of politically sensitive crops especially rice and sugar as well as through the subsidisation of the production of such politically sensitive crops. The effect of such distortion is that scarce land is not efficiently utilised, thereby leading to less than robust growth of the sector. In the more serious case, this leads to higher food costs that eventually get embedded in higher wages, which have adverse effects on the competitiveness of labour intensive manufactures in an open and integrated ASEAN region under AEC.

The key reason for the policy distortions within the agriculture sector is the political imperative of food security. This is most salient for countries like Indonesia and the Philippines which are both large producers and net importers of rice, arguably the most politically sensitive crop in the region. Thus, for example, Intal, Oum and Simorangkir (2011, p.35) present the food security conundrum for the Philippines as thus:

“The major challenge on food security for the Philippines is that the country has relatively low land-to-population ratio but high population growth. Moreover, it has low irrigation rate, but rice is a water-intensive crop. It has emerged as the world’s largest rice importer but the world rice trade is thin, resulting in highly variable price. The thinness of the global market ...is the result of government interventions to control the importation... (and exportation)...of a politically sensitive commodity like rice. The Philippines’ agricultural comparative advantage is in tropical fruits and vegetable oils...plus fishery... Reducing the trade—off between the political imperative of food security and the ...(potentials of)... exports would call for a greater focus on productivity enhancing investments (irrigation, roads, R & D...) and a substantial reduction of funds for price stabilisation.”

Addressing the food security conundrum. Can the concern for food security be reconciled with an open agriculture sector? Studies on the impact of the 2007-2008 global food price inflation show large negative impacts on poor households that led them to borrow, take their children out of school, or migrate out of their villages, among others (Reyes and Mandap, 2011). Agricultural food protection tends to temper the effect of sharp global price hikes on domestic food prices and their impact on households. However, such protectionist policy results in distorted allocation of resources in the agriculture sector which has adverse long run effects on the economy.

Simulations by Warr (2011), using a CGE model for Indonesia, suggest that the **long run** solution is to *gradually open up and eliminate the distortions in the agriculture sector while at the same time stimulating more productivity enhancing investments in agriculture*. This result is consistent with the quotation on the Philippine case presented above. The challenge is with respect to the **short run** solution, of which the most important is how to strengthen confidence on the international market. One of the major policy actions undertaken during the 2007-2008 food price crisis was the imposition of export restrictions, which exacerbated the global price rise, and likely encouraged the net importing countries to import more, thereby further fuelling the global price hikes. Thus, the important regional cooperation challenge is to have a **regional agreement on policy rules or rules of behaviour** among AMSs (and other East Asian countries including India) to prevent volatility-enhancing policies

by net exporting countries (e.g., export restrictions, export taxes) and to encourage volatility-reducing policies by net importing countries (e.g., reduction in taxes) during food price inflation periods (see Intal, Oum and Simorangkir, 2011, pp. 39-43).

Food security remains a significant concern in ASEAN. Using prevalence of undernourishment as a key indicator of food insecurity as used by the Food and Agriculture Organization (FAO), a number of AMSs (e.g., Lao PDR, Cambodia, the Philippines) are seriously food insecure (see **Table 2A.5** in Chapter 2A of this Report) even if national food availability is adequate.

The 2007-2008 food crisis brought to the fore the urgency of concerted regional initiatives on food security in the region. ASEAN crafted the ASEAN Integrated Food Security (AIFS) Framework and the Strategic Plan of Action on Food Security (SPA-FS). There are four components; namely, (1) emergency/shortage relief, (2) sustainable food trade development, (3) integrated food security information system, and (4) agri-innovation for sustainable food production. The framework is comprehensive, addressing both long run dimensions (component 4) and the short run (component 1). It also highlights the role of conducive market and trade policies (component 2) and effective information system (component 3) in order to ensure a food secure ASEAN.

Component 3 is implemented with the establishment of the ASEAN Food Security Information System (AFSIS) in 2002. On component 1, as a result of the 2007-2008 global food crisis, ASEAN and the Plus Three countries (China, Japan, and Korea) intensified efforts towards the establishment and operationalisation of an emergency rice reserve in the region. The agreement to establish the ASEAN Plus Three Emergency Rice Reserve (APTERR) was signed in 2011 and it was entered into force in 2012. APTERR is meant to enhance food security in the region as it can potentially be tapped by concerned AMSs during emergencies and major shocks. Component 4 is addressed in continuing ASEAN initiatives on R & D, climate change, while Component 2 is implemented primarily through AMSs' commitments under ATIGA and regional initiatives related to SPS. There is no regional agreement on policy rules or behaviour among net exporters and net importers to prevent exacerbation of price hikes during food shortages.

With the entry into force of the APTERR agreement, can there be another commodity or set of commodities where an emergency reserve agreement could also be signed and operationalised? Briones (2013) examined this issue, with the choice of the commodity based on importance in demand, contribution to livelihoods, storability, magnitude of price volatility, and viability of other instruments for price stabilisation. After examining a number of crops (e.g., maize, sugar, and vegetable oils) based on the above criteria, there is none that qualifies. This indicates that rice is indeed a unique commodity, making it politically salient and workable to have an emergency reserve agreement within the region. Given that an emergency reserve is compelling for rice only, the author recommends that AMSs explore other policy options to enhance food security, specifically (Briones, 2013):

- Government programs targeted to specific disadvantaged groups such as cash transfers to targeted poor households;
- Establishing market –based instruments to reduce price instability at the farmers level, e.g. commodity exchanges; and
- Developing market-based instruments that mitigate the effects of instability, e.g., options and futures.

Cash transfer to targeted poor households is already implemented in AMSs, perhaps most aggressively by the Philippines. Commodity exchanges can contribute to the modernisation of ASEAN agriculture as well as to the region’s food security goals. Experiences of the development of commodity exchanges in India, Brazil, Malaysia and South Africa indicate that commodity exchanges also facilitate the development of the physical infrastructure for physical trade. Thus, for example, the Multi commodity Exchange of India (MCX) contributed substantially to the growth of mentha oil, cardamom and other commodities through infrastructure development (e.g., warehouses), expansion of warehouse-based financing, aggressive development of ICT technologies, development of national electronic spot exchange, etc.. Brazil’s Bolsa de Mercadores e Futuros (BM & F) facilitated trade in the secondary market of Cedula de Produto Rural (CPR) thereby facilitating rural finance, established an exporter call centre, developed links with China thereby helping in market development. .Bursa Malaysia Derivatives Berhad became a global price setter for FCPO as it focused on establishing a global price discovery platform and on developing long term pricing models to help in price risk

management. It did not need to focus on the facilitation of physical trade, finance and market development because Malaysia has a well-established, well developed, and well regulated and rapidly growing global physical market for palm oil. (See UNCTAD, 2009.) Thus, the development of commodity exchanges can facilitate the improvement of physical trade, finance and market development in addition to supporting food security goals.

While the discussion above focused primarily on the regional initiatives, much of the challenge of ensuring food security lies at the national level. As implied in the AIFS and SPA-FS, food security is now viewed more broadly than food availability only. The FAO definition of food security entails the simultaneous satisfaction of four basic dimensions: availability, physical access, economic access and utilisation. This broader and multi-dimensional definition of food security effectively expands the factors that impinge on food security. There is thus a need for an integrated approach to ensuring food security, where the interrelationships among the four dimensions of food security are acknowledged and laid out. One key question arises: how robust is a country's food and agricultural system to address the food security challenge? A corollary question is: which are the areas that need to be a focus for intervention? (Syngenta, 2012, p.16). Towards this end, the **Rice Bowl Index** provides a useful integrative framework and, being an index, a measuring tool on the robustness of a country's system for food security. The Rice Bowl Index measures the following set of enabling and disabling factors and the basic question that each set of factors addresses (Syngenta, 2012, pp.16-17):

- *Farm level factors:* Do the farmers have the capability and means to be productive?
- *Policy and Trade factors:* Does the trade and policy environment encourage open markets, investment and innovation?
- *Environmental factors:* Will the environmental capacity in the country provide for long-term agricultural productivity and sustainability?
- *Demand and price factors:* How will the food security needs in the country evolve in terms of quantity, affordability and access?

The findings from the Rice Bowl Index show that the countries with the most stable food security over a period of time have a balance of the four sets of factors, that farm level factors are the major contributors to the robustness of a country's food security system albeit also being the most volatile, that demand

and price factors have more impact during periods of greater price volatility, and that the other two factors shape the longer term robustness of a country's food security system (Desker, Caballero-Anthony and Teng, 2013).

A comparison of the results of the Rice Bowl Index for a number of AMSs with comparator countries in the East Asia Summit region shows that AMSs lag behind, with countries differing on their robustness among the enabling and disabling factors. In view of its potential usefulness as an organizing and measuring tool on the robustness of food security systems in AMSs and the region, it is worthwhile to have the Rice **Bowl Index refined further for ASEAN and then institutionalised in ASEAN.**

Disaster Management and Safety Net Design for ASEAN

*Disaster management*⁹. While the AMSs have been successful in achieving economic growth and poverty reduction, ASEAN cannot avoid exposure to a variety of disasters; in fact, ASEAN and East Asia is the most disaster-prone region in the world (Sawada and Oum, 2012). The region is exposed to almost all types of natural hazards, e.g., tsunamis, typhoons and cyclones, earthquakes, floods, volcanic eruptions, etc. Indeed, Asia accounted for about two-fifths of all natural disasters as well as the cost of the damages from the disasters in the world during 2001-2010 (Sawada and Zen, 2013). In addition, the number of reported disaster events more than doubled from the 1980s to the 2000s (Fargher, *et al.*, 2012, Box 1, p.4). The region has experienced major natural disasters including the 2004 Indian Ocean Tsunami, 2008 Cyclone Nargis, 2008 earthquake in Sichuan, China, 2009 earthquake in Padang, West Sumatra, 2011 earthquake and tsunami in Japan, and most recently, the 2013 Typhoon Haiyan that devastated Central Philippines.

The cost to lives and property have been large, most vividly illustrated by the over 250,000 deaths from the Indian Ocean tsunami, 69,000 deaths from the Sichuan earthquake, and most recently, the more than 6,000 deaths from Typhoon Haiyan. The economic cost has also been substantial stretching for a number of years, worsening poverty, and eroding development gains.

⁹ This subsection draws heavily from Sawada and Zen (2013).

Given the disaster-prone condition of the majority of ASEAN member states, ASEAN has been raising its collective efforts to cope with the challenges. Since its inception back in 1976, ASEAN has been recognising and adopting disaster management as one of its eight principles and objectives. A major step was the decision to establish the ASEAN Committee on Disaster Management in 2003, followed by the signing of the ASEAN Agreement on Disaster Management and Emergency Response in 2005, as well as the ARF Statement on Disaster Management and Emergency Response in 2006. The latest major manifestation of the high policy importance given to disaster management is the Cha-am Hua Hin Statement on EAS Disaster Management that was adopted by the East Asia Summit (EAS) Leaders during the 4th EAS in 2009. The Statement brings out forcefully that disaster management is not only an ASEAN concern but in fact a major concern of the wider EAS region, the world's most natural disaster-prone region as averred earlier.

Given that the region is disaster-prone, the fundamental challenge for the region is to make the region more disaster resilient and to substantially reduce disaster losses in terms of human lives and in the social, economic and environmental assets of communities and countries (UNISDR, 2005, p.3; AIFDR Design Document, 2009, p.4). The Hyogo Framework for Action 2005-2015, drawing from the earlier Yokohama Strategy for a Safer World, provides the five key strategies, and corresponding action points, towards greater disaster resiliency and reduced losses from disasters, namely (UNISDR, 2005, p.6):

- Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.
- Identify, assess and monitor disaster risks and enhance early warning.
- Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
- Reduce the underlying risk factors.
- Strengthen disaster preparedness for effective response at all levels.

As the Hyogo Framework stated, disaster risk arises when hazards (which in the region is mainly hydrometeorological in origin) interact with physical, social, economic and environment vulnerabilities (Ibid, p. 1). It is apparent that one critical way forward towards disaster reduction is for countries, communities and people to understand better the various hazards and thereby build a culture of safety and resilience, in tandem with understanding the social, economic, and environmental vulnerabilities and their interaction with the various hazards. Early warning systems, embedding disaster resiliency in social and economic practices and policies in part as a means of reducing the underlying risk factors, capacity building, drawing up emergency plans, disseminating and teaching emergency knowledge, conducting emergency drills, constructing early warning systems, investing in sturdier infrastructure, and engaging communities combined together contribute to improved disaster resiliency. As the above Hyogo Framework implies, building sufficient capacities for disaster resiliency and preparedness needs to be the core foundation of disaster management. To a large extent, the Australia-Indonesia Facility for Disaster Reduction is primarily in support of this perspective of raising national capacities towards disaster resiliency and reduction of disaster losses.

Nonetheless, there is clear basis for strong regional and even international cooperation and partnerships in the various areas of action towards greater disaster resiliency and lower disaster losses in AMSs and the region. As the Typhoon Haiyan experience shows, international or regional surge capacity to respond in the immediate aftermath of a major disaster, especially when the disaster-stricken country is initially overwhelmed by the magnitude of the crisis, can play a major role in tempering the adverse consequences of disasters. Regional cooperation goes further than disaster response; indeed, in many areas of action under the Hyogo Framework and as articulated in the Cha-am Hua Hin Statement on EAS Disaster Management, regional cooperation and countries joining together can make a significant difference. Thus, for example, the ASEAN Regional Program on Disaster Management (ARPD) aims at enhancing cooperation among member countries, capacity building, sharing of information and resources, external partnerships, as well as public education and awareness raising. ARPD is coordinated under the ASEAN Agreement on Disaster Management and Emergency Response (AADMER), which is the first Hyogo Framework for Action-related binding instrument in the world. The operational body of AADMER is the ASEAN Coordinating

Centre for Humanitarian Assistance on Disaster Management (AHA Centre) based in Jakarta (Sawada and Zen, 2013, pp. 17-18).

In addition to strengthening national capacities and regional cooperation in disaster management, a creative use of market mechanisms can also contribute to greater disaster resiliency and risk reduction. Specifically, **ASEAN moving forward beyond 2015** may well examine and implement insurance mechanisms at the regional level to help address and manage the aftereffects of natural disasters. Munich Re's 2010 report shows that only 9 percent of property losses due to natural disasters in Asia was covered by private insurance as against about 75 percent coverage in the case of the Christchurch earthquake (Sawada and Zen, 2013, p.2).

Not surprisingly, an analysis by Sawada suggests that significant income shocks arising from natural disasters also translate to large consumption shocks, a reflection of the incomplete insurance mechanism in the region (Ibid, p. 14).

There is merit in strengthening the complementarities among market mechanisms like insurance systems, government enforcement mechanisms, and community social interactions and capital in order to improve disaster resiliency. For idiosyncratic risks that affect individuals or small groups of individuals, community-based mutual insurance mechanisms that tap a community's social capital can help weather losses from natural disasters. For aggregate shocks that cover a wide area (e.g., natural disasters), government enforcement mechanisms can contribute to increased participation rates, and thereby make private insurance workable. These risks should be covered by well-designed formal market or similar arrangements backed by the public enforcement mechanisms in which country-specific or region-specific risks are diversified away across countries or regions. There can also be regional insurance mechanisms similar to the Caribbean Catastrophic Risk Insurance Facility (CCRIF) which is a parametric, multinational hazard insurance fund for hurricanes and earthquakes that works with the international reinsurance market. The benefit of such funds as CCRIF was shown when the Haiti government received funds from CCRIF twenty times its premium about 2 weeks after the earthquake (Sawada and Zen, 2013, p.29). The CCRIF is an example of recent innovative ideas in insurance mechanisms against natural

disasters such as the “index insurance or parametric insurance contracts” which “...pay out on storms that exceed a pre-designated speed, rainfall that falls short of a threshold level, and earthquakes that exceed a certain seismic intensity” (Sawada and Zen, 2013, p. 22).

The World Bank and other institutions have been piloting weather-based index insurance contracts in Morocco, Mongolia, Peru, Viet Nam, Ethiopia, Guatemala, India, Mexico, Nicaragua, Romania, and Tunisia. However, the market for micro insurance is still underdeveloped in the South East Asian region. For disaster linked micro-insurance, only Indonesia, the Philippines, Thailand, and Viet Nam have developed small-scale or pilot projects, hence, the coverage areas are still limited and the programs are at an early stage of development.

Another creative use of market mechanism in tandem with government enforcement and policy intervention is by incentivising disaster risk reduction (DRR) policy. Thus, for example, countries could be constantly evaluated for their DRR policy and given “seals of approval” which would allow them to insure themselves explicitly with international re-insurers or implicitly by issuing Catastrophic Bonds (CAT bonds) that allow for multi-year insurance. The “seal of approval” would alleviate investors or insurers’ concerns about the moral hazard generated by the disaster-contingent financial support (Sawada and Zen, 2013, p. 27).

In summary, it is best to quote verbatim from the Hyogo Framework for Action 2005-2015, as thus:

“There is now international acknowledgement that efforts to reduce disaster risks must be systematically integrated into policies, plans and programmes for sustainable development and poverty reduction, and supported through bilateral, regional and international cooperation, including partnerships. Sustainable development, poverty reduction, good governance and disaster risk reduction are mutually supportive policies, and in order to meet the challenges ahead, accelerated efforts must be made to build the necessary capacities at the community and national levels to manage and reduce risk” (UNISDR, Hyogo Framework for Action, p. 1).

Thus, moving forward beyond 2015, it is recommended for ASEAN to:

- **Strengthen further the (a) operationalisation of regional cooperation in disaster reduction and emergency response in the region, (b) networking and sharing of best practices, experiences and operational manuals among specialists, responders and practitioners, and (c) operationalisation and enhancement of standard operating procedures for greater compatibility and effectiveness in disaster response.** This is in part through the main activities of the AHA Centre that include risk identification and monitoring in tandem with a national focal point in each AMS, facilitation of the establishment, maintenance, and periodic review of regional standby agreements for disaster relief and emergency response. This is in part through such mechanisms such as the ASEAN Regional Disaster Emergency Response Simulation Exercise (ARDEX) for capacity building and improved regional coordination.
- **Accelerate national efforts in ASEAN to integrate disaster risk reduction in national policies and programs and to strengthen national and local capacity in disaster management in AMSs** through better understanding of risk and vulnerability and their interaction in prioritised areas and regions of AMSs, better capability to reduce disaster risk in practice, and greater partnerships with regional and international institutions and organisations. This approach is similar to the strategies set out by the Australia-Indonesia Facility for Disaster Reduction.
- **Develop formal mechanisms to diversify aggregate disaster risks at national and regional levels** and to elaborate multi-country risk pooling schemes and sources, i.e., regional fund, to cover sovereign disaster risk. While regional index insurance schemes (such as the Pacific Catastrophe Risk Assessment and Financing Scheme) are supported by development partners, the microcredit and insurance programs are supported by informal community enforcement mechanisms. Hence, complementarities among the market, the state, and the community will be the key.

- Another policy to consider is to support the acquisition and public provision of hazard map and data. Rashky and Chantarat (2013) suggest the establishment of a **regional centre for disaster risk data, modelling and insurance**. Reliable spatiotemporal- rich data on exposures and disaster losses are largely unavailable in ASEAN countries. These necessary risk data and modelling are critical in enhancing risk-based pricing and supervision, in stimulating the development of new insurance products, and in helping the governments identify appropriate risk financing strategies for effective and timely disaster responses.

*Social protection*¹⁰.

One of the key premises of the framework in Chapter 2B is that the pursuit of inclusive and balanced growth in ASEAN is best pursued through greater reliance on dynamic economic forces tempered by prudent safety net programs, rather than on activist and fiscally unsustainable subsidisation policies and income redistribution programs. Much of Chapter 5A shows that the more critical strategies for greater inclusiveness also contribute to greater competitiveness, e.g., SME development, better infrastructure connectivity and institutional connectivity. Nonetheless, as ASEAN economies become more integrated with one another and with the rest of the world, AMSs and their households become more vulnerable to shocks coming from abroad. Moreover, a number of AMSs are facing increasingly the challenges of an aging population. Thus, AMSs need to have robust safety net and social protection programs, albeit more prudently than a number of advanced countries in view of the fiscal constraints in many AMSs.

At present, the nature and availability of social security programs varies considerably within the ASEAN region. In general, programs are skewed towards the formal sector, urban workers and government staff and are predominantly publicly managed. In terms of areas of coverage, all countries have programs for at least four of the eight branches that include sickness, maternity, old age, invalidity, survivors, family allowances, employment injury and unemployment. Thailand has the most comprehensive coverage. Nearly all countries provide pensions for old age, disability, survivorship and

¹⁰ This subsection draws heavily from Asher and Zen (2013).

work injury. Coverage of sickness, maternity benefits, unemployment benefits and family allowance is however limited, as is access to health care. While the scope of coverage is large, most countries perform poorly on legal coverage and effective population covered. Actual coverage may also be lower than legal coverage because of the large informal sector.

Rapid growth of the working age population in ASEAN means that ASEAN will have to deal with issues such as migration and informalisation of labour. At the same time, the region faces the challenge of aging at relatively low incomes, calling for serious attention and action from the policy makers. In addition, the region has to deal with the issues of covering special groups within the population like informal sector workers and migrants. Intra-ASEAN labour migration has been growing and is 32 percent of total outward migration and 60 percent of total inward migration but there is no social security agreement among ASEAN countries, resulting in no portability of benefits for 60 percent of intra-ASEAN labour migrants (Pasadilla, 2011). Other issues to be tackled on the social security are the effectiveness of service delivery and imbalance in supply and demand.

Social security systems have the functions of smoothing consumption over lifetime, insurance particularly against longevity and inflation risks, poverty relief and even income redistribution. The challenge for efficient and effective social security systems in AMSs is maintaining fairness and sustainability or in effect, have social security programs that are fiscally viable in the longer term and yet provide an adequate level of benefits to all, especially in the context of tight fiscal resources and many competing urgent expenditure needs (Asher and Zen, 2013, 4). As indicated earlier, coverage leaves much to be desired in many AMSs.

Can AMSs raise substantially coverage and provide adequate level of benefits while at the same time ensure fiscal viability? An examination of the experiences of some countries (e.g., Japan, Chile, and Brazil) provide some insights and **recommendations for the way forward for ASEAN beyond 2015:**

- **Prioritisation and tiering.** For example, Chile has a tax funded pension system called solidarity pillar to all citizens older than 65 years

belonging to the poorest 60 percent of the population, while the rest have a voluntary pillar where all workers contribute. Similarly, Brazil has the non-contributory second pillar, called social assistance, that ensures universal coverage of all Brazilians; the social assistance includes pension for the elderly and disabled with limited resources as well as income transfers to poor families, the best known of which is the cash transfer program called Bolsa Familia Programme. Brazil's first pillar for social insurance is contributory and also covers pension for old age. Japan also has a two-tier strategy for its social security system, with the upper layer for those with formal employment and the lower layer for the rest of the population who are excluded from the upper layer. The tax financed schemes for the lower layer are administered by local governments. Note that in both Chile and Brazil, the tax-financed pillar covers only the relatively poor segment of the population. This is perhaps the take away on prioritisation and tiering; that is, the non-contributory and tax financed pillar or tier is for the relatively poor population only. This is one way of reducing the fiscal cost of the social security system while at the same time expanding the coverage of the system.

- **Strong health insurance systems.** This is best exemplified by the case of Japan where the health system is organised to provide equal quality of medical service at equal cost to all and the patient can directly approach any hospital for treatment. While the provision of equal quality at equal cost for all is not realistic for many AMSs at the moment, it is likely that the quality of medical care can be expected to improve over time in AMSs as they develop. Nonetheless, the focus on health insurance systems reflects the fact that medical emergencies can set back families without insurance considerably financially, possibly forcing them into indebtedness and unplanned sale of productive assets and into poverty.
- **Controlling costs and modernising systems.** Administrative costs are likely to be high in ASEAN economies, and administrative capacities in the relatively poorer AMSs are not adequate. Decentralised implementation but with central government direction and supervision, involvement of non-government organisations with similar objectives

subject to stringent centrally defined criteria, stronger governance and administration of schemes, increased professionalism through evidence-based policy making, and (for low income AMSs) building administrative capacities of social security institutions are all possible means, among others, of controlling costs and modernising systems in the face of higher coverage.

- **Developing effective transfer mechanism that does not rely on formal labour market relationships.** Perhaps the best example of this is Brazil's Bolsa Familia programme, which is a conditional cash transfer program for poor families. Analysts point that the Bolsa Familia accounted for only 3 percent of all social sector expenditures in Brazil, yet the program has been responsible for between 16 – 21 percent of the decline in Brazil's income inequality (arguably one of the worst in the world until the 1990s) since 2001. The conditionalities imposed on recipient families of the cash transfers are related to health and education, which themselves also contribute to improved human capital and competitiveness (or investment attractiveness) of the country. In ASEAN, the Philippines has probably the largest conditional cash transfer program in the region.
- **Integrated, systemic changes in systems under evidence-based policy making.** Improving the efficiency and effectiveness of the social security systems in a number of AMSs may call for systemic and integrated reform efforts. In the case of Chile, the social security reforms were in tandem with capital market reforms, creation of autonomous regulatory structures, and with a great focus on job creation. Such reforms would call for evidence-based policy making with strong reliance on good and transparent information that contributed to better product development and informed policy making.