Study on Collaborative Approach to Special Economic Zones (SEZs) Development and Cooperation in IMT-GT (TA 9572)

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<th>Description</th>
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<tr>
<td>AEC</td>
<td>ASEAN Economic Community</td>
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<tr>
<td>BIMP-EAGA</td>
<td>The Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area</td>
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<td>BKPM</td>
<td>Badan Koordinasi Penanaman Modal Investment Coordinating Board of the Republic of Indonesia</td>
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<td>BLPs</td>
<td>Bonded Logistics Parks</td>
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<td>BOI</td>
<td>Board of Investment of Thailand</td>
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<td>CIMT</td>
<td>Center for IMT-GT Subregional Cooperation</td>
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<td>CMGF</td>
<td>Chief Ministers and Governors’ Forum</td>
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<td>CPKO</td>
<td>Crude Palm Kernel Oil</td>
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<td>CPO</td>
<td>Crude Palm Oil</td>
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<td>CVIA</td>
<td>Chuping Valley Industrial Area</td>
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<td>DFTZ</td>
<td>Digital Free Trade Zones</td>
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<td>DFTZ</td>
<td>Digital Free Trade Zone</td>
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<tr>
<td>E&amp;E</td>
<td>Electricals and Electronics</td>
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<td>ECER</td>
<td>East Coast Economic Region</td>
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<td>ECa</td>
<td>Eastern Aviation City</td>
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<td>EEcd</td>
<td>Eastern Economic Corridor Digital Innovation Zone</td>
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<td>EEci</td>
<td>Eastern Economic Corridor Innovation Zone</td>
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<td>EIT</td>
<td>Economic and Industrial Towns</td>
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<td>EMS</td>
<td>Electronic manufacturing services</td>
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<td>EPTEs</td>
<td>Export-oriented production entrepôts</td>
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<td>EPZs</td>
<td>Export-processing zone</td>
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<td>EZs</td>
<td>Economic Zones</td>
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<td>FCZs</td>
<td>Free Commercial Zones</td>
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<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>FIAS</td>
<td>Foreign Investment Advisory Service</td>
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<td>FTZ</td>
<td>Free Trade Zone</td>
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<td>GBS</td>
<td>Global Business Services (model)</td>
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<td>GEZs</td>
<td>General Economic Zones</td>
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<td>GMS</td>
<td>The Greater Mekong Subregion</td>
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<td>GRDP</td>
<td>Gross regional domestic product</td>
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<td>GVA</td>
<td>Gross value added</td>
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<td>GVCs</td>
<td>Global Value Chains</td>
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<td>HALMAS</td>
<td>Accreditation given to Halal parks operators</td>
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<td>HEZs</td>
<td>Hybrid Economic Zones</td>
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<tr>
<td>HKI</td>
<td>Indonesian Industrial Estates Association or Himpunan Kawasan Industri Indonesia</td>
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<td>IEAT</td>
<td>Industrial Estate Authority of Thailand</td>
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<td>ITA</td>
<td>Income tax allowance</td>
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<td>IZs</td>
<td>Industrial Zones</td>
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<td>JAKIM</td>
<td>Jabatan Kemajuan Islam Malaysia Department of Islamic Development Malaysia</td>
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<tr>
<td>JBC</td>
<td>Joint Business Council</td>
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<tr>
<td>KAPET</td>
<td>Integrated Economic Development Zones (Kawasan Pengembangan Ekonomi Terpadu)</td>
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<td>KB</td>
<td>Bonded zones of Indonesia</td>
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<td>KBN</td>
<td>Kawasan Berikat Nasantara</td>
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<td>KEKs</td>
<td>Kawasan Ekonomi Khusus or special economic zones</td>
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<tr>
<td>KIET</td>
<td>The Sebalang Integrated Energy Industrial Zone, Indonesia</td>
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<tr>
<td>KLI</td>
<td>Kuala Lumpur International Airport</td>
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<td>LGs</td>
<td>Local Governments</td>
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<td>LMWs</td>
<td>Licensed Manufacturing Warehouses</td>
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<tr>
<td>LNG</td>
<td>Liquified Natural Gas</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td>MCEI</td>
<td>Modern Cikande Industrial Estate</td>
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<tr>
<td>MD&amp;C</td>
<td>Multimedia Development Corporation</td>
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<td>MIDA</td>
<td>Malaysia Investment Development Agency</td>
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<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>MRAs</td>
<td>Mutual Recognition Agreements</td>
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<td>MSC</td>
<td>Multimedia Super Corridor</td>
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<td>MSMEs</td>
<td>Micro small and medium enterprises</td>
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<tr>
<td>NCER</td>
<td>Northern Corridor Economic Region</td>
</tr>
<tr>
<td>NCPO</td>
<td>National Council for Peace and Order</td>
</tr>
<tr>
<td>NC-SEZ</td>
<td>National Committee of the Special Economic Zones</td>
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<tr>
<td>NESDC</td>
<td>National Economic and Social Development Council of Thailand</td>
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<td>NSTDA</td>
<td>National Science and Technology Development Agency</td>
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<td>NTBs</td>
<td>Non-tariff barriers</td>
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<tr>
<td>PS</td>
<td>Pioneering status</td>
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<tr>
<td>RBD</td>
<td>Refined, Bleached and Deodorized</td>
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<tr>
<td>RPJMN</td>
<td>Rencana Pembangunan Jangka Menengah Nasional (National Medium Term Development Plan of Indonesia)</td>
</tr>
<tr>
<td>RPJPN</td>
<td>National Long-Term Development Plan (Rencana Pembangunan Jangka Panjang Nasional)</td>
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<tr>
<td>RSP</td>
<td>Regional Science Parks</td>
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<tr>
<td>RVCs</td>
<td>Regional Value Chains</td>
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<tr>
<td>SBEZs</td>
<td>Special border economic zones</td>
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<tr>
<td>SCORE</td>
<td>The Sarawak Corridor of Renewable Energy</td>
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<tr>
<td>SEC</td>
<td>Southern Economic Corridor (Thailand)</td>
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<tr>
<td>SEMI</td>
<td>Semiconductor Equipment and Materials International (an industry association comprising companies in the electronics design and manufacturing supply chain)</td>
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<tr>
<td>SEZs</td>
<td>Special economic zones</td>
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<td>SIJORI</td>
<td>Singapore-Johor (in Malaysia) – (parts of) Riau Islands Province (Indonesia) Growth triangle</td>
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<td>SMI</td>
<td>small and medium industry</td>
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<tr>
<td>STI</td>
<td>Science, Technology and Innovation</td>
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<tr>
<td>STPs</td>
<td>Science and Techno Parks</td>
</tr>
<tr>
<td>TSP</td>
<td>Thailand Science Park</td>
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<tr>
<td>WTO</td>
<td>World Trade Organisation</td>
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<tr>
<td>WGAA</td>
<td>Working group on Agriculture and Agro-based Industry</td>
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<tr>
<td>WGT</td>
<td>Working group on Tourism</td>
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<tr>
<td>WGTIC</td>
<td>Working group on Transport and ICT Connectivity</td>
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<tr>
<td>WGTI</td>
<td>Working group on Trade and Investment</td>
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<tr>
<td>WGHAPAS</td>
<td>Working group on Halal Products and Services</td>
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<tr>
<td>WGHRC</td>
<td>Working group on Human Resource Development, Education and Culture</td>
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EXECUTIVE SUMMARY

**Background.** The Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA) and Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) subregional cooperation programs supported by the Asian Development Bank (ADB) accord a high priority to the development of regional and cross-border production networks using special economic zones (SEZs) and special border economic zones (SBEZs) as the key tool. They are considered potentially effective mechanisms to deepen subregional cooperation, strengthen linkages to the wider ASEAN Economic Community (AEC), and stimulate economic activities, employment, exports and foreign direct investments. However, very little is known about whether the participating economies have coordinated strategies that integrate trade expansion and growth with SEZs development. Bearing this consideration in mind, ADB a Regional Development Partner to IMT-GT since 2007 has initiated a study on collaborative approach to SEZ development and cooperation in IMT-GT under ADB Technical Assistance 9572 at the request of the member states. Against that background, this study focuses on the IMT-GT economic zones. This is the first study of its kind that takes stock of the IMT-GT SEZs and other economic zones, reviews the extent to which these are aligned with subnational strategies and policies of the member states and reviews their performance. It also identifies the challenges facing IMT-GT economic zones and offers recommendations for policy makers to support active clustering and specialization efforts in the subregion. No earlier study has assessed the implementation of the subregional agenda from the perspective of economic zones.

**Objectives.** The study sets out the following specific objectives.

- Mapping of the economic zones (EZs) located in the IMT-GT countries,
- Mapping of the EZs on IMT-GT economic corridor routes
- Assessing the national and subnational policies, regulations, institutions and governance relating to IMT-GT EZs,
- Assessing the alignment between the national development agenda and the IMT-GT economic corridors and zones development approaches;
- Reviewing the economic performance of the subregions to gauge the success of economic zones.
- Identifying the challenges facing the subregional economic zones, and offering recommendations for actions and mechanisms to deepen EZs' development and cross-border cooperation in IMT-GT subregion.

The ultimate objective of the study is to strengthen the strategic relevance of EZs in the subregional initiative and identify actions for promoting them. The geographical scope of the study includes all 32 provinces/states covered under the IMT-GT including 10 provinces of Sumatera in Indonesia, 8 Northern states of Peninsular Malaysia and 14 provinces in Southern Thailand.

**Data.** The analysis is based on both primary and secondary data. The primary data was gathered through consultations and interviews with a cross section of federal governments as well the state/provincial governments’ officials, the Centre for IMT-GT Subregional Cooperation (CIMT) management team, economic zones’ management authorities, and private entrepreneurs; and field trips to a number of economic zones. It was combined with the secondary data which encompassed an enormous range of sources including nationally and internationally published studies; Development Plan documents of the three countries since the 1960s; texts of the relevant acts, decrees and regulations; government reports and press releases; academic and news articles; blogs and books; and the websites of various government agencies.
Methodology. The data was assessed using the descriptive, exploratory and explanatory approaches. The descriptive element includes mapping of the economic zones in three IMT-GT countries and policy frameworks surrounding them. The exploratory part delves into the linkages between the zones and national development strategies, and reviews economic impacts of the former. Finally the explanatory part explains the relevance of the subregional program using both theoretical arguments and empirical evidence, discusses the challenges and offers recommendations to strengthen the subregional EZs.

Typological framework of economic zones. We propose a two-layered classification zones to map their universe. At the top (level 1) is the typology based on the legal perspective. From this perspective, there are mainly three types of economic zones: general, special and hybrid zones. The distinction between the general and special economic zones centers mainly around the type of regulatory regime that governs them. The SEZ is a distinct variety of an economic zone with a specialized legal regime to overcome the institutional deficit in developing countries. Hybrid zones consist of both, the general and special economic zones. Each type of economic zone further branches out according to its functional characteristics in layer 2. In this typological framework, ‘subregions’ are classified as cross-border hybrid zones covering contiguous subnational units from two or more nation-states that can drive growth by reinforcing local competencies through regional integration.

Mapping of the economic zones. The governments of all three IMT-GT countries adopted the economic zones program at different points in time, followed different policies regarding the designs, types and names of the zones, and implemented them with different rigour. However the turning point came in the mid 2000s when all three countries gave a major thrust to their economic zones programs to steer their respective economies to a higher growth trajectory and structural shifts to higher value added activities. Since then there has been proliferation not only in the number but also variety of zones. The three countries have 2,065 cluster based economic zones for which specific information is available (excluding the hybrid zones). Of them, 470 (23%) are general zones; the rest are cluster based SEZs (1,595) of different varieties. In accordance with the development ladder, Indonesia has the largest number of SEZs (1,482) followed by Thailand (68) and Malaysia (45). Malaysia leads in general economic zones (309); Indonesia (122) and Thailand (39) follow it. Overall, Indonesia has the most diverse types and the largest number of economic zones followed by Malaysia and Thailand. More importantly however, 92% zones in Indonesia are SEZs followed by Thailand (72%) and Malaysia (13%) in that order. It also shows that all three countries have been launching ever more ambitious zones initiatives since the mid 2000s. Economic zones have evolved towards larger spatial dimensions, complex structures, more comprehensive high tech orientation and multi sectors, and flexible locations. This reflects a strong commitment, pragmatic approach and dynamic learning towards economic zones adopted by all three countries, which are critical components of a strategic zones policy.

Legal and institutional frameworks of SEZs and GEZs. In general, the presence of a legal and regulatory framework that can evolve with changing requirements is considered as a good practice in the context of the SEZ programs. The analysis presented here however shows that the legal traditions that the countries follow affect their practices regarding the legal and institutional frameworks of economic zones as well. Indonesia and Thailand, two civil law countries support almost all EZ programs whether GEZs or SEZs by a distinct legal framework. On the other hand Malaysia which is a common law country has distinct legal frameworks only for its SEZs. Further, Thailand has autonomous institutional bodies in place to run all its EZ programs. In Malaysia and Indonesia however, autonomous regulatory bodies have been set up only for those programs which are accorded a high priority. The preferential regulatory contents have been enriched and enlarged over time particularly in Thailand’s SEZs. Indonesia is mainly focusing on administrative simplifications and fiscal incentives while Malaysia is relying more on specialised and integrated GEZs. The study
argues that the gap in the legal or institutional regimes of SEZs and the wider economy is the key to their competitiveness. Large fiscal incentives offered in SEZs cannot compensate for a narrow institutional gap between the two.

**SEZs and GEZs in IMT-GT corridors.** The IMT-GT corridors' landscape is abuzz with a variety of economic zones that are at various stages of operation. In all, there are 355 cluster based zones of various types in the IMT-GT subregion for which there is specific information available. They are located mainly in Malaysia-GT and Indonesia-GT. Thailand-GT is yet to pick up. In addition, there are several projects in the pipeline. In all 35 such projects are identified. Malaysia is leading with 19, Indonesia 10 and Thailand 6. Many of them are large projects involving a number of economic zones.

**Assessing the alignment of the national/subnational development policies with IMT-GT agenda.** The linkages between the national development agenda and IMT-GT corridors and EZs are assessed using two approaches: qualitative and quantitative.

- The qualitative approach. The study identifies four forms of linkages between the subregional and national and subnational development agenda, and explores them one by one based on a depth review of the long and medium term plans documents at the national level. These are,
  - Alignment between national and IMT-GT objectives.
  - Mainstreaming of IMT-GT spatial approach as a strategic pillar.
  - Mainstreaming of IMT-GT projects.
  - Mainstreaming of the development of subregional production networks through SEZs

The explorations reveal that there is a growing recognition of the importance of IMT-GT subregional program in the national strategic plans and that all three countries have explicitly or implicitly incorporated it in their national development agenda albeit in different forms and varying degrees. Overall, Thailand has taken a lead and is followed by Malaysia and Indonesia in that order. Yet, the role of the IMT-GT spatial approach in particular that of economic zones in unlocking subregional potential is not fully recognised.

- The quantitative approach: The quantitative approach analyses trends in 5 indicators organised into 3 categories: immediate (projects completed), intermediate (intra subregional trade and investment) and final/impact (GDP and GDP per capita). The analysis summarised in 5 figures indicates that the IMT-GT subregional program or even the proliferation of economic zones has not made the subregion significantly better off in relative terms. The progress in IMT-GT connectivity projects is also found to be short of expectations.

**Performance of IMT-GT using selected indicators.**

!(a) Intra IMT-GT Trade share (%)

!(b) Intra IMT-GT Share in World Trade (%)
The need of mainstreaming the subregional program into broader development agenda. All three countries have undergone substantial industrial and social transformation alongside rapid economic growth and development since the 1960s, and have transformed their industrial base from agriculture to export-oriented manufacturing. This is largely achieved by integrating key manufacturing production into global value chains with economic zones being the lynchpin of this strategy. However, since the mid 2000s, these economies have been slowing down as reflected in GDP growth per capita, structural transformation and trade. And this is despite the fact that all three countries have adopted an aggressive approach to their economic zone initiatives to promote trade and investment. The linkages between the EZs and economic growth seem to be weakening in the region. A renewed thrust on zones programs from the perspective of regional integration can infuse a new dynamism to economic growth of these economies. The study highlights how the corona virus pandemic has underscored the need for regional cooperation and the regional value chains.

Challenges The challenges facing the economic zones are grouped into three categories

- External: Intensified competition for GVC linked FDI with new centres emerging in Africa and Asia; increasing protectionist sentiments across the developed world; he China-US trade war; the rise of digital technologies, and of late, the Covid 19 pandemic and lockdowns to contain it.
- Domestic conditions: Regional disparities, limited spillover effects, proliferation of EZs
- Subregional factors: Gaps in physical connectivity and transport facilitation; non-tariff and custom barriers; general treatment to EZs in the subregion; weak alignment between the national development agendas and IMT-GT economic corridor approach; and heterogeneous policies, regulations and standards

Policy and strategy development. The study proposes a ‘coopetition strategic approach’ to strengthen the IMT-GT corridors and economic zones program. Coopetition is defined as a situation where firms simultaneously cooperate and compete with each other. A central idea
is that the coopetition approach enables countries to augment their capabilities by having access to subregional resources and markets to enhance their competitive advantage which they can use for competition to attract more investment. It is founded on two pillars: cooperation and competition.

- Collaborative approach. The underlying principle of the cooperative strategic elements is to establish a single market and production base in the subregion by effectively implementing economic corridors, building regional capabilities, promoting cross border value chains, and branding of the IMT-GT subregion as a hub of food, rubber and palm oil industries.

- Competitive approach. To complement the cooperative strategy with a competitive strategy a two pronged strategy is recommended which focuses on the competitiveness of EZs in attracting investment and maximising spillovers effects within the economy to promote the domestic capabilities.

Each of the two approaches consists of strategies, which are broken down into strategic interventions that are further divided into enabling actions.

**Policy adoption into planning** for the adoption of the proposed strategic framework into planning, a threefold solution is proposed.

- First, adopt a holistic and integrated approach that requires the adoption of all the broad policy prescriptions simultaneously as a package. A piecemeal approach cannot be effective.

- Second, break down the strategic interventions into three time frames: short-, medium-, and long-term and focus on the former two as low hanging fruits while building consensus for the long term measures.

- Third, mainstream all proposed strategic interventions and enabling actions for economic zones into the relevant sectoral /thematic strategies of the development plans, and the 7 working groups and design special programs and initiatives for the subregion to implement them effectively. This is termed as the *mainstreaming with targeted approach*.

**A sound strategy for implementing the spatial approach.** Implementation is the process that turns strategies and plans into actions in order to accomplish strategic objectives and goals. We propose four approaches for implementation with specific enabling actions. These approaches focus on overcoming institutional constraints; human resource constraints; and social and environment costs, and external risks involved in integrating border areas and promoting SEZs in these areas. It also proposes to strengthen the monitoring and evaluation frameworks for both the corridors and economic zones. The study maps the IMT-GT working groups and government agencies that need to collaborate closely to adopt these strategies and deliver the desired results.
I. INTRODUCTION

I.1 Background

Since its inception in 1993, the IMT-GT subregional program has attained remarkable economic growth and shared regional prosperity through concerted policy interventions. Yet there is a mismatch between the actual achievements and declared objectives. The mid-term review of the Implementation Blueprint (IB), 2012-2016 observes that the gains in terms of intra-subregional trade and investment are particularly modest suggesting limited success of the member states in leveraging on their comparative advantages to make it a well-positioned regional production base (ADB 2015). To address this gap, the IMT-GT Vision 2036 (CIMT 2017a) supported by the Implementation Blueprint, 2017-21 (CIMT 2017b) adopts the spatial approach which accords a high priority to the development of regional and cross-border production networks in IMT-GT areas using special economic zones (SEZs), special border economic zones (SBEZs) and other production sites as the key tools. It places the five priority IMT-GT economic corridors at the center to facilitate cross-border connectivity of these production sites backwards with resources and forward with markets and maximise the economic network externalities. The objective is to foster diversification and sophistication of manufacturing, agribusiness and tourism chains for “an integrated, innovative, inclusive and sustainable subregion by 2036” (CIMT 2017a). However, very little is known about whether and how economic corridors are being leveraged for setting up SEZs, SBEZs and other production hubs and how successful they have been in generating network externalities in the subregion through regional cooperation. Bearing this consideration in mind, ADB a Regional Development Partner to IMT-GT since 2007 has initiated a study on collaborative approach to special economic zones (SEZs) development under the ADB Technical Assistance 9572 at the request of the member states. The main objectives of the study are to take stock of the IMT-GT SEZs and other economic zones, assess the national and subnational policies governing economic zones, review the extent to which these are integrated into national development agendas of the member states, review their performance, identify challenges and offer recommendations for policy makers to support active clustering and specialization efforts in the subregion. The study begins by mapping the universe of SEZs and other industrial zones in a comparative framework to harmonise the data on economic zones in the three member countries. Harmonization of data means transforming the data of varying zone types and naming conventions into one cohesive data set. This is achieved by developing a framework for zone typology. To our best knowledge, no earlier study has assessed the implementation of the subregional agenda from the perspective of economic zones and/or attempted to harmonise the regional economic zone data. This is the first study to address this gap. It makes three major contributions to the existing literature on economic zones (EZs), in particularly SEZs. First, it harmonises the data on EZs in the IMT-GT member countries. Second, it underlines the relevance of the collaborative approach for the subregional EZs and highlights how the outbreak of Covid 19 pandemic has further underscored the need for the collaborative approach to EZs. Third and most importantly, it proposes a strategic framework for the success of economic zones in the subregion. Typically, EZs are set up as a competitive tool to attract investment and generate employment. However, this study identifies the transborder subregion with a hybrid zone and proposes a coopetition (a combination of collaboration and competition) strategy to improve the attractiveness of the subregional EZs.

I.2 Objectives and Scope

The study sets out the following specific objectives.
- Mapping of the economic zones (EZs) located in the IMT-GT countries,
- Mapping of the EZs on IMT-GT economic corridor routes
• Assessing the national and subnational policies and strategies (including incentives), regulations, institutions and governance relating to IMT-GT EZs,
• Assessing the alignment between the national development agenda and the IMT-GT economic corridors and zones development approaches;
• Reviewing the economic performance of the subregions to gauge the success of economic zones.
• Identifying the challenges and offering recommendations for actions and mechanisms to deepen EZs’ development and cross-border cooperation in IMT-GT subregion.

The ultimate objective of the study is to strengthen the strategic relevance of EZs in the subregional initiative and identify actions for promoting them.

While the study proposal was designed to cover only SEZs and SBEZs, during the course of the study it was decided to include all other types of economic zones, as well for three reasons: first, there has been proliferation not only of SEZs but also other economic zones in the region; any study based only on SEZs would therefore present a partial view of trade and investment activity along the economic corridors. Second, the distinction between SEZs and other economic zones is becoming blurred with many of the advantages of the former offered in the latter as well. Finally, the ultimate objective of both these types of zones is to promote industrial clustering and production networks which is one of the planks on which the Vision 2036 strategic framework is based.

The geographical scope of the study includes all 32 provinces/states covered under the IMT-GT including,
• 10 provinces of Sumatera in Indonesia (Aceh, Bangka-Belitung, Bengkulu, Jambi, Lampung, North Sumatera, Riau, Riau Islands, South Sumatera, and West Sumatera);
• 8 northern states of Peninsular Malaysia (Melaka, Kedah, Kelantan, Negeri Sembilan, Pulau Pinang, Perak, Perlis, and Selangor); and
• 14 provinces in Southern Thailand (Nakhon Si Thammarat, Narathiwat, Pattani, Phatthalung, Satun, Songkhla, Trang, Yala, Chumphon, Krabi, Phangnga, Phuket, Ranong, Sura Thani in Thailand).

### I.3 Methodology

The methodology employed in this study involves a combination of both secondary and primary research. We began with country consultations in which, using semi structured questionnaires, face-to-face interviews were conducted with key informants including government officials at the national and subnational levels, SEZs and other economic zones officials, the Center for IMT-GT Subregional Cooperation (CIMT) and private sector entities. The field based consultations offered crucial insights on the implementation of the subregional agenda at the national level. Country consultations were also filled with presentations by various government agencies, discussions and site visits. This yielded rich information on the existing and proposed economic zones in these countries. The primary data gathered during field trips was then combined with the secondary data which encompassed an enormous range of sources including nationally and internationally published studies; development plan documents of the three countries since the 1960s; texts of the relevant acts, decrees and regulations; government reports and press releases; academic and news articles; blogs and books; and websites of investment promotion agencies including Malaysia Investment Development Agency (MIDA), Investment Coordinating Board of Indonesia (BKPM), Industrial Estate Authority of Thailand (IEAT) and Board of Investment of Thailand (BOI), and the relevant Ministries. The data was assessed using the descriptive, exploratory and explanatory approaches. The descriptive element includes mapping of economic zones in the three IMT-GT countries and policy frameworks surrounding them. The exploratory part seeks to analyse the linkages between the zones and national development agendas, and review economic impacts of the former. Finally the
The explanatory part explains the relevance of the subregional program using both theoretical arguments and empirical evidence, discusses the challenges and suggests approaches to strengthen the subregional EZs.

I.4 Organization of the study

Since the ultimate objective of the study is to identify policy actions for promoting economic zones created within the subregional economic corridors, it is structured using the ‘stages model framework’ of the public policy literature. According to this model, the process of producing public policies can be divided into 5-7 stages. In this report we use the Howlett and Ramesh’s model (Howlett and Ramesh 2003) which proposes 5 stages of public policy: agenda building, policy formulation, adoption, implementation and evaluation. The agenda building stage establishes the relevance of an issue/topic for public intervention while policy formulation means strategy building to address the issue. Policy adoption is the third phase of the policy process in which policies are adopted by government bodies for implementation; implementation involves putting the policies into effects and the final stage evaluation requires impact assessment of the policy. In this study these stages are adapted and reorganised into four stages: Agenda building, strategy development, adoption of policy into planning, and policy implementation. The fifth stage of monitoring and evaluation (M&E) is grouped into the implementation stage as part of the implementation strategy. The rest of the study is organised into 10 sections covering these four stages and concluding remarks, as illustrated in Figure 1.

![Figure 1: Organisation of the study](source: Author)
The stage of agenda-building is the subject of Section II through VI. These sections provide a detailed account of EZs in the three IMT-GT member states in general and within the subregion in particular, explore their linkages with the broader development agenda and establish the need for deeper state intervention to harness the potential of the subregional EZs in building cross-border value chains and generating economic externalities. Section VII highlights the need for the development of EZs within the subregional economic corridors and identifies challenges. Sections VIII proposes strategic approaches, strategic interventions and enabling actions. Section IX presents the approaches for policy adoption into planning while Section X offers recommendations for implementation strategy of the policy framework. Finally, the study concludes the analysis.

II. UNDERSTANDING THE CONCEPT OF ECONOMIC ZONES: THE CONCEPTUAL FRAMEWORK

II.1 The typological framework of economic zones

Economic zones are geographically delimited areas, created with the intention of offering well-developed industrial spaces with or without special rules and incentives. While the underlying principle for economic zones is clustering of general or specialized firms and generating agglomeration economies, they are different from ‘industrial/economic clusters’ in terms of origin, entry barriers, and composition of enterprises. Clusters are often organically formed geographic concentration of highly interconnected companies, specialized suppliers, and service providers (i.e., finance, business consultants and service providers, and academic and technological institutions) linked by commonalities and complementarities without a clearly demarcated geographical boundary (Porter 1998) and as determined by historical legacy (Miller and Côté 1985). They are instrumental in improving competitiveness of firms in a globalizing world by exploiting the strength of agglomeration economies through collaborative networks developed between economic actors operating within them (Krugman 1991). By contrast, economic zones are government-designated industrial areas with specific geographical boundaries and are developed by public and/or private entities, offering enabling environments in a limited place with a single administrative regime and infrastructures, such as roads, power, and other utility services (ADB 2018). The type, size, and number of firms that can operate in them are determined by the zone management authorities. The collaborative networks and social capital that develop between various economic actors engaged in production processes in natural (organic) clusters may not be seen in these government designated zones. Usually interconnectedness of firms in economic zones is limited to sharing common infrastructure and utilities provided by the developers. However they can evolve over time and transform into economic clusters to serve as a useful policy tool. Policy makers across the globe have pinned their hopes on economic zones for promoting agglomeration economies and have been experimenting with innovative designs, features and incentives to generate the intended effects. This has led to a proliferation in the number and variety of zones in terms of the objectives, designs, ownership, sectoral composition and geographical spread. With their evolution it has become difficult to present any universally accepted, all-encompassing, and comprehensive definition or terminology for EZs (ADB 2018). Therefore, we use the typological method to understand the concept of economic zones. But there is no uniform typology of economic zones either. They can be categorized in various ways based on their legal regimes or geographical, institutional and economic characteristics resulting in diverse typologies, each addressing certain analytical requirements.

We propose a two-layered classification zones to map their universe (Figure 2). At the top (level 1) is the typology based on the legal perspective. From this perspective, there are mainly three types of economic zones: general, special and hybrid. The distinction between the general and special economic zones centers mainly around the type of regulatory regime
that governs them. Hybrid zones consist of both, the general and special economic zones. Each type of economic zone further branches out according to its functional characteristics in layer 2.

![Figure 2: A typological framework of economic zones](image)

**II.2 Types of economic zones**

**General Economic Zones or industrial zones**

According to UNIDO (1997) `general economic zones are tracts of land developed by the government/private investors, or in public-private partnerships according to a comprehensive plan with a provision for roads, transport, public utilities, services and facilities to the occupants to promote industrial clustering`. Industrial parks started emerging in the early 20th century in the advanced countries¹, and their number exploded in the post-World War II period. The US alone had 1,000 industrial parks by 1959 which grew to 2,700 by 1970 (World Bank 1992). In Asia, the first publicly funded industrial estate was set up in Singapore in 1961 (ibid.). The concept spread quickly with industrial estates emerging and multiplying in other Asian countries as well. They evolved over time in terms of the number of variants. The most common names given to them are industrial zones, industrial parks, industrial districts, industrial subdivisions, trading zones, industrial areas, and industrial tracts. This chapter shall use the term GEZs/IZs (industrial zones) as a generic term for them throughout the analysis. Table 1 provides a second layer typology of GEZs which is based on their functions (objectives and forms).

<table>
<thead>
<tr>
<th>GEZ</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Type IZs</td>
<td>• IZs of mixed type are industrial zones which accommodate a wide range of</td>
</tr>
<tr>
<td></td>
<td>industrial activity and firms.</td>
</tr>
<tr>
<td>Specialised IZs</td>
<td>• Specialised industrial zones provide factory accommodations exclusively to</td>
</tr>
<tr>
<td></td>
<td>industrial units belonging to the same trade in manufacturing or services,</td>
</tr>
<tr>
<td></td>
<td>with the advantage of common services and facilities that are organized</td>
</tr>
</tbody>
</table>
|                          |     efficiently and economically for the benefit of the tenants. Some illustrative examples are textile

¹ Manchester’s Trafford Park set up in 1896 was the world’s first industrial estate (World Bank 1992).
parks, food parks, halal parks or computer software parks.

- A business park is a variety of specialised zones with non-pollutive light, high-technology, research-oriented and service based businesses clustered in them. They also cover cybertechies and centers.
- A specialized business district is a business hub specialised in specific type of activities.
- Logistics parks are specialised zones that provide services related to transport, logistics and distribution to lower freight and transaction costs, vehicular pollution, congestion and warehousing costs.

### Technology/Science Parks/ Science and technology parks

- Technology parks are specialized industrial parks with research and development institutions, companies, and markets that facilitate the creation and growth of innovation-based companies through incubation and spin-off processes.²
- An innovation district is a second generation technology park with a top-down urban innovation ecosystem designed with the ultimate objectives of accelerating the process of innovation and strengthening the location’s competitiveness (UNIDO 2015)³.

### Enterprise zones

- Enterprise zones are intended to revitalize distressed urban or rural areas through the provision of tax incentives and financial grants. Most such zones are in the developed countries, for example the United States, France, and the United Kingdom.

### Eco industrial parks.

- Eco industrial parks are communities of businesses both in manufacturing and services seeking enhanced environmental and economic performance by sharing common pollution-control services and facilities, and promoting the exchange of goods, services, material, energy, water, waste, and by-products through a process called industrial symbiosis (Lowe 2019, UNIDO 2019).

**Source:** Author based on the existing literature

### Special Economic Zones

The SEZ is a distinct variety of economic zones with a specialized legal regime and institutional environment that is different from the rest of the economy. They are set up to overcome the institutional deficit in developing countries (Aggarwal 2010). Typically, a SEZ is set up for export-oriented enterprises particularly foreign invested, to offer them a special regulatory regime for exporting activity with a separate customs area, duty-free benefits, streamlined procedures, and its own management authority (Akinci and Crittle 2008, FIAS 2008). But they can also target import substituting activity or investment in priority industries. In today’s world they have become a critical tool for developing countries to plug into the global value chains. According to UNCTAD (2019), 147 countries have established nearly 5,400 SEZs within their borders and 500 are in the pipeline. Over time SEZs have evolved into various forms depending on their objectives (Table 2).

**Table 2: Functional Typology of special economic zones**

<table>
<thead>
<tr>
<th>Type of Zone</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free ports</td>
<td><em>Free ports</em> are a special kind of maritime /air ports where normal tax and customs rules do not apply.</td>
</tr>
<tr>
<td>Free trade zone (FTZ)</td>
<td><em>A FTZ is a small enclosed area carved out in or adjacent to ports/airports offering warehousing, storage, and distribution facilities for trade, trans-shipment and re-export operations, and located in the ports of entry/airports (UNCTAD 2019).</em></td>
</tr>
<tr>
<td>Bonded logistics parks (BLPs)</td>
<td><em>BLPs are essentially a variant of the logistics parks established especially on port hinterlands offering a range of transport and logistics services to all types of trade including swift, customer-oriented just-in-time (JIT) services and value added logistics services to reduce inventory and raw material procurement costs.</em></td>
</tr>
<tr>
<td>Digital free trade</td>
<td>*A DFTZ aims at providing physical and virtual space for SMEs to grow through e-</td>
</tr>
</tbody>
</table>


³ Daedeok Innopolis in the Republic of Korea for instance has 30 government-funded institutions, 5 universities, over 400 corporate R&D centers, and more than 1,200 high-tech companies. Over 11% of all PhD-level researchers in the Republic of Korea who specialize in engineering and the natural sciences are residents of this town (Oh and Yeom 2012).
zones (DFTZ) | commerce cross-border activities. It is supported by logistics centers set up in selected locations.
---|---
**Production Based SEZs**

**Export-processing zone (EPZs)**
- A first generation EPZ is a relatively small, geographically separated area within a country to attract export-oriented processing activity by offering favourable investment and trade conditions. It provides for the importation of goods to be used in the production of exports on a bonded, duty-free basis.
- Second generation EPZs are relatively larger and more sophisticated in terms of the composition of export processing activities, and services and facilities offered than the traditional ones.

**Single factory EPZs**
- EPZs may be promoted as a single firm/factory that is a designated enterprise with EPZ benefits. Mexico’s maquilas and Mauritius’s export-processing zones are well known examples of single factory zones.

**Special economic zones (SEZs)**
- SEZs are mega open industrial towns spread over several square kms. The key features of SEZs are that they accommodate all types of activities, including tourism and retail sales, and permit people to reside on site with an elaborate onsite social infrastructure.
- Second generation SEZs. These are more specialised and more complex than the first generation SEZs.

**Border economic zones (BEZs)**
- Special border economic zones (SBEZs). First introduced in Mexico (on US-Mexico border) in the early 1960s in the form of maquiladoras, border economic zones are set up to exploit comparative advantages of border areas that arise due to their climatic conditions, factor endowment, spatial proximity to foreign markets, and the relatively high potential for developing cross-border backward and forward linkages and regional cooperation.
- Cross-border zones. Cross-border economic zones are established by integrating border economic zones on both sides of the border to catalyze economic activity and to promote regional cooperation. ADB is supporting the development of Hekou–Lao Cai and Pingxiang–Dong Dang CBEZs on the PRC–Viet Nam border.

Source: Author based on the existing literature

**Hybrid zones**
Hybrid zones are a conceptual leap in the concept of EZs. These are contiguous subnational or transborder economic regions comprising of clusters of SEZs and GEZs.

- **Subnational hybrid zones.** Known as micro regions these are groupings of contiguous subnational economic regions being promoted on a premise to create specialised territorial areas that can enable the development of distinct polarities (such as SEZs and GEZs) around which activities, resources, economic and market relations structure themselves to generate a cumulative process of territorial agglomeration and a virtuous circle of development (Capello 2009). It means that the concept of a single node (a single factory or EZ) growth pole has been upscaled to a hybrid zone comprising of a cluster of such “nodes” (SEZs and IZs) to exploit externalities generated by them on a larger scale (Jassop 2003).

- **Cross-border hybrid zones.** The early 1990s witnessed a resurgence of regionalism with an explosion of the number and types of new regional programs across the globe. One of the major developments was the extension of the concept of micro regions to transborder regions covering contiguous subnational units from two or more nation-states (Söderbaum 2004, Hutchinson and Chong 2016). Originated in Germany the concept had been in existence since 1958. However, early such regions were in the form of cross-border cooperation by local governments with no formal organisational arrangements (Perkmann 2002). In the 1980, the Madrid Convention was signed to provide a legal framework for bi- and multinational agreements for cross-border regions between local governments in Europe which started growing in the 1990s under the ‘Interreg Community Initiative’ launched by the European Commission⁴. In Asia, these arrangements arose in the form of growth triangles, growth polygons and growth areas...

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⁴ By 2002, there were over 70 such zones in Europe (Perkmann 2002).
which are orchestrated by the policies of central governments. One of the earliest subregion in Asia was the Singapore-Johor-Riau (SIJORI) Growth Triangle initiated by Singapore. It was followed by a number of subregional arrangements in Asia including Greater Mekong Subregional (GMS) Economic Program, Tumen River Delta Initiative, IMT-GT and BIMP-EAGA. Backed by a formal organizational structure, a cross-border subregion is an eco-territorial unit designated to promote economic nodes (or zones) which drive growth by accelerating trade, investment flows and productivity growth, reinforcing local competencies through regional integration. Viewed from this perspective the IMT-GT subregion is a cross-border hybrid zone. Physical integration of institutionally and physically fragmented cross-border areas is a necessary condition to create a contiguous economic spatiality to ensure efficient movement of people, resources and goods and services. This facilitates the promotion of new production hubs and urban centers on the one hand and expansion of the existing one on the other. Economic corridors that support connectivity infrastructure and regulatory reforms are therefore integral to the economic fabric and economic actors (including, economic zones of different types) of the subregion (Brunner 2013). In general, the assessment of the subregion (ADB 2015) focuses either on the primary goals (connectivity and regulatory reforms) or the final outcomes (GDP, investment and trade); the intermediate goal i.e. the promotion of economic zones is often ignored. This study deals precisely with this gap.

III. GEZS AND SEZS IN IMT-GT COUNTRIES

SEZs have been a core element in the economic development strategy of ASEAN countries since the early phases of their development. Currently all ASEAN countries have EZs of different varieties. The IMT-GT countries were among the first major economies in the region and in Asia that successfully leveraged economic zones to support their manufacturing centered industrialization strategy (Aggarwal 2019). By the early 1970s, all IMT-GT countries had established both general and special economic zones with a view to promote industrial diversification. Since then, the SEZs and GEZs remain the center piece of their national development strategies. Over time, the EZs in these countries have undergone several transformations with changing macro-economic contexts. Several different types of EZs have emerged with their objectives evolved from promoting economic diversification to achieving regional balanced growth to improving competitiveness. This section describes the evolution of EZs in the IMT-GT countries through different phases of economic development and maps them using the typological framework outlined in Section II.

III.1 Indonesia

Indonesia is known for its abundance of natural resources: spices, wood, rice, copper, tin, gold, coffee, tea, cacao, tobacco, rubber, and since 1883 mineral oil. At the time of independence, the economy was heavily dependent on commodity trade. In 1949, the government embarked on the process of industrialisation as the engine of economic development. Over time, economic development policies evolved with the political regimes and economic crises and can be broadly classified into three distinct phases: 1947-1967, 1967-1998, and 1998 till date (Table 3). Each phase is associated with evolutionary changes in the EZs (Table 3).

<table>
<thead>
<tr>
<th>Table 3: The evolution of Industrial policy and economic zones in Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development phase</td>
</tr>
<tr>
<td><strong>Phase 1: 1950-1966:</strong></td>
</tr>
<tr>
<td>1972-1999</td>
</tr>
</tbody>
</table>

Revised draft: 4 September, 2020
The first phase of growth (1950-1966) focused on widening the industrial base to support which, a nationalist industrialisation strategy was adopted with nationalisation of foreign enterprises, extensive foreign exchange controls and all pervasive government interventions and regulations as the major policy tools (Humphrey 1962). The potential of economic zones in driving industrialisation was overlooked. After a short period of industrial momentum, the economic strategy resulted into economic stagnation and structural retrogression. Foreign capital fled while many private companies that were dependent on imported materials shut down or turned to quick return activities such as trade and currency exchange. In the late 1960s, there was a change in the political regime which led to a series of reforms and marked a shift in the policy regime from nationalist to import-substituting industrialization (Ananta et al 2011). Beginning from 1969-1970 to 1993-1994, the first 25 years’ development plan was introduced which was implemented through 5 five years’ development plans called Repelita. All successive five-year plans during this phase emphasized the importance of redressing regional disparities and spreading economic growth more evenly. It was against this background that a variety of industrial estates and bonded zones were created in Indonesia. The emergence of a number of economic zones had a transformative effects on the economic structure as is evident from the share of manufacturing in GDP which grew from 10% in 1970 to 27% by 1997 (Grabowski 2020). The Asian Crisis of 1997 followed by the political regime change hit Indonesia hard and took 6 long years to show sign of recovery (Tijaja and Faisal 2014). Indonesia entered the third phase of development from 2005 when it scrapped the then planning system and introduced the Long-Term National Development Plan (Rencana Pembangunan Jangka Panjang Nasional or RPJPN) for the period 2005–2025. It placed the industrial sector at the center of growth for strengthening the economic structure and improving efficiency with modernization, promoting local and international competitiveness, strengthening the national industrial base, and achieving more balanced economic development outside Java with a focus on developing resource based industries. A major thrust was provided to economic zones’ establishment by envisaging cluster development as the basis of industrial growth. However, the share of manufacturing in GDP continued to move southwards to capture which the government in 2015 renewed its focus on promoting EZs. Since then, efforts to increase their number and improve their attractiveness have accelerated. Currently, the country has a large variety of economic zones as described below.

**General economic zones**

- **Industrial estates (IEs).** The Government of Indonesia (GoI) started to develop industrial estates in the early 1970s to support the promotion of domestic and foreign direct investment and encourage regional development. The country’s first industrial estate Jakarta Industrial Estate Pulo Gadung (JIEP) was set up in 1970 over 500 hectares of land. In 1971 a Presidential decree designated Batam as an industrial estate (Kam and Kee 2009). In 1973, Batam Industrial Development Agency was set up for the industrial development of the island (Table 3). Subsequently, a series of regulations were issued that formed the legal and technical basis of the industrial estate development. However
the progress in IE development remained slow due to highly regulated business environment. A few more IEs were set up by public owned companies covering 2,596 hectares of land until 1989 (HKI 2019a). These were: Surabaya Industrial Estate Rungkut (1974), Cilacap Industrial Estate (1974), Medan Industrial Estate (1975), Makassar Industrial Estate (1978), Cirebon Industrial Estate (1984), and Lampung Industrial Estate (1986) (Kwanda 2000). In the late 1980s, a series of reforms were initiated to stabilise the economy, encourage private investment and promote industrial growth. In 1989, the Presidential Decree 53/1989 concerning Industrial Estates opened the industrial estate development to private companies, and set the legal and technical standards’ requirements for their development. This gave an impetus to the IE program. Several local entrepreneurs partnered with foreign companies to set up IEs, including Sumitomo, Itochu and Marubeni from Japan, Hyundai from Republic of Korea, Sembcorp from Singapore etc. Yet by 2007 there were just 40 Industrial estates; of them, 32 were on the main Java island (WTO 2007). Since then the number has surged. In 2019, there were 87 operational industrial estates covering over 86 thousand hectares (ha) of land (HKI 2019a). Out of them, 45 are in Java, 23 in Sumatera, 6 in Kalimantan, and 5 in Sulawesi. In addition, there are 15 industrial estates under construction and 10 industrial estates in planning. The most successful, relatively larger and more diversified industrial estates are in Java attracting investment in wide ranging products from technology and knowledge intensive consumer goods such as electronics and electrical, automotive and other consumer items to labour intensive industries (Daisy 2012). Concentration of economic activity in Java started with the rise of the colonial economy based on the exports of plantation crops accompanied by the growth of processing industries and infrastructure development. Post-independence, despite transmigration policies of the government, industrial hubs in Java continued to expand and extended to adjacent cities due to centripetal forces. Java which accounts for 7% of land and is home to 57% of the population contributed 70% of total manufacturing value added in 2014 (ADB 2019). There has however been thrust on promoting economic zones outside Java. New industrial centers are emerging in natural resource abundant areas outside Java with favourable conditions for growth in processing activities to leverage the opportunities presented by abundant natural resources including gold, copper, tin, palm, rubber, cocoa, spices, fruits, forests, oil and gas fields, marine life, and many others. The 2020 – 2024 National Medium-Term Development Plan (RPJMN) proposes to set up 19 priority industrial estates out of Java between 2020 and 2024 (Cahyoputra 2019). In the long term up to year 2035 industrial estates in 36 locations are planned requiring the availability of land of about 50,000 hectares prioritized in areas outside Java; and the establishment of new small and medium industry (SMI) centers so that each district/city owns at least one SMI center 2015 onwards (GoI 2016).

- **Integrated Economic Development Zones (KAPET).** The Presidential Decree No. 89 of 1996 created the Integrated Economic Development Zones (Kawasan Pengembangan Ekonomi Terpadu, or KAPET) to reduce inequality under the program ‘Acceleration of Development in Eastern Indonesia”. Under this program 13 zones were created in the island groups of Kalimantan, Sulawesi, Maluku, Papua, and Nusa Tenggara. There is one KAPET in Aceh. These are large industrial areas in lagging regions which are endowed with fiscal and non-fiscal benefits. These are modelled after ‘enterprise zones’ of the UK, France and the USA (see, Table 1). An attractive feature of the program is that it offers several non-financial incentives, including 31 priority programs in human, economic and natural resources; facilities and infrastructure, and investment facilitation services (Temenggung 2013). These programs cover business counselling and assistance programs to help small and medium entrepreneurs apply for loans, and the promotion of a one-stop-shop integrated licensing system. The target is to attract 20% of the national investment to KAPET regions (OECD 2016). Between 2005 and 2010 however, they could attract only 3.4% of the national investment (ibid.). There are several studies evaluating the performance of KAPET regions and they all find that
despite attractive features, these zones could not measure up to expectations (Rothenberg et al. 2017, Temenggung 2013, Rothenberg and Temenggung 2019).

- **Science and techno parks (STPs):** Indonesia took an early lead to promote high technology intensive industries in the country when it started to promote aircraft manufacturing and biotechnology research in the late 1970s. One of the initiatives was to establish the Center for Research, Science and Technology (Puspiptek) in 1976 (Sulfikar Amir 2013) which was developed as a township complex of government funded research institutes that focused on science and technology (S&T) development (UNESCAP 2019). However, the synergies could not be created between institutional S&T and industry. In 2002 the development of Techno Parks received attention through UU 18/2002 which encouraged the government and private sector to develop the S&T infrastructure for connecting the industry with institutional R&D (Sihotang et al 2019). This led to the creation of Bandung Technopark by the Ministry of Industry (2010), Solo Technopark (2009) and Batam Technopark (2018) and Palembang Technopark by their respective city administrations, and Cikarang Technopark (2011) by industry players (Narita 2015). There is no systematic study on these parks or their performance. The medium term development Program (RJPMN 2015-2019, GOI 2015) has however given a major thrust to high tech specialized parks by proposing to set up 100 Science and Techno Parks (STPs) to support the government’s nine-priority agenda called ‘Nawacita’. Under this program, STPs can be developed at the national, provincial and district level. There are 5 ministries/agencies which are given the task to build 100 STPs until 2019. These are: the Indonesian Institute of Sciences, the Ministry of Agriculture, the Ministry of Ocean and Fisheries, National Atomic Agency, and the Board for Research and the Application of Technology. At the provincial and district level, it will be a responsibility of the Ministry of Science, Technology and Higher Education or other appropriate institutions to oversee the program. Under the program, Puspiptek has been upgraded to a National Science &Techno Park, expanding its role as a center for quality research, development and technological innovation. A top official from the Ministry of Science, Technology and Higher Education reports that there are 18 operational STPs with three in the pipeline in 2019. Many of these are in public universities and are located in Java. There is no further information on them.

- **Halal Parks.** A halal zone is being built at Modern Cikande Industrial Estate (MCIE) in Serang in West Java which is the first industrial estate to receive halal industrial estate status. The 500-hectare new halal zone is carved out of the current 3,175-hectare MCIE that was developed by PT Modern Group in the early 1990s. The park will have halal certification facilities with a laboratory for tests by halal guarantee institutions; halal waste-water treatment plant; and a logistics park with storage facilities. Other planned halal industrial zones are Batamindo Industrial Park (a 17-hectare site for halal cosmetics and pharmaceuticals), Bintan Industrial Park (100 hectares dedicated to halal food and beverages), and Jakarta Industrial Estate Pulogadung (part of a 433-hectare area planned for halal food and beverages, fashion, cosmetics and pharmaceuticals) (Winosa 2019).

**Special economic zones**

- **Bonded zones (KB).** Bonded zones are buildings or confined areas used to process goods and materials for exports. These are traditional first generation export processing zones. The bonded zones program was initiated in the early 1970s soon after the introduction of the industrial estates. The oldest bonded zone is Kawasan Berikat Nasantara (KBN) on the outskirts of Jakarta set up in 1973 (Table 3). It mainly produces garments for the EU and US markets. Overall, 114 establishments located within the Kawasan Berikat Nasantara zone employed a total of 75,551 workers as of 2006. 

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(Sivananthiran 2009). The second major area that was designated as bonded zone in 1978 was Batam, in the proximity of Singapore. It was earlier given the status of an industrial estate. The bonded zone status given to Batam in the early 1970s accelerated the growth of this island transforming it from a fishing village into a hub of electronics, shipbuilding and oil and gas industries. Currently, there are 1,372 bonded zones in the country. Bonded zones are dominated by labour intensive and medium technology activities such as electricals and electronics (20%), Textile (33%), and rubber, plastics and rubber (12%) and other items (Damuri et al. 2015). In order to rebrand bonded zones, the Regulation of the Minister of Finance Number 131/PMK.04/2018 streamlined the procedures of these zones by expediting the permit process, improving the efficiency of online transactional permit, extending the validity period of the permit until it is evoked, extending subcontracting facility, and offering flexible incentives.

- Export-oriented production entrepôts (EPTEs). Export-oriented production entrepôts (EPTEs) were introduced in 1993. These resemble single enterprise export processing zone and enjoy the benefits of bonded zones. They may be set up inside or outside an industrial estate. Their number is not known.

- Free port and free trade zones. Indonesia has 4 ‘free ports and free trade zones’: Batam, Bintan and Karimun on Riau islands and Sabang FTZ in Aceh. Batam, Bintan and Karimun received the status of Free port and free trade zone in 2007 after having enjoyed that of industrial zones in the early 1970s, bonded zones since 1978 and bonded plus zone since the early 1990s. Typically, FTZs allow only commercial activities including processing activities, design engineering, sorting, initial or final inspection, packing, repackaging, and repairing/rebuilding machinery (Table 1). However, the free port and free trade zones of Indonesia are not traditional commercial free trade zones since they allow processing activities. Further, they allow social infrastructure including housing, condominiums trade centers and all related facilities. These zones are therefore equivalent to special economic zones. Given their strategic location, the Riau Islands’ FTZ status allows the province to attract investment in the shipbuilding and shipyard industry. More than 150 major maritime, oil and gas, and electronics companies are operating in the province (GBG Indonesia 2014). It also hosts medical equipment, agri business, tourism, fabrication and other sectors. Besides, it was benefitted by the SIJORI growth triangle – comprising Singapore, Johor (Malaysia) and Riau (Sumatera) in Indonesia. However, technology content is not high in these zones (Rothenberg and Temenggung 2019). In addition to the Riau Islands, Indonesia also has a FTZ at Sabang, which is set in the North of the country on Weh Island in the Aceh province. The development of a deep seaport in Sabang is a joint venture with India to enhance maritime connectivity, which seeks to attract investment to the northern part of the country (Roy Chaudhury 2019). Free ports and free trade zones will however expire in accordance with a predetermined period unless they are subsumed within the special economic zones program of the country.

- The Bonded Logistics Center. The Government Regulation 85/2015 introduced Bonded Logistics centers (logistics parks) of ‘bonded logistics parks’ variety with an objective to reduce logistics costs in Indonesia6 (Table 2 for reference). Since the launch of the first logistics center in March 2016, the number has grown to 91 spread across various regions of Indonesia (Haryana 2017). The Minister of Finance Regulation Number 131/PMK.04/2018 concerning Bonded Zones encourages the setting up of ‘integrated bonded zones’ with bonded logistics centers built within the bonded zone. It is expected

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to increase production capacity of bonded zones by optimizing supply chains through bonded logistics centers.

- **Kawasan Ekonomi Khusus (Special economic zones).** In 2009, the government introduced a new variety of zones named Kawasan Ekonomi Khusus (KEKs) as its most ambitious zones program. These are zones with specific boundary within Indonesia which carry out economic functions including export processing activities, logistics (storage, assembly, sorting, packing, distributing, repairing/ rebuilding machinery) and industrial engineering, and are expected to encourage value-added processing activities and exports. These zones are to be situated in strategic positions (i.e. close to trade and or maritime routes) and are to be supported by well-developed external infrastructure. Each SEZ can have different types of zones located within them including: bonded zones, EPTEs, and industrial zones which are supported by facilities such as ports and logistics services. While there is no export requirement on the units, it is essentially export oriented investment that is targeted in KEKs. These are second generation export processing zones which a focus on processing activity but are characterised by large size, and extended facilities and services. The SEZ program took off in the post 2014 period, until when only 2 SEZs were announced: Sei Mangkei (Rubber and Palm oil) and Tanjung Lesung (Tourism). Currently there are 15 SEZs and each one is developed for a set of specific sectors. Of the 15 SEZs, 6 are tourism zones while the rest focus on manufacturing. The target industries are essentially resource intensive including palm oil, rubber, fertilizer, logistics, wood, coal, mineral, oil and gas, paper, agro processing and energy. In addition to 15 SEZs, 5 are under review.

**Hybrid zones**

- **Economic corridors:** The government adopted the concept of (subnational) economic corridors in 2011 as part of its long term industrial strategy MP3EI (Acceleration and Expansion of Indonesian Economic Development). One of the three key elements of the Implementation of MP3EI was to develop economic potentials in 6 Economic Corridors: Sumatera, Java, Kalimantan, Sulawesi, Bali-Nusa Tenggara, and Papua-Maluku corridors. The corridors are defined as six economic development highways to improve internal connectivity. These corridors are located along coastlines, which would connect the existing economic growth centers and build new economic clusters and business centers on five islands: Java, Sumatera, Kalimantan, Sulawesi and Papua to support the comparative advantages of the local economies. A study by Berawi et al (2017) shows that each corridor has its own comparative advantages. Sumatera as national plantation and processing industry corridor, Java as cyber technology innovation and services center, Kalimantan as national energy reserves and processing, Sulawesi as national aquaculture and processing industry, Bali-Nusa Tenggara as national eco-tourism corridor, and Papua–Maluku as national ore mining and processing. However, there is no legal framework to implement these corridors. These are to be implemented through the medium term national development programs.

In sum, Indonesia started setting up industrial estates and export zones in the early 1970s. The next three decades witnessed an emergence of a large and broad based industrial sector in the country. Since 2009, the country has accelerated its drive to attract industrial investment by setting up new varieties of economic zones. Post 2015, the drive is given further momentum.

**III.2 Malaysia**

Malaysia the most rapidly industrialising country in the subregion has had a remarkably high rate of economic growth since independence. At the time of independence in 1957, Malaysia was an agrarian economy with heavy dependence on the exports of rubber and tin, and entrepôt trade centered on the free ports of Singapore, Penang and Malacca. In view of the risks associated with the overdependence on commodities trade, the government set out the
objective of diversifying the economic base by promoting manufacturing with SEZs and GEZs as the center piece of its national development strategies. In general, 3 broad phases of industrial strategies may be identified in Malaysia which are manifested in the evolutionary changes in economic zones as well (Table 4).

Table 4: The evolution of Industrial policy and economic zones in Malaysia

<table>
<thead>
<tr>
<th>Sub-phases</th>
<th>Strategic focus of the industrial policies</th>
<th>Trade regime</th>
<th>Industrial And spatial policies</th>
<th>Evolution of GEZs</th>
<th>Evolution of SEZs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1: 1957-70</td>
<td>Growth</td>
<td>Ist phase import substitution (ISI)</td>
<td>Pioneer Industries Ordinance Act 1958</td>
<td>1st GEZs developed by state economic development corporations</td>
<td>-</td>
</tr>
<tr>
<td>1980-1986</td>
<td>Efficiency and competitiveness</td>
<td>Ii phase EOI</td>
<td>Industrial Master Plan 1(1986-1995)</td>
<td>Emergence of private industrial parks</td>
<td>Integration of EPZs with the wider economy</td>
</tr>
<tr>
<td>2011-2020 New Transformation Policy</td>
<td>Economic transformation</td>
<td>High density cluster based policy</td>
<td>-</td>
<td>Proliferation of both GEZs Expansion of specialized high tech, and halal parks Zones within zones strategy</td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled by the author from five years’ development plans

Soon after independence, Malaysia embarked on the strategy of import substituting industrialization (Rasiah et al. 2015, Jomo 2013, Rasiah 1996). In the first phase of development (1957-1970), specific industries were promoted primarily through tariffs protection and quotas, and the provision of basic infrastructure to cater to the domestic market. In 1958, the pioneer industries Ordinance Act was introduced, under which, companies that were granted pioneer companies’ status enjoyed tariff protection along with other tax breaks. Unlike in Indonesia, creation of industrial areas (GEZs) was seen as a critical element of the industrialization strategy in the first phase of growth itself. The import substituting pioneer firms grew in number in the 1960s but widespread unemployment and social unrest in the late 1960s led the government to change the development agenda from growth to ‘growth with social restructuring and regional equity’. For accelerating economic growth in the second phase (1971-1990), import substituting regime was complemented with export oriented policies in selected sectors. This led to the creation of export processing zones which aimed at attracting labour intensive assembly type activity of imported components for trade based growth and employment generation. To achieve the objective of
regional equity, the government set up industrial estates in backward regions. Kedah was the only backward state that had an industrial estate in 1971. However, by the end of 1980, 28 of 76 industrial estates were in the economically backward states of Kedah, Kelantan, Pahang, Sabah, Sarawak and Terengganu. In 1991, Malaysia launched the Vision 2020 embarking on the third phase of economic development with an agenda of inducing a structural shift from low to high value added activities through information and knowledge led growth along with equity. This led to the creation of high tech parks and the Multimedia Super Corridor (MSC) modelled after the Silicon Valley. Following the Asian crisis of 1997, efforts to achieve the goals of growth, balanced regional development and competitiveness were further intensified. With a thrust on promoting high productivity society supported by infrastructure, industrial investment and innovation, a high density integrated cluster development approach was adopted (GoM 2011 XI plan). In 2006, the Federal Government of Malaysia announced five regional economic corridors to unlock the potential of all the regions through micro planning and build competitive cities by integrating EZs into urban planning. According to Malaysian Investment Development Authority (MIDA) statistics, over the three phases of economic development Malaysia has created more than 600 economic zones of different types⁷. Of them, 247 are major facilities developed by various government agencies, namely, the State Economic Development Corporations (SEDCs), Regional Development Authorities (RDAs), port authorities and municipalities⁸.  

**General industrial zones**  
- **Industrial parks/estates.** As early as in 1955, the first industrial site was created in Petaling Jaya in Selangor over 730 acres. It was followed by 9 more industrial estates by the end of 1970 (GoM 1971). Since then there has been a rapid growth in the number of industrial estates (IEs). By the end of 1980, the number of industrial estates rose to 76 covering about 9,650 hectares developed principally by State Economic Development Corporations (SEDCs). In the late 1980s, the setting up of IEs was open to the private sector. This led to a proliferation of privately developed industrial estates particularly in the developed states of Melaka and Selangor. However, there is no comprehensive statistics available on the number, type or location of industrial estates in the country. MIDA provides information on 247 major economic zones. Of them, nearly 200 are IEs. The majority of these parks is in manufacturing and comprises of a wide ranging economic activities from light to high tech ones. Johor hosts the largest number of industrial estates followed by Terengganu, Melaka, and Selangor. Most parks are mixed in terms of their economic composition. However there are a few instances of parks in single trades as well. These include, integrated fisheries park (Kelantan), Maritime park (Johor), furniture park, biopolymer park (Terengganu), Aerotech park (Selangor) among others. There are a few business parks for office spaces but they are concentrated in Johor.  
- **Technology parks:** In the early 1990s, Technology Parks (TPs) were launched to cater to technology-intensive industries and R&D activities. Kulim high tech park, the country’s first high technology park created in 1995, was developed as a self-contained township with a shopping center, a hospital, educational institutions and recreational facilities. It was followed by a number of such parks around the country. According to MIDA statistics, there are at present 17 public owned and managed TPs/science parks including Kulim high tech park, Kulim science and technology park, Technology Park Malaysia (TPM in Kuala Lumpur), Seri Iskandar Technology park (Perak), Selangor Science Park (Selangor), Science Parks (Penang), and Johor Technovation Park (Johor)⁹.  

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⁷ https://www.mida.gov.my/home/infrastructure-support/posts/  
⁸ Ibid.  
⁹ Ibid.
• **Other specialised industrial parks**
  - **Multimedia Super Corridor (MSC).** In 1996, Malaysia set up the MSC as a high-technology business district measuring 15 by 40 kilometer in central-southern Selangor anchoring cybercities, cyber centers and digital hubs. While digital hubs are the designated areas created for start-ups, cybercities and centers are created to host information technology (IT) related domestic and foreign companies which present attractive ecosystem to spur the growth of the IT industry and digital economy of Malaysia. As of July 2019, there were 61 cyber cities and centers within the MSC Malaysia\(^\text{10}\). Cyberjaya and Technology Park of Malaysia are two major technology hubs on the MSC. Spread over 2,883 hectares of land, Cyberjaya is an ICT city designed to attract world class multimedia and ICT companies. In addition to the specific zones, MSC Malaysia status is granted to eligible ICT-related businesses, both local and foreign with rights and privileges to promote continued growth. More than 2,000 companies have been provided with this status.

  - **Halal Parks.** In addition to technology parks and cybercities, there is a new variety of specialised parks called Halal parks which emerged when the Negri Sembilan government built the first Halal Products Industrial Park on a 22 hectares of land at the Pedas MIEL Industrial Park near Rembau in 2004. “A Halal park is a community of manufacturing and service businesses located on a common property with the aim of preserving the integrity of halal products” (JAKIM 2016). These are eco-friendly parks for halal products developed with a focus on green design of park infrastructure, cleaner production, pollution prevention, availability and accessibility of raw materials and ingredients, and energy efficiency. The Halal Development Corporation is responsible for the overall management of these parks while the Department of Islamic Development Malaysia (JAKIM) is responsible for the Halal certification. Currently there are 21 halal parks, of which 14 are HALMAS (the accredited Halal parks) and the rest are non-accredited. The largest one is a halal hub in Sarawak which is spread over 124,000 hectares of land.

**Special economic zones**

• **Free industrial zones.** Malaysia promulgated its Free trade zones law in 1971 to set up traditional export processing zones named ‘free trade zones’ where the companies had to export 80% of their production to avail benefits. The first zone was set up near Bayan Lepas airport of Penang in 1971 with the objectives of reviving entrepot trade, attracting foreign investment in labour intensive industries and promoting manufacturing exports. These zones were benefitted from large waves of foreign investors particularly from the US who relocated electric and electronics assembly and processing plants in Penang to avail the advantage of its large educated pool of English speaking cheap labour, attractive incentives and political stability. As a result, the electronics industry grew very fast during the 70s and 80s and became the main engine of growth in the country’s economy. Encouraged by the success of Bayan Lepas, the government set up more such geographic spaces. In 1990, the name of these zones was changed from ‘free trade zones’ to ‘free industrial zones (FIZs)’ to better reflect their objective. To-date there are 22 FIZs located at Johor (Pasir Gudang, Tanjung Pelepa), Melaka (Batu Berendam I, Batu Berendam II, Tanjung Kling), Selangor (Pulau Indah, Sungai Way I, Sungai Way II, Ulu Kelang, Telok Panglima Garang), Perak (Jelapang II, Kinta), Penang (Bayan Lepas I,II, III, IV, Seberang Perai), and Sarawak (Sama Jaya).

• **Single enterprise zones.** In 1975, the country introduced the scheme of enterprise specific EPZs under the provision of section 65/65A of the Customs Act 1967. These are

\(^{10}\) Ibid.
single factory EPZs termed as ‘Licenced Manufacturing Warehouses’ (LMW). A LMW is a manufacturing unit (factory) granted to any person for warehousing and manufacturing approved products on the same premise with the same benefits as FIZs and could be set up where FIZs did not exist. Companies with 80% or more exports have been given the status of LMWs.

- **Free commercial zones.** The Foreign Zone Act 1990 introduced Free Commercial Zones (FCZs) of traditional FTZ variety. Commercial activities conducted in these zones include trading (except retail trading), breaking bulk, grading, repacking, re-labelling, transshipment and transit. All major ports and international airports in the country are integrated with free zones who have been instrumental in attracting foreign companies to set up regional distribution centers (RDCs) and turning Malaysia into a major distribution hub. Currently, there are 21 FCZs located at North, South and West of Port Klang, Port Klang Free Zone, Pulau Indah MILS Logistic Hub, Butterworth, Bayan Leas, Kuala Lumpur International Airport (KLIA), Rantau Panjang, Pengkalan Kubor, Stulang Laut, Johor Port and Port of Tanjung Pelepas.

- **Digital free trade zone (DFTZ):** It is a digital export platform for small and medium companies to carry out e-commerce and benefit from globalization. DFTZ has three components:
  o eFulfilment Hub. It helps SMEs and other businesses in exporting their goods easily, with the help of leading fulfilment service providers;
  o Satellite Services Hub. It connects SMEs / businesses with leading players who offer services like financing, last mile fulfilment, insurance and other services which are important in cross-border trade;
  o eServices Platform. It efficiently manages cargo clearance and other processes needed for cross-border trade.

  Alibaba, a Chinese company hosts its regional eFulfilment hub at KLIA Air Cargo Terminal 1 (KACT1) which is developed by POS Aviation and serves Lazada e-commerce player. The government, through the MIDA has approved eight e-fulfilment projects as of March 2019, with more in the pipeline (Nee 2019). In the second phase, a logistics center over 60-acre plot will be operational at KLIA to support the DFTZ. In addition, facilities will also be created within Penang International Airport, the Subang Airport and Port Klang (FMT 2019). There are 1,972 companies on DFTZ covering 10 consumer goods sectors. The largest number of firms are from Selangor (39%) followed by WP Labuan (14%) and Penang (13%).

- **Special border economic zone.** A special border economic zone is coming up in Bukit Kayu Hitam, a Malaysia-Thailand border town as a duty-free logistics hub covering a total of 6,000 hectares of land which will be developed by the federal government and the Kedah state government. It is essentially a bonded logistics park located in border areas (Further details are provided later in the report).

**Hybrid Zones**

- **Regional economic corridors:** The idea of national economic corridors was mooted in the Ninth Plan (2006-2010) following which, in 2008 (Mid Term Review of the Ninth Plan) the government announced five economic corridors for balanced growth and to move the economy up the value chains as a key objective. These are: East Coast Economic Region (ECER), Iskandar Malaysia in Johor, and Northern Corridor Economic Region.

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(NCER), Sabah Development Corridor (SDC), and Sarawak Corridor of Renewable Energy (SCORE). These corridors are essentially *micro regions* that transcend the boundaries of Malaysian administrative states to generate agglomeration economies by upscaling the clusters through factor complementarities and pooling of resources. Iskandar targets creative industries; NCER automobile and aerospace; ECER petrochemical; SDC tourism and palm oil; and SCORE hydropower. The overall development of these regions in Peninsular Malaysia is guided by the spatial strategy of "Concentrated Decentralisation" which aims to concentrate the resources into a few priority urban areas with the greatest growth potential while protecting the rural areas and natural environment. A number of locations within the urban conurbations have been earmarked for the establishment of clusters of economic zones (micro sub-regions) within the regional corridors (micro regions). In addition to the extensive subsidies offered by the Federal Government, the State Governments have also developed a number of incentives to encourage investors in industrial areas in these concentrations (MLIT 2015). It is called a ‘high cluster density approach’ of industrialisation. In August 2009, Malaysia introduced a SEZ within the ECER micro region which stretches from the district of Kertih, Terengganu in the north to the district of Pekan, Pahang in the south for integrated development of commercial, residential, education, industries, service and knowledge components as part of the concentrated decentralisation strategy (high density cluster approach). Four separate zones are to be established within this SEZ to promote and focus on groupings of industries: manufacturing, agro-industry, petrochemical, tourism, ICT and logistics. While it is named ‘special economic zone’ it is a *sub-micro region* with no distinct administrative framework. It is a part of the high density cluster policy which matches with the ‘zones within zones’ strategy of China (Zheng 2016).

### III.3 Thailand

The process of economic development and modernisation started in Thailand through the late 19th and early 20th century when a number of measures were taken to promote agriculture, and major reforms were introduced in the corvée labour system (Unpaid and free labour under the feudal system) and public administration (Kelly et al. 2012). The process was intensified in the early 1960s when the government launched the first 5-year National Economic and Social Development Plan (NESDP) in 1961 focusing on the development of infrastructure and agricultural extension (Pombhejara 1965). Since then three phases of industrial development policy could be identified: 1961-1975, 1975-2002 and 2002 onwards (Table 5).

<table>
<thead>
<tr>
<th>Phase</th>
<th>Sub phase</th>
<th>National objectives</th>
<th>Industrial strategy</th>
<th>Evolution of GEZs</th>
<th>Evolution of SEZs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1: 1961-1975</td>
<td>1961-1975</td>
<td>Growth (agriculture and infrastructure)</td>
<td>Import substituting</td>
<td>First IZ set up in 1971</td>
<td>None</td>
</tr>
<tr>
<td>Phase 2: 1975-2002</td>
<td>Phase 2: 1975-1982</td>
<td>Growth (light manufacturing)</td>
<td>Import substituting complemented by export oriented regime</td>
<td>Emergence of industrial parks in Bangkok</td>
<td>Emergence of IEs in Bangkok</td>
</tr>
<tr>
<td></td>
<td>Phase 3: 1982-2002</td>
<td>Growth with industrial dispersal through a zoning system</td>
<td>Step by step liberalization</td>
<td>Expansion of industrial parks</td>
<td>Spread of IEs across the countries</td>
</tr>
<tr>
<td>Phase 3: 2002-</td>
<td>Phase 4: 2002-2014</td>
<td>Competitiveness and regional development</td>
<td>Liberal economic regime, regional development incentives dropped</td>
<td>Science and Technology Parks</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2014 onwards</td>
<td>Competitiveness</td>
<td>Liberal economic regime</td>
<td>-</td>
<td>SEZs in border areas,</td>
</tr>
</tbody>
</table>

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*Table 5: The evolution of Industrial policy and economic zones in Thailand*
During the first phase (1961-1975), economic development was sustained by the expansion of the agricultural sector and infrastructure development, such as, construction of dams for irrigation purposes and hydro-electric power as well as other public utilities (Meesook et al 1987). In the industrial sector, the government adopted selective, protective and promotional policies to promote domestic industrialization which was funded by foreign exchange from the export of primary products. The manufacturing sector was offered a high level of protection combined with tariff exemptions on their imported raw materials and incentives. As a result of the active promotion and protection policy, private investment increased rapidly during this period; the presence of the US military bases and foreign aid from the US and the World Bank were other factors that benefitted private investment (ibid.). In 1971, Thailand’s first government-developed IE, named Banchan Industrial Estate was created. Soon after the first private sector–developed IE named Nava Nakorn Industrial Zone by Nava Nakorn Public Company Limited emerged. In 1972, the Industrial Estates Authority of Thailand (IEAT) was also established. However, there was little progress in the evolution of economic zones. In the mid 1970s, a series of crises hit the economy including the oil crisis of 1973, the closure of the US military base which ended the procurement boom, and a slow-down in agriculture. To bring a favourable climate for investors, on April 29, 1977 the Investment Promotion Act B.E. 2520 was enacted. It was followed by the Industrial Estate Authority of Thailand (IEAT) Act (1979) which provided the legal framework for the Authority to build, manage and govern industrial estates and industrial ports to promote the country’s industrial sector expansion. Thus the country entered the phase of cluster based industrialisation with economic zones being its lynchpin. In the early 1980s, the Eastern Seaboard Development Program was proposed with a focus on heavy industries plants for the manufacture of soda ash, fertilizers, and petrochemicals. The number of industrial estates started proliferating particularly in the Eastern Seaboard area which became a hub of automobile and petrochemical industries. Industrial Estates were greatly benefitted by the G5 Plaza Accord of 1985. Foreign direct investment from Japan and Taipei, China played an important role in economic growth over this period. Thailand abolished protection and regulation measures step by step in order to stimulate trade and investment in IEs. Soon it shifted to a high growth trajectory and came to be dubbed as the fifth Asian Tiger after Singapore, Malaysia, Indonesia and the Philippines (Hussey 1993). Post Asian crisis the government shifted the focus to industrial competitiveness to enter the third phase of development. It was during this period that high tech parks began to be set up. Post 2014, two major initiatives have been taken which will have far reaching implications for the economy. First, the Eastern Economic Corridor has been designated as a SEZ to target industry 4.0 to help Thailand become a high value economy. Second, a strong emphasis on the development of border areas was supported by setting up the special border economic zones named ‘SEZs’ to relocate agriculture and labour intensive industries from the center to utilize cheap labour and resources of the neighbouring countries and promote cross-border supply chains with neighbouring countries. Thailand was relatively late-comer in active industrial development process but a variety of economic zones strongly aligned with the national development agenda facilitated the country in the catch up process.

**General economic zones**

- **Industrial parks/zones.** Industrial parks are entirely developed and managed by private developers. These are named industrial ‘parks’ or ‘zones’ and are not allowed to be named industrial ‘estates.’ These private-sector industrial parks and zones are under the Board of Investment (BOI), which has assigned the Department of Industrial Works in each province to monitor them. Industrial parks do not enjoy the special rules and management benefits which are available to industrial estates (as we shall see later). Further, businesses in these parks do not have access to the single solution center
facility offered in industrial estates. They need to negotiate with the operators of the park/zone for services and benefits, who are private-sector entities.

- **Thailand Science Park (TSP).** The development of science and technology parks was proposed in the Sixth National Economic and Social Development Plan, 1989. The country’s first science park was however established in 2002 by the National Science and Technology Development Agency (NSTDA) on 80 acres of land in Pathumtani province in the northern outskirts of Bangkok. Managed by the Technology Management Center (TMC) of the NSTDA under the Ministry of Higher Education, Science, Research and Innovation, TSP has been created to support the development of technology-intensive businesses, and R&D and innovation in the private sector. Phase 1 of the Park, with 14 hectares of built-up space is fully occupied by the NSTDA and its four national research centers, namely National Center for Genetic Engineering and Biotechnology, National Metal and Materials Technology Center, National Electronics and Computer Technology Center, and National Nanotechnology Center. In addition, it is inhabited by over 100 corporate tenants, of which 30% are international companies. The close proximity between research institutions and commercial companies provides an opportunity for corporate tenants to gain access to highly-skilled personnel, including over 2,600 full-time NSTDA researchers, of whom some 700 are Ph.D. scientists. Almost half of the firms in the park belong to food and agriculture, electronics, robotics and automation industries. Phase 2 adds a further 12.7 hectares of space for private companies.

- **Regional science parks.** After the success of the TSP, there have been initiatives to establish science parks in other parts of the country. In 2004, the government approved the Science and Technology Strategic Plan (2004-2013) which proposed the Regional Science Parks (RSP) project and designated it to be executed in three main regions of the country: Northern, North-eastern and Southern, in order to enhance Science, Technology and Innovation (STI) capability in agriculture and industrial manufacturing sectors (Phasukavanich 2003). However, it was not until 2013 that they could be officially organized in full scale. In 2013, the government endorsed the involvement of Science Park Promotion Agency (SPA) to make the parks fully functional. Unlike the Thailand Science Park, Regional Science Parks (RSP) are primarily led by a network of regional universities. The Northern Science Park (started in 2004) is managed by the Thailand Institute of Scientific and Technological Research, headquartered at Chiangmai University. The North-eastern and the Southern Science Parks are being operated by several local universities. Initially, they provided only ‘soft’ services to local firms through ‘Technology-Business Incubation’ facility by means of technological consultancy, training and contract, and collaborative research projects. There were no physical infrastructure or ‘hard’ facilities such as rental space and laboratories. However, since 2013, business incubation and infrastructure development have been the key elements of their implementation strategy. Under planning is the Amrata Science City the first privately-owned science and technology park in Thailand (Tantanasiriwong 2016). Started in 2013, RSPs have so far generated $16 million regional economic impact (Tridech 2017). Between 2013 and 2016, they managed to get 37 patents to their credit.

- **Food InnoPolis.** These areas aim to develop Thailand into a R&D hub for food industry. The project involves an innovation area that is well-equipped with sound infrastructure and human resources in fields related to food science, technology and innovation through a collaborative effort among academic institutions, research institutions, and the private sector. Innovation-based businesses can enjoy attractive investment privileges and incentive packages for their operation in these areas. There are 13 sites which have been given the status of Food InnoPolis; all of them are located in universities, except for

12 https://www.sciencepark.or.th/index.php/th/
one which is within the TSP. The key implementing agency of all types of science parks is the Ministry of Higher Education, Science, Research and Innovation.

Special economic zones

- Industrial estates (IEs). As stated above, since 1979 the IEAT has been instrumental in developing industrial estates in the country. There are two types of IEs: (i) IEs with general and free zones and (ii) IEs with only general zones. A general industrial zone is defined as “a tract of land designated for the carrying out of industry, service or any undertaking which is beneficial to, or connected with, industry or service” while fee zones are “tracts of land designated for the carrying out of industry, commerce or any undertaking in connection with industry or commerce for economic benefit, security of State, public welfare, environmental management or other necessary reasons as determined by the Board” (IEAT Act 1979). Free Zones are entitled to exemptions from import and export duties, excise and value added tax. The IEs with free zones also offer separate custom areas. Irrespective of their constitution, however all industrial estates enjoy special legal regimes to target large foreign and domestic investment and provide a range of industrial infrastructure and in some cases social infrastructure as well.\(^\text{13}\) They are essentially the second generational EPZs.

IEs are developed by the IEAT authority by itself or in partnership with one or more private developers who may provide maintenance services, and/or develop public utilities and infrastructure for the business operations. All of these sites must be situated upon a minimum of 81 hectares with 60-70% of the total area set aside for factory usage. Currently, there are 57 industrial estates in Thailand with a total area of 23,173 hectares. The eastern region houses 75% of the total. Of the total area only 13% (3,111 hectares) is vacant as per the IEAT website. As of August 2019, they housed 5,742 companies creating 479,784 jobs (as informed during the country consultations).

- Eco industrial Towns. Following the court order in 2009 to suspend 76 industrial projects in Map Ta Phut industrial region in view of the rising levels of water and air pollution adversely affecting people’s health and the environment (Excell and Moses 2012), the Ministry of Industry in 2010 launched a program titled Eco Industrial Town development (EIT) to develop environmentally and socially sustainable industrial communities. It was piloted in five regions to develop industrial estates that maintain equilibrium between physical, economic, social, environmental elements using integrated solutions. The IEAT adopted an EIT Development Master Plan covering 10 years’ period (2010–2020) divided into 2 phases. In the first phase, EIT standards and master plans were prepared and implemented in 15 pilot industrial estates. In Phase 2 the efficiency criteria was enhanced, stakeholders’ participation was encouraged and new projects were initiated covering the remaining provinces. In 2016 nineteen IEs were certified as ‘eco champions’. The IEAT has set the long term goal of upgrading all existing industrial estates into EITs (IEAT 2017).

- Special economic zone (Special border economic zones): In 2015, Thailand commenced the establishment of Special Economic Zones (SEZs) in 10 provinces: Tak, Sa Kaeo, Trat, Mukdahan, Songkhla, Chiang Rai, Nong Khai, Nakorn Phanom, Kanchanaburi, and Narathiwat. These SEZs are located in border areas and match the description of special border economic zones (SBEZs). The government provides highly attractive incentives for businesses operating in 13 industries located in SEZs. Each of the SEZs has its own target industries which are decided and categorized by the area where the SEZ is situated. The 13 industries are agriculture, fishery and related businesses; ceramics; garments, textiles, and leather; home furniture; jewellery and fashion accessories; medical equipment; automobiles, engines, and parts; electrical appliances and

\(^{13}\) [http://www.boi.go.th/tir/issue/200804_20_20/54.htm](http://www.boi.go.th/tir/issue/200804_20_20/54.htm) last accessed on 28 August 2020
electronics; plastics; medical products; logistics; industrial estates; and activities that support tourism. Most of the target industries are labour-intensive. The objective is to connect the selected areas with the neighbouring countries in terms of trade, economy and investment to benefit from the large pool of labour in the cross-border areas. The Thai government has relaxed rules on foreign labour to support the SEZs. According to the NESDC, as of July 2020, 82 projects in 10 SEZ provinces were approved, with a total investment amount of $17.6 billion. Tak SEZ with 33 projects in textile and garments, plastics, automotive, machinery and parts, etc. leads the pack. It is followed by Songkhla, Sa Kaeo, and Kanchanaburi SEZs (NESDC 2020). Songkhla that has attracted 15 projects accounts for most (51%) of the total investment in SEZs.

- **Eastern special development zone (SDZ).** Three provinces namely Chonburi, Rayong and Chachoengsao have recently been designated as Eastern SDZ with a special legal regime, spanning a total of 1,328,500 hectares of land. It is around 7 times as large as Shenzhen. It is a next-level SEZ with the objective not only for economic activities but also urban development and modernization of cities. The region has already attracted a considerable amount of industrial development projects in automotive, oil and gas, and petrochemicals. In 2008, it alone accounted for about 8% of Thailand’s gross domestic product (GDP), 40% of all chemical products and 44% of all basic metals products (GoT 2008). It hosts 14 industrial estates, 12 private industrial parks, and two deep water ports of Laem Chabang and Map Ta Phut (ibid.). The designation of the region as special development zone is in the direction of leveraging the competitive advantage of the region to implement Industry 4.0. The focus is on the development of 10 targeted industries which include next-generation cars, smart electronics, affluent treatment, medical and wellness tourism, agriculture and biotechnology, and food. In addition, 5 New S-Curve industries planned for the zone are: robotics for industry, logistics and aviation, biofuels and biochemicals, digital, and medical services. Following the ‘zones in zones principle’, a new type of zones has been introduced within the EEC development zone. These are ‘Special Economic Promotional Zones’ prioritising the development of target industries directly or indirectly. In addition, a clear distinction has made between the services and manufacturing zones.
  - **Special Services Promotional Zones.** These zones include infrastructural construction zones e.g. the Eastern Aviation City (EECa), the Eastern Economic Corridor Innovation Zone (EECi), and the Eastern Economic Corridor Digital Innovation Zone (EECd). Under the EECi, plans are to promote science parks, space Krenovation Park and the Sriracha Innovation District in Chonburi province by the National Innovation Agency (NIA), a part of the Ministry of Higher Education, Science, Research and Innovation. Digital Park Thailand is a new economic cluster aiming to be the destination for digital global players.
  - **Industrial Promotional Zones** These zones will include industrial estates, “Smart Parks” and industrial estates with targeted industries. The EEC SDZ is one of the most ambitious agglomeration programs in the country which is expected to boost the country’s GDP growth to 5% a year, creating more than 100,000 jobs and generating income exceeding 450 billion baht annually.

- **Southern economic corridor (SEC).** The government has launched an initiative to develop another growth pole ‘the Southern Economic Corridor’ to spur economic growth in the southern provinces, which have comparative advantage in local raw materials such as rubber and palm to create value-added products. While the EEC aims to enhance the country to achieve being a high value-added economy, the objective of the SEC is to develop the upper southern region area of Thailand to be the main port of the western side of the country supporting the Thai economy on bio-base industry and coastal tourism. Southern Economic Corridor (SEC) covering the four provinces of
Chumphon, Ranong, Surat Thani and Nakhon Si Thammarat is proposed to be connected to the EEC to create a trade hub. The plan includes a high-speed rail network, a double-track rail system, road construction and an upgrade of Ranong port. In addition, there is a proposal for the development of model cities in southern border provinces, under the ‘Triangle of Stability, Prosperity, and Sustainability’ project to promote investment in Southern provinces.

- **Other economic corridors.** There are proposals to develop a Bio-Economy Corridor in the North-eastern and central regions, and the Lanna Creative Corridor in the North. The Bio-Economy Corridor development which is located on the East-West Economic Corridor is expected to create immense opportunities in Thailand.

### III.4 Mapping of GEZs and SEZs in the three economies

As discussed in sections III.1-III.3, economic zones have been the centre piece of the development strategy in all three IMT-GT countries. As the development agendas of the three countries evolved in the process of economic development, evolutionary changes were introduced in the EZs also to support it. As a result, several functional and spatial variants of the EZs have spawned over the years with their objectives evolved from industrial diversification to balanced regional development to industrial upgrading to urban development. While new types of zones are emerging, the traditional ones are still in operation in all three countries. Table 6 maps the economic zones of all three countries using the typological framework provided in Figure 2. It provides the generic category, name used, year of initiation and the number of these zones. The number of industrial estates reported for Malaysia is based on the MIDA’s list of 247 industrial estates promoted by the state. Information on the rest of the EZs in the country is compiled from the specific sources. It must also be noted that the EEC in Thailand is essentially a hybrid zone (Figure 2).

However, it is included in the category of second generation SEZs as the entire area is given the status of a SEZ.

<table>
<thead>
<tr>
<th>Table 6: Economic zones in IMT-GT countries</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Industrial estates/parks/business parks</strong></th>
<th>Name used</th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Thailand</th>
<th>Total</th>
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</thead>
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<td>Number</td>
<td>87</td>
<td>210</td>
<td>21</td>
<td>318</td>
<td></td>
</tr>
<tr>
<td>Year of initiation</td>
<td>1970</td>
<td>1905</td>
<td>1960</td>
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<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Technology parks (first generation)</strong></th>
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<th>Malaysia</th>
<th>Thailand</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>Number</td>
<td>4</td>
<td>17</td>
<td>2</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Year of initiation</td>
<td>2002</td>
<td>1995</td>
<td>2002</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Technology parks (Second generation)</strong></th>
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<th>Malaysia</th>
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</tr>
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<tr>
<td>Number</td>
<td>18</td>
<td>61</td>
<td>16</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Year of initiation</td>
<td>2015</td>
<td>1996</td>
<td>2013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Specialised industrial parks</strong></th>
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<th>Malaysia</th>
<th>Thailand</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Number</td>
<td>Halal Parks</td>
<td>Under construction</td>
<td>21</td>
<td>-</td>
<td>21</td>
</tr>
<tr>
<td>Year of initiation</td>
<td>2020</td>
<td>2004</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th><strong>Enterprise zone</strong></th>
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<th>Malaysia</th>
<th>Thailand</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>KAPETS</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Year of initiation</td>
<td>1996</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Eco Industrial parks</strong></th>
<th>Type used</th>
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<th>Malaysia</th>
<th>Thailand</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Halal eco industrial parks, voluntary efforts</td>
<td>Pilot projects (Makassar industrial park)</td>
<td>Eco industrial towns projects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of initiation</td>
<td>2004</td>
<td>2010</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>FTZs:</strong> First generation <strong>zones</strong></th>
<th>Name used</th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Thailand</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Bonded logistic Centers</td>
<td>Free Commercial zones</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of initiation</td>
<td>91</td>
<td>21</td>
<td>112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of initiation</td>
<td>2015</td>
<td>1990</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>FTZs:</strong> Second generation <strong>zones</strong></th>
<th>Name used</th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Thailand</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Digital Free trade zone</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Based on the data presented in Table 6 two major observations can be made. First, there has been a proliferation of both, the number and types of economic zones in the three IMT-GT countries that have been continuously expanding their EZs in newer directions. The three countries have 2,065 cluster based economic zones (excluding the hybrid and single enterprise zones). Of them 470 (23%) are general zones, the rest are cluster based SEZs (1,595) of different varieties. Second, Indonesia has the largest number of SEZs (1,482) followed by Thailand (68) and Malaysia (45). Malaysia on the other hand leads in general economic zones (309\textsuperscript{14}); Indonesia (122) and Thailand (39) follow in this order. Over 92% zones in Indonesia are SEZs followed by Thailand (72%) and Malaysia (13%) in that order.

The SEZs are essentially a ‘safety valve’ in the process of development. They allow the government to adopt a special legal and institutional regime to fast track economic growth without changing the institutional set up in the wider economy. The wider the distance between the two, the more attractive are SEZs. However, with economic development taking place in the economy, institutional transformations also occur. This reduces the institutional distance between the existing SEZs and the wider economy (Aggarwal 2017). At the same time, policy makers set more ambitious goals which, in turn, may pose new institutional challenges to be addressed in the SEZs. The latter must therefore evolve to remain relevant and attractive. Once the economy reaches a threshold level of economic development SEZs become less relevant. Thus, while Malaysia the most developed of the three countries which is well on its way to cross the threshold into high-income country status continues to host traditional export processing zones, it increasingly relies on GEZs. Indonesia with the lowest GDP per capita in the group has been focusing on creating the SEZs to give a major thrust to economic growth and promoting new growth poles in the country. Thailand has adopted a three pronged SEZ strategy on its way to catch-up. On the one hand, it has adopted the SEZ route to upgrade the most successful industrial hub in the country by targeting Industry 4.0; and on the other, it has set up SEZs in border areas to shift low value added activities and leverage cross-border synergies to bring prosperity in these areas. Finally, it plans to promote new growth poles through SEZs in hitherto underdeveloped areas.

\textsuperscript{14} For which specific information is available.
III.5 Structural features of economic zones

The evolutionary changes in the objectives and types of economic zones have been accompanied by evolution in their structural and institutional characteristics as well. The latter comprise of governance structures and legal regulations and are explored in Section IV. Here we focus on the structural features as summarised in Figure 3.

Size. EZs are growing larger, more diverse and more complex. While the traditional export processing and SEZ type zones are still operating in all three countries, they are complemented by more complex varieties. Further, new hybrid zones spread across a number of states and provinces are emerging with multiple growth poles formed by the clusters of GEZs and SEZs located within them.

Composition. Economic zones in the region are essentially dominated by manufacturing. However, services zones have also started emerging. A successful example of services zone is: the MSC in Malaysia. Indonesia has set up tourism zones while Thailand has introduced special services zones within the EEC. Further, they are increasingly becoming specialised. Early zones were multi-activity zones. However, in recent years, SEZs are being set up to target priority industries in the expectations of generating agglomeration effects.

The level of development. In the early stages of evolution, SEZs in all three countries were dominated by labour intensive assembly type low skill labour intensive production in textile and electrical and electronics industries while industrial estates hosted import substituting light and heavy industries. Over time, both SEZs and GEZs upgraded and are now dominated by skill and resource intensive activities in a variety of industries including electronics and electricals, automotive, rubber, food products, textiles and garments, chemical and petrochemical industries. The third generation of economic zones have currently emerged catering to high value added and relatively more technologically sophisticated manufacturing. In parallel with this, efforts have been made to promote fourth generation science and technology parks to contribute to technology generation and spillovers. There is increasing awareness of environmental concerns as well. However, these concerns have not yet been translated into creation of eco-industrial parks as defined in Table 1.

Location. Originally, economic zones were set up in the most strategic locations, essentially in coastal areas. These were Penang, Selangor and Melaka in Malaysia; Java in Indonesia and Bangkok and surrounding regions in Thailand. In recent years, they are increasingly being located in lagging interior regions and border regions. The SBEZ in Malaysia, SEZs in

---

**Figure 3. Structural features of economic zones: A framework**

<table>
<thead>
<tr>
<th>Size</th>
<th>Composition</th>
<th>Level of development</th>
<th>Geographical spread</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mixed vs. specialised</td>
<td>Labour intensive assembly type</td>
<td>Port / coastal areas based</td>
</tr>
<tr>
<td></td>
<td>Manufacturing vs. services</td>
<td>Skill and resource intensive</td>
<td>Big cities based</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Technologically advanced</td>
<td>Lagging regions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R&amp;D &amp; innovation based</td>
<td>Border areas</td>
</tr>
</tbody>
</table>

Source: Author based on Aggarwal (2012a)
Thailand and KEKs in Indonesia essentially target border/lagging regions with some potential.

To sum up, economic zones have evolved towards larger spatial dimensions, complex structures, more comprehensive high tech orientation, and flexible locations irrespective of whether they are SEZs or GEZs. This reflects a strong commitment, pragmatic approach and dynamic learning towards economic zones adopted by all three countries, which are critical components of a strategic zones policy (Aggarwal 2012b).

IV. LEGAL AND INSTITUTIONAL FRAMEWORK OF SEZS AND GEZS

IV.1 The framework
This section presents the legal and institutional framework of EZs in the three IMT-GT countries to enhance our understanding of how they operate. The framework comprises of three components as shown in Figure 4: (i) the presence of a legal framework which defines a broad set of rules that govern and regulate the zones; (ii) the institutional structure which is created for law enforcement; and (iii) the rules and norms which determine the substance of the legal framework in the zones. The effectiveness of the legal framework depends on its enforcement (institutional structure) and substance (rules and norms).

Figure 4. Legal and institutional framework

IV.2 Presence of a legal framework
The EZ policy is very complex. It is explicitly cross-cutting in that it does not fit within one ministerial portfolio or one level of government, and there is often disagreement among different government organs over the policy provisions. Further, it asymmetrically affects other interest groups including private businesses and individuals. Successfully addressing the conflicting interests calls for a well-developed and comprehensive legal framework that governs the establishment, development, management and termination of EZs with stable and transparent rules established for all stakeholders. While it is not a necessary condition, it may lay critical foundation for any successful EZ program. A sound legal framework is particularly important for the SEZ program because it offers a legal regime which is different from the rest of the economy. Evidence suggests that most countries with successful zone programs put in place a distinct legal framework when they launched the SEZ program to signal strong and long-term government commitment, policy continuity (despite the change in government) and the adequate provision of various public goods such as infrastructures and services (Farole 2011, Zheng 2016).
Table 7 shows that the SEZs in all three countries are being governed by their respective legal frameworks. However, the practice in regard to GEZs varies across countries. Malaysia does not have a distinguished legal framework governing GEZs. It may be partly attributed to the common law system that the country has adopted. In contrast to Malaysia, Indonesia is a civil law country where GEZs are also governed by their respective legislations with a few exceptions. In Thailand, a civil law country, all types of EZs are governed by their respective legal frameworks.

In Indonesia, there is an official hierarchy of legislations. The 1945 Constitution is the highest legal authority in the country. This is followed by Resolutions of the People's Representative Council (MPR), Acts, Government Regulations, Presidential Regulations and Regional Regulations (provincial and cities/regencies) in that order. In practice there are also Ministerial regulations, but they are surrounded by legal uncertainty and may be conflicting with higher regulations (Aji et al. 2020). It is thus apparent that the Special Economic Zones (KEKs) which are supported by a distinct SEZ Act have been accorded the highest importance of all zone programs. On the other side of the spectrum is the program for science and technology parks which is not supported by any distinct regulation. The rest of the zones are governed by regulations of different levels of hierarchy. It may also be noted that post 2005, all new zone programs have been supported either by an act (KEKs) or ‘government regulations’ (just below Acts). This indicates an increasing importance attached to EZs in the country.

### Table 7: Legal framework of economic zones in IMT-GT countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Industrial estates</th>
<th>Science &amp; techno parks</th>
<th>Halal Parks</th>
<th>GENERAL ECONOMIC ZONES</th>
<th>SPECIAL ECONOMIC ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>Government Regulation 24/2009 as amended by GR 142/2015</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Free zones Act 1990</td>
</tr>
<tr>
<td>Thailand</td>
<td></td>
<td>High tech parks</td>
<td>MSC</td>
<td>Industrial parks/zones</td>
<td>Industrial estates</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>KAPETS Presidential decree No. 89/1996</td>
<td>MSC</td>
<td>-</td>
<td>-</td>
<td>SBEZ</td>
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<td>Malaysia</td>
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<td></td>
</tr>
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<td>Thailand</td>
<td></td>
<td>Regional science parks</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>Halal Parks</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Malaysia</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GENERAL ECONOMIC ZONES**

- **Industrial estates**
  - Indonesia: Government Regulation 24/2009 as amended by GR 142/2015
  - Malaysia: Industrial Parks
  - Thailand: Section 30 of the Factories Act of 1992

- **Science & techno parks**
  - Indonesia: KAPETS Presidential decree No. 89/1996
  - Malaysia: High tech parks
  - Thailand: Thai Science park

- **Halal Parks**
  - Indonesia: Halal Parks
  - Malaysia: -
  - Thailand: -

**SPECIAL ECONOMIC ZONES**

- **Bonded logistics**
  - Indonesia: Government Regulation No. 85 of 2015
  - Malaysia: Free zones Act 1990

- **Free trade and port zone**
  - Indonesia: Government Regulation Number 36 of 2000 amended in 2007
  - Malaysia: DFTZ
  - Thailand: Eastern economic corridor

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IV.3 Institutional structure

Ownership

The spectrum of possible institutional models extends from those almost entirely developed and managed by the private sector, at one end, to those almost entirely controlled by the public sector, at the other. In between the two, there are a variety of models involving public private partnerships (PPP). According to a World Bank study (FIAS 2008), the number of private zones has been growing rapidly across the globe. In 2008, 62% of the 2,301 SEZs in the developing countries were privately developed and managed, in contrast with less than 25% in the 1980s. However, in the IMT-GT member states special economic zones are normally publicly owned and managed (Table 8). Bonded zones and bonded logistics centres in Indonesia are an exception which can be set up by the private operators. Further, even though SEZs are publicly owned, the development of the newer generation ones is increasingly based on public private partnership (PPP). In Malaysia the upcoming SBEZ on Malaysia-Thailand border is being developed in a PPP mode. The DFTZ is also being developed by Ali Baba a Chinese multinational company in collaboration with domestic private companies. In Indonesia private entities can propose KEKs and participate in their development through PPP mode. In the IEs of Thailand, however private participation is limited to managing utilities and other infrastructural developments.

The GEZs on the other hand, may be developed and managed by the private sector. In Thailand the first private industrial zone (GEZs) was set up as early as in the early 1970s while Indonesia and Malaysia allowed the private sector (both domestic and foreign) to own and develop designated land for industrial estates in the late 1980s. In Indonesia, the industrial estate business has become overwhelmingly dominated by the private sector. Currently, 94% of Indonesia’s industrial estates are managed by the private sector, which is in stark contrast to its regional counterparts: Malaysia (78%) and Thailand (48%) (Tijaja and Faisal 2014). Thus at one side of spectrum is Thailand with rather limited role given to the private sector in the establishment of economic zones and at the other side is Indonesia with an extensive role given to the private sector in setting up both special and general economic zones. In the middle is Malaysia where traditional SEZs are publicly owned but the role of private participation is increasingly recognised in the newer ones.

Further, all three countries are open to foreign participation in the development of GEZs. There are examples of collaborations with foreign governments for building general economic zones: Malaysia-China Kuantan Park and Julong Agricultural Industry Cooperation Zone (China-Indonesia). Foreign and national companies can also collaborate to set up GEZs. For instance, G3 Global Bhd is collaborating with two Chinese companies to establish the first artificial intelligence (AI) park in Malaysia. Morowali China-Indonesia industrial park is developed by Shanghai Decent Investment (Group) Co. Ltd. and Bintang Delapan Group. Similarly, Rayong Industrial Zone is a Thai-Chinese park, developed by Holley (China) and Amata (Thailand) groups.

Table 8: Institutional framework of economic zones in IMT-GT countries

<table>
<thead>
<tr>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL ECONOMIC ZONES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial estates</td>
<td>All types of ownership</td>
<td>Industrial Parks</td>
</tr>
<tr>
<td>Science &amp; techno parks</td>
<td>Public</td>
<td>High tech parks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Industrial parks/zones</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Regulatory approach: Centralised vs. Decentralised

As regulator, the government may adopt a centralised or decentralised approach in the regulation of EZs. A decentralised approach to EZs is one in which the provincial and state governments own and regulate the zones. Such an approach contrasts with the centralised approach where the central government entity is responsible for regulation. In general, relying on a centralised zone regime is considered a good practice because it provides a strong centralized framework and uniformity throughout the country. Yet, because the regional officials are better equipped with the knowledge of regional economic opportunities and challenges (Aggarwal 2012a), the centralised regulatory approach may be complemented with models which involve administrative and fiscal decentralisation ensuring greater local autonomy to provincial and state governments. The former places planning and implementation responsibilities in the hands of the local governments while the latter accords substantial revenue and expenditure autonomy also to them (World Bank 2013a). Viewed from this perspective, Thailand a unitary state is at one extreme of the spectrum where regulatory, administrative and fiscal powers are concentrated at the center. This system is highly efficient, less costly and quick. However, it may or may not include significant representation from the local government. At the other extreme of the spectrum is Indonesia that has been following the system of decentralized governance and development planning with substantial authority and financial resources assigned directly to regencies and municipalities, bypassing even provincial governments in the hope of better service delivery. Thus, in addition to administrative decentralisation, there is decentralisation of fiscal powers as well. However, evidence is that the local governments do not have adequate capacity for economic planning or to take initiatives to promote economic growth or exercise fiscal powers in their jurisdictions (Nasution 2016). This makes the decision-making and implementation process more difficult and slower. In the middle of the two is Malaysia where regulatory (or political) centralisation is combined with administrative decentralization. But the latter is not supported by fiscal decentralisation which severely curbs the financial powers of the local governments and makes them dependent on the Federal government for funding their development projects and leaves immense scope for political favouritism (Wilson 1996). While all three countries have adopted centralised regulatory regimes for their zones programs which is considered a good practice, the institutional distribution of administrative and fiscal powers to lower levels of governments may constrain the success of the zone programs. The Chinese experience, where the local governments have played a critical role in the success of SEZs, shows that the local governments should have certain administrative and financial autonomy to create an open and conducive policy environment for the SEZs (Zheng 2016).

The regulatory body

The regulatory body may be fully anchored into a single ministry (Korea, Taipei, China), be a cross ministerial government body (India), or an autonomous board or body with a Board of Directors – usually chaired by the head of a specific ministry – including cross-ministerial and private sector membership (Jordan, Costa Rica, Bangladesh, and the Dominican

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20 It was widely discussed during country consultations.
Republic). In many countries the autonomous regulator is anchored to the highest possible level of government (China, Bangladesh, Dominican Republic, Viet Nam and Mauritius). This is a signal to officials that the economic zone program is a central instrument in the government’s industrial development strategy and to foreign investors that the government is committed to the program, lowering their perception of risk. It also empowers the regulator to effectively coordinate actions with other ministries. The IMT-GT countries follow diverse practices in regard to the regulatory body.

- Malaysia. Most industrial area programs (including SEZs) are being directly run by the relevant federal ministries as their programs; the only exceptions are Halal Parks and multimedia corridor which have autonomous regulatory bodies (Table 9). For overseeing the economic corridors program, Regional Corridor Authorities have been set up. But they have little regulatory role. They are created as an administrative layer between the Center and states to support the latter in planning and negotiating for development projects’ funding with the center. While many consider this practice as suboptimal, it has its own pros. It provides a greater flexibility to the zone programs. But each time a new government takes the office there is a possibility that it reverses whatever decisions predecessors took.

- Indonesia. In Indonesia, the regulatory powers are anchored within the relevant ministries for all EZs except KEKs (Table 9). KEKs are regulated by an autonomous inter-ministerial body named National Council which is chaired by the minister in charge of economic affairs. This substantiates the importance of this program in the country.

- Thailand. All SEZs and science parks’ programs have been governed by their respective autonomous bodies. While the IEAT Authority anchored in the Ministry of Industry governs the industrial estates, other SEZs are governed by their respective autonomous bodies which are chaired by the Prime Minister. Further, each of the authorities has representation from the private sector. While the IEAT Board has independent directors, the policy committee is represented by experts appointed by the PM and the confederation of Industries. Under the new regulation approved in principal by the cabinet resolution on June 9, 2020, the SEZs scheme along border areas will be integrated with Economic Corridor scheme including Southern Economic Corridor (SEC), Northern Economic Corridor (NEC), North-eastern Economic Corridor (NeEC) and Central-Western Economic Corridor (CWEC), It will be placed under a single governance unit “The National Committee on Special Economic Zone” which is to be chaired by the Prime Minister and will comprise of representatives from relevant government agencies and private sectors21.

<table>
<thead>
<tr>
<th>Table 9: Regulatory bodies of economic zones in IMT-GT countries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indonesia</strong></td>
</tr>
<tr>
<td><strong>GENERAL ECONOMIC ZONES</strong></td>
</tr>
<tr>
<td>Industrial estates</td>
</tr>
<tr>
<td>Science &amp; techno parks</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>KAPETS</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

IV.4 Rules and regulations

Rules and regulations pertain to the type of permissible activities, fiscal and non-fiscal incentives, labour, land, governance, administration, and infrastructural requirements. They cover various aspects of economic zone development, management, operations and monitoring. Some of the major rules and regulations in EZs of the three countries are reviewed as under.

**One-stop-shop**

- **Indonesia** In July 2018, Indonesia introduced an online single submission service (OSS). It is a web-based business licensing system that integrates all business licensing services for all economic zones across the board. However, the free port and FTZ of Batam has its own single window services provided by the Batam Free Trade Zone Authority (BP Batam). Recently in a progressive move, it has been merged with the city administration to debottleneck the licensing system. In KEK’s, Zones Councils administer the one-stop integrated services. To promote the development of Industrial Estates, a three-hour investment express service (I23J) has been introduced on 11 January 2016, for investors looking to invest a minimum of 100 billion rupiah (US$8 million) and/or to employ no less than 1,000 local workers at designated IEs. Under the scheme 8 documents and a letter of land availability are issued within three hours to the investor to start business.

https://www.eeco.or.th/th/filedownload/1199/file_EEC%20ACT%202561%20%28English%20version%29.pdf

Malaysia does not have a distinct concept of one-stop-shop for industrial areas. MIDA provides comprehensive information on investment opportunities in the country and facilitates investors by working in conjunction with State Investment Boards that act as the one-stop agencies at the state level. The zone management authorities provide additional assistance to investors.

Thailand provides one-stop-shop facilities in all types of SEZs through their respective regulatory bodies. The IEAT provides single window for visas and work permits as well. Besides there are other facilities including,
- The “IEAT Operation Center” (EMC2@I-EA-T) at its headquarters to operate as a center to monitor industrial estates and the factories inside them for efficient management of environmental and safety issues and integration of all information. The center also provides a centralized command in the case of emergency and disasters.
- e-Paperless and e-Permission. Tax privilege application service is provided through the e-Paperless system streamlining the customs clearance procedures for imported and exported goods for which an on-site training program is organized for business operators.

Foreign investment
- Indonesia has a negative list for foreign investment. It is applicable in all types of zones except KEKs. In free trade zones, the master list is decided by the one-stop service of Indonesian Investment Coordinating Board (BKPM). There are also relaxations on foreign equity holding in special economic zones and FTZs where foreign nationals can build their own plant and own 100% of their businesses subject to certain conditions.

- Malaysia follows a liberal policy towards FDI since June 2003, under the law; foreign investors could hold 100% of the equity in all manufacturing investments in new projects, as well as investments in expansion/diversification projects by existing companies irrespective of the level of exports and without excluding any product or activity. However, certain services are subject to limits on foreign equity.

- Thailand Although there are no general restrictions on foreign investors, foreign ownership in most services sectors is limited to 49%. Further, the Foreign Business Act (FBA) of 1999 contains three annexes which list specific restrictions on foreign investment in selected activities. Annex 1 contains activities where foreign investment is prohibited while annexes 2 and 3 impose restrictions on foreign investment in specified activities. However, up to 100% foreign ownership is allowed for BOI and IEAT promoted investments in activities listed in annexes 2 and 3.

Infrastructure
- Indonesia. The legal framework for industrial estates in Indonesia requires companies to set aside 30% of land for green spaces and infrastructure. In addition, the estates must adhere to specific infrastructure requirements with criminal and financial penalties applicable for violations. The responsibility of developing industrial infrastructure (energy and electricity, telecommunications, water, sanitation and transportation networks) and supporting infrastructure (housing, education and training, research and development, health, fire stations, and waste disposal) lies with the government while the basic infrastructure (roads, sanitation, water treatment etc.) is to be developed by industrial estate companies (Octavia 2016). In KEKs, the National Council may set its own policies in cooperation with central, provincial and local governments and private parties to construct and maintain the infrastructure in the zone. Finally, bonded zones are encouraged to set up bonded logistics centers within the boundaries of bonded zones in order to improve logistics efficiency.
• **Malaysia.** Industrial areas are normally developed as traditional industrial zones with onsite industrial and supporting infrastructure. There are instances of township development within EZs as well. Kulim high tech park for instance is equipped with urban infrastructure. The upcoming SBEZ will also have urban infrastructure including factories, shopping complex, housing, hotels, recreation park and a new Immigration, Customs, Quarantine and Security (ICQS) facility. However, there are no standard specifications for infrastructure development in the zones.

• **Thailand.** Industrial estates in Thailand provide the complete range of infrastructure necessary for all industrial operations including amenities such as electricity, water supply, flood protection, waste water treatment plant (size approved by the IEAT authority), solid waste disposal, communication facilities and security systems. They also contain commercial banks and post offices to further facilitate business operations. Most estates have customs offices, schools, hospitals, shopping centers and other social infrastructure. To provide the necessary infrastructure, all industrial estates must set aside 30-40% of the area for infrastructure development. Industrial estates larger than 161 hectares can allocate up to 25% of land area for infrastructure.

**Foreign labour employment**

• **Indonesia** prioritises employment of Indonesian citizens (local to be more precise) in all types of economic zones including KEKs. There is no relaxation given to foreign employees. There are restrictions on the types of businesses that can employ foreign workers. The laws set requirements to obtain health insurance for expatriate employees, requires companies to appoint local “companion” employees for the transfer of technology and skill development, and requires employers to “facilitate” Indonesian language training for foreign workers (US Department of State, 2019a). The processes for immigration and resident permit for foreigners have been relaxed only for tourism zones.

• **Malaysia.** As per the national labour code, foreign workers can be employed subject to certain restrictions. Malaysia’s 1.78 million documented and 2-4 million undocumented foreign workers make up over 20 percent of the country’s workforce even though the government has been trying to reduce reliance on them (US Department of State 2019b). The employer must first obtain approval from the Local Center of Approval at the Ministry of Home Affairs to hire foreign workers. Only companies operating in manufacturing, construction, agriculture, plantation and services industries may be approved to hire foreign workers. For this, Foreign Worker One-Stop Approval Center has been set up. In addition, special services are provided in the Multimedia Super Corridor by setting up an eXpats Service Center within the Malaysia Digital Economy Corporation Sdn. Bhd. (MDEC) as one-stop-shop for foreign knowledge workers.

• **Thailand** allows foreign experts and technical staff together with their spouses and dependents in industrial estates and other SEZs. In border area SEZs, permission is granted to employ foreign unskilled workers in the promoted project, according to the conditions prescribed by BOI. In EEC, Thailand has unrolled a “Smart Visa” to attract highly-skilled foreign labour across 10 targeted industries; they are even given exemptions on personal income tax.

**Labour laws**

• **Indonesia.** The law allows independent labour unions, legal strikes, and collective bargaining in all zones. However, two specialised labour institutions have been set up in KEKs as derogations. These are: Special Tripartite Cooperation Councils for labour administration and dispute prevention and resolution; and Remuneration Council for wage related issues. Further, companies with more than one labour union may establish an employee
labour union forum the establishment of which is governed by the minister in charge of manpower.

- **Malaysia.** Labour relations in Malaysia are generally non-confrontational. Despite a system of government controls that discourages strikes and restricts the formation of unions at the enterprise level, territorial federations of unions have emerged. The government protects the electronics and textile sectors which dominate the SEZs of Malaysia from territorial federations. The electronics sector is limited to forming four regional federations of unions, while the textile sector is limited to state-based federations of unions in the states where this industry exists.

- **Thailand.** While labour unions are not discouraged, there are restrictions on trade unions’ right to establish branches, federations and confederations or to affiliate with national and international organisations. There are restrictions on trade unions’ right to organise their administration, strikes, and collective bargaining. This is particularly the case in all types of SEZs.

**Land**

- **Indonesia.** Foreigners cannot own freehold land in Indonesia. Leasehold titles (Right to build) are granted for 25 years and under the 2016 law, can be renewed for a maximum period of 80 years. Prior to 2016, the maximum extension period was only 20 years. KEKs’ already have the provision of 80 years’ lease. However, the rules for property ownership by foreign nationals in Batam fall under Decree No 068/KPTS/KA/III/1999 which allows foreign nationals or companies to 100% own residential or commercial property in the Bareleng area (Batam, Rempang and Galang).  

- **Malaysia.** The National Land Code recognizes two types of land ownership, namely freehold and leasehold. Foreigners can legally own freehold land, condos, houses, and can even get residency permit for 10 years for a fee.

- **Thailand.** Foreign companies in all types of SEZs can own land for commercial and residential purpose. In EEC SEZ foreigners are exempted from restrictions on the ownership of condominium also.

**Direct and indirect tax incentives**

- **Indonesia.** Massive investment incentives are being offered to firms on new investment in 18 designated pioneer industries that have a wide range of connections, provide additional value and high externalities, introduce new technologies, and have strategic value for the national economy. KEKs offers most comprehensive direct tax benefits on investment in target industries (Table 10). Economic activities other than in target industries enjoy standard tax benefits. Direct tax benefits can be extended up to 25 years. In addition, there are indirect tax benefits across all SEZs.

### Table 10. Direct and indirect tax incentives in Indonesia

<table>
<thead>
<tr>
<th>Direct tax incentives</th>
<th>Standard tax exemptions applicable to 18 industries</th>
<th>IE s’ Additional Tax incentives KEKs for primary activities</th>
<th>KB/Logistics</th>
<th>KAPET</th>
<th>FTZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment (in Rupiah)</td>
<td>Exemption Years</td>
<td>Investment (in Rupiah) Exemption Years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-500 bn</td>
<td>50+25%</td>
<td>5-2</td>
<td>Y*</td>
<td>No additional direct tax benefits</td>
<td></td>
</tr>
<tr>
<td>500 bn to 1 tn</td>
<td>100+50%</td>
<td>5-2</td>
<td>Y*</td>
<td>500 bn to 1 tn</td>
<td>20-100%</td>
</tr>
<tr>
<td>1 tn to 5 tn</td>
<td>100+50%</td>
<td>7-2</td>
<td>Y*</td>
<td>1 tn and above</td>
<td>20-100%</td>
</tr>
</tbody>
</table>

24 [http://www.balivillasales.com](http://www.balivillasales.com)
5 mn to 15 tn 100-60% 10+2 Y*
15 to 30 tn 100-60% 15+2 Y*
above 30 tn 100-50% 20+2 Y*

Tax allowance (TA) for 145 business fields: 30% of investment value Reduction of corporate net income tax for 6 years, 5% each year.
TA for non-primary activities of KEKs.

Indirect tax incentives

<table>
<thead>
<tr>
<th>Non collection of VAT and Local sales tax on certain imports</th>
<th>Exemption / Postponement of Import duties on capital goods, components and raw materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-collection of VAT and LST on the domestic purchases of certain goods</td>
<td>Non collection on Article 22 income Tax on importation of certain goods.</td>
</tr>
<tr>
<td>Non collection of excise duties on certain imported goods</td>
<td>Exemption of VAT on transactions of intangible goods and taxable services</td>
</tr>
</tbody>
</table>

Y*: All tax incentives applicable but industrial zones have been divided into four categories for tax incentives, namely developed industrial development estates (WPI) in Java; developing WPIs in Southern Sulawesi, Eastern Kalimantan, Northern Sumatera (other than Batam, Bintan and Karimun) and Southern Sumatera; potential WPIs in Northern Sulawesi, Western Kalimantan, Bali and Nusa Tenggara; and potential WPIs in Papua and West Papua (Amin 2016). Tax and regional incentives for both industrial zone operators and industrial tenants vary depending on the category of zone.

- **Malaysia.** Tax incentives are essentially industry and merit based; special incentives offered to activities in backward regions are independent of the location of industrial unit within zones or outside them. Companies are eligible for either pioneering status (PS) or Income tax allowance (ITA). The direct tax incentives may be given for up to 10 years subject to the merit of the project (Table 11).

Table 11: Direct and indirect tax incentives in Malaysia

<table>
<thead>
<tr>
<th>Qualifying industry</th>
<th>Pioneering status Benefit</th>
<th>Investment tax allowance Benefit</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard deduction for companies</td>
<td>70% of increased SI 5</td>
<td>60% new QCE against 70% SI 5</td>
<td></td>
</tr>
<tr>
<td>Projects of national and strategic importance involving heavy capital investment and high technology including halal parks, eCRC and Sabah</td>
<td>100% of SI (2) 10</td>
<td>100% QCE (3) against 100% SI 10</td>
<td></td>
</tr>
<tr>
<td>High-technology companies in areas of new and emerging technologies</td>
<td>100% of SI 5</td>
<td>60% QCE against 100% SI 5</td>
<td></td>
</tr>
<tr>
<td>Companies manufacturing specialised machinery and equipment</td>
<td>100% of SI 10</td>
<td>100% QCE against 100% SI 10</td>
<td></td>
</tr>
<tr>
<td>Existing locally owned companies reinvesting in production of heavy machinery, specialised machinery, and equipment</td>
<td>70% of increased SI 5</td>
<td>60% new QCE against 70% SI 5</td>
<td></td>
</tr>
<tr>
<td>In addition there are sector specific incentives to biotechnology industry, Palm oil, halal and Industry 4.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Indirect tax benefits

Service and sales tax: Manufactured goods for exports are exempted from sales tax. All imports and exports of services are exempt from the service tax.

Source: PwC

- **Thailand.** Wide ranging tax benefits have been offered in Thailand which are classified as category and merit based. Merit of the project is based on competitiveness enhancement, decentralisation and industrial zone development. Thus, unlike in Malaysia, companies in all types of SEZs enjoy additional benefits (Table 12)

Table 12. Direct and indirect tax incentives in Thailand

<table>
<thead>
<tr>
<th>Category based</th>
<th>Tax exemption</th>
<th>Standard years</th>
<th>IEs</th>
<th>SEZs</th>
<th>EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category based</td>
<td>100%</td>
<td>8</td>
<td>8</td>
<td>8 plus 5 years of 50% relaxation</td>
<td>8 Plus 2 years of 50%</td>
</tr>
<tr>
<td>A1</td>
<td>100%</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>A2</td>
<td>100%</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>A3</td>
<td>100%</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>A4</td>
<td>100%</td>
<td>3 (merit)</td>
<td>4</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>-</td>
</tr>
</tbody>
</table>
The SEZs (SBEZs) and EEC SEZ enjoy the most attractive tax regimes. In SBEZs, those running businesses in the 13 target industries can avail a maximum of 8 exemptions for all activities irrespective of technology sophistication. SBEZ companies in sectors other than the 13 targeted sectors can avail standard BOI benefits. In addition, 10 years’ double deductions are offered from the costs of transportation, electricity, and water supply and 25% deduction on the cost of installation or construction of facilities. The special promotional zones within EEC (EECi, EECd, and EECa) offer personal tax relaxation for foreign staff who will be taxed at 17% rate (over half the standard rate). Projects for human development in EEC attract additional (to the standard) tax break of 2 years and 50% reduction of corporate income tax for three years and personal income tax of 15% for foreign executives. The conditional tax benefits can thus be extended up to 15 years in the EEC. Under the standard package, import duty and value added tax exemptions are offered on imports of machinery and production raw materials directed to export markets. Free zones can bring supplies or raw materials for production without being subject to import permits, standard and quality controls, or any other control except for those under the Customs Act. The 2007 IEAT Act also provides tax burden relief for goods from the Free Zones sold to the local market; the raw materials and components are entitled to tax and duty exemptions if they are produced locally. This is likely to promote the linkages of SEZs with the outside economy. SEZ companies enjoy exemption from import duty on raw materials and inputs used in the production of products and reduced or waived import duty on machinery irrespective of whether they are producing for export/domestic markets.

V.5 Summing up

The above analysis shows that there is a clear cut distinction between the SEZs and GEZs in terms of the legal and institutional frameworks. The SEZs are not just about tax benefits, they also address some binding institutional constraints without disturbing the institutional balance within the rest of the economy. Further, the EZs in the subregion are evolving not only in terms of the structural features such as size, design, location, and economic composition but also legal and institutional frameworks. Along with the provisions of fiscal incentives, the range of facilities, services, and amenities available within zones have also been extended to new ambitious zones program particularly in Thailand and Indonesia. The analysis thus reveals that the governments have adopted strong commitment, pragmatic approach and dynamic learning, which are critical elements of a strategic EZ policy. Notwithstanding this, SEZs could not be completely insulated from the broader institutional contexts in these countries. The preferential regulatory contents have been enriched and enlarged particularly in Thailand’s new generation SEZs. Indonesia is mainly focusing on administrative simplifications and fiscal incentives. As argued above, the competitiveness of SEZs is positively related with the gap between the institutional orientation of SEZs and the wider economy. Large fiscal incentives offered in SEZs (as in KEKs) cannot compensate for a narrow institutional gap between the two.

Source: BOI, Thailand

<table>
<thead>
<tr>
<th>Merit based (Merit on competitiveness enhancement)</th>
<th>B2</th>
<th>-</th>
<th>-</th>
<th>-</th>
<th>8</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted technology</td>
<td>100%</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>12+ 3 years of 50%*</td>
<td></td>
</tr>
<tr>
<td>R&amp;D</td>
<td>100%</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>12+ 3 years of 50%*</td>
<td></td>
</tr>
<tr>
<td>Indirect tax</td>
<td>Import duty exemption on Machinery (all but B2), Import duty on Raw material for production on exports and import duty exemption on raw material for R&amp;D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

26 Ibid.
V. SEZS AND GEZS IN IMT-GT CORRIDORS

There are five priority economic corridors (EC) designated in the IMT-GT subregion, each with its own comparative advantage (CIMT 2017b). These are (i) Extended Songkhla–Penang–Medan Corridor (Nakhon Si Thammarat – Phatthalung – Songkhla–Yala–Pattani–Penang–Medan) with specialisation in agriculture; (ii) Straits of Malacca Corridor (covering the western coastal belt from Trang in Southern Thailand to Melaka in Peninsular Malaysia); (iii) Banda Aceh–Medan–Pekanbaru–Palembang Economic Corridor (a road corridor running south to north through Sumatera); (iv) Melaka–Dumai Economic Corridor (a maritime corridor linking Sumatera and Peninsular Malaysia) and; (v) Ranong–Phuket–Aceh Economic Corridor (primarily a maritime corridor). These corridors (Figure 5) ensure internal regional connections of all provinces/states within the subregion which can increase transport services, reduce transport and trade costs and serve as the basis for clustering economic activities through the development of industrial hubs and special economic zones. This section takes stock of the existing economic zones in these corridors and identifies upcoming projects in each of the 32 provinces and states within the IMT-GT subregion. It is based on the data sourced from the relevant agencies during country consultations which were combined with information from various government reports, academic and newspaper articles to prepare a rich database on the location of economic zones in the subregion. Since the size, age and occupancy of these zones vary significantly and may not provide a good idea of the concentration of manufacturing activity in these corridors, we also analyse trends in a few selected quantitative indicators of manufacturing in the subregion. These include: (i) the share of manufacturing in gross regional domestic product (GRDP) of IMT-GT provinces and states, (ii) the ratio of GRDP of the subregion to national GDP per capita.

Figure 5 IMT-GT Economic Corridors

Source: IMT-GT Vision 2036

V.1 Indonesia

The IMT-GT covers all 10 provinces of Sumatera in Indonesia: Aceh, Bangka-Belitung, Bengkulu, Jambi, Lampung, North Sumatera, Riau, Riau Islands, South Sumatera, and West Sumatera. Sumatera is resource rich with almost 70% of Indonesia’s oil palm plantations and two-thirds of the rubber latex harvested followed by Kalimantan, Sulawesi and Java. In addition, it is one of the four oil-producing regions and three main gas-producing regions of Indonesia. In order to leverage the abundance of natural resources, there has been a drive to promote processing activity by setting up economic zones in the

27 Gross regional domestic product (GRDP) measures the size of a region's economy. It is the aggregate of gross value added (GVA) of all resident producer units in the region, and analogous to national gross domestic product.
region. Table 13 which summarises the spatial distribution of all types of economic zones in IMT-GT Indonesia shows that the region hosts around 23(25%) of 87 industrial estates, which covered 30% of total 86,059 hectares of area under industrial estates in 2019. It also comprises of 91 (6.7% of 1,350) bonded zones (Damuri et al 2015), 5 of 15 SEZs and all four free trade zones created in the country. In total, it has 124 economic zones. Of the 28 national strategic projects on SEZs and industrial zones, 8 are in the IMT-GT Indonesia.

The 10 districts of Sumatera form a development ladder in terms of GRDP per capita, at the top of which are Riau islands and Riau which are two of the major centers of industrial development and among the most well off provinces with their GRDP per capita being above the national average. At the second tier are Bangka Belitung, Jambi, North Sumatera and South Sumatera that have the GRDP per capita which is roughly equal to the national average. West Sumatera, Lampung, Bengkulu and Aceh have been at the third tier and are among the bottom states falling 30 to 50% short of the national income. The spatial distribution of economic zones is also linked with the development ladder. The Riau and Riau islands form the largest hub of economic zones in the subregion with 13 IEs (57% of 23) and 3 free trade zones, contribute 8.6% of the national manufacturing value added, and form the second largest industrial hub of the country after Java. Another hub of economic zones is emerging in North Sumatera with 5 industrial estates, 42 bonded zones and one SEZ and 4% of contribution to the national manufacturing value added. It is followed by South Sumatera. The share of bottom tier provinces remains marginal both in economic zones and manufacturing value added (Table 13).

### Table 13. Cluster based Economic zones and Manufacturing shares in Indonesia-GT

<table>
<thead>
<tr>
<th>Bonded zones</th>
<th>Aceh</th>
<th>Sumatera North</th>
<th>Riau Island</th>
<th>Sumatera West</th>
<th>Riau</th>
<th>South Sumatera</th>
<th>Banka</th>
<th>Lampung</th>
<th>Bengkulu</th>
<th>Jambi</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
<td>42</td>
<td>2</td>
<td>24</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial estates</td>
<td>5 (5.7)</td>
<td>11 (12.6)</td>
<td>1 (1.1)</td>
<td>2 (2.3)</td>
<td>1 (1.1)</td>
<td>1 (1.1)</td>
<td>1 (1.1)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SEZs</td>
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<td>1</td>
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<td>1</td>
<td>1</td>
<td></td>
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<tr>
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<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>GBL</td>
<td>4</td>
<td>48</td>
<td>16</td>
<td>25</td>
<td>3</td>
<td>24</td>
<td>2</td>
<td>1</td>
<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Contribution to Mfg VA</th>
<th>Aceh</th>
<th>Sumatera North</th>
<th>Riau Island</th>
<th>Sumatera West</th>
<th>Riau</th>
<th>South Sumatera</th>
<th>Banka</th>
<th>Lampung</th>
<th>Bengkulu</th>
<th>Jambi</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>0.3</td>
<td>4.0</td>
<td>2.7</td>
<td>0.7</td>
<td>5.9</td>
<td>2.2</td>
<td>0.8</td>
<td>1.7</td>
<td>0.1</td>
<td>0.6</td>
</tr>
<tr>
<td>Mfg share of GDP (%)</td>
<td>6.9</td>
<td>19.8</td>
<td>38.8</td>
<td>11.2</td>
<td>27.8</td>
<td>18.4</td>
<td>23.3</td>
<td>17.8</td>
<td>6.8</td>
<td>11.4</td>
</tr>
<tr>
<td>GDP per capita as ratio of national GDP per capita (2018)</td>
<td>0.6</td>
<td>0.8</td>
<td>1.9</td>
<td>0.7</td>
<td>1.7</td>
<td>0.9</td>
<td>0.9</td>
<td>0.7</td>
<td>0.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

The parentheses show the % of total industrial estates

Source: Compiled by the author from various sources; Statistical Year Book 2019

**Prominent economic zones by provinces: Proposed and operational**

**Aceh.** The discovery of natural gas reserves in the early 1970s and a liquefied natural gas refinery that became operational in 1977 triggered the development of the petrochemical cluster Lhokseumawe in Aceh, until then a rice barn of Indonesia. However, the industrial area could not bring structural change to the economy which remained predominantly agrarian in nature. The plantations of palm oil, rubber, coffee, cacao, coconut, and clove helped the growth of processing industry which was dominated by low productivity small firms. Currently, there are two major industrial sites which are benefitted by the strategic location of Aceh at the entrance to the world's busiest trade route, the Malacca Straits (Table 14).
• **KAPET Bandar Aceh Darussalam (KAPET BAD).** The Bandar Aceh Darussalam Integrated Economic Development Zone (KAPET) is one of 13 KAPETs with the total area of 6,356.87 km² or 10.89% of the total area of Aceh Province covering the city of Banda Aceh, Aceh Besar Regency, and Pidie Regency with the hinterland of the Central and West / South Aceh region. Its major objectives are to support the (i) development of Sabang free port and Malahayati as a port of transportation of goods and services, (ii) development of Aceh Island as a center for distribution services, and (iii) promotion of industrial estates to promote five targeted sectors: agriculture and plantation, fisheries, energy, animal husbandry and tourism. A joint initiative between India and Indonesia is underway to develop a deep-sea port in Sabang in Aceh to enhance maritime connectivity and give a push to logistics activities in the province (Roy Chaudhuri 2019).

• **SEZ Arun Lhokseumawe.** It is located 250 km away from the capital Bandar Aceh and is spread over 2,600 hectares of land with a focus on oil and gas industry, petrochemical, agro industry, logistics, and paper industry. Earlier, around half of the area was the Arun liquefied natural gas facility, which was formally decommissioned in 2014 due to falling natural gas reserves. It is established as a Special Economic Zone (SEZ) in February 2017 to accelerate economic development. There are plans to create social infrastructure in the area. It is expected to create 40,000 jobs.

**Bangka Belitung Islands.** The Province has tremendous tourism potential along with the mining sector, especially tin, which is still a major investment attraction despite a decline in importance. Other industries of interest in the province are fisheries and palm oil. Some of the major (proposed/ under development) projects are as follows.

• **Tanjung Kelayang SEZ** located in Sijuk District, Belitung Regency has a land area of 324.4 hectares with main activities in the Tourism sector. It is expected to provide employment to around 23,645 people (Gol 2019). This SEZ is one of the 10 national priority tourism destinations declared by the Government and will transform the tin mining based economy of Bangka Belitung province into the one based on international tourism. Tanjung Kelayang SEZ is also included in 10 priority tourist destinations called 'Bali Baru'.

• **Sadai Industrial Estate** in Bangka Selatan: It is one of the 19 priority projects proposed by the Ministry of Industry to be developed outside Java from 2020 to 2024.

• **Tanjung Gunung and Sungailiat KEKs.** The proposal for these KEKs is under review. This will increase the number of KEKs in the province to three. The Tanjung Gunung KEK will span 385 hectares while Sungailiat will be spread over 600 hectares of land that includes Rambak Beach and Rebo Beach. Tanjung Gunung has been earmarked for the meetings, conferences and exhibitions (MICE) based tourism; and Sungailiat has been designated to promote sports based tourism in particular a golfing hub. These are not yet included in the national strategic plan (PSN). However, the SEZ Tanjung Gunung is already approved as a SEZ site.

**Riau Islands.** Riau islands strategically located on the Indian and Pacific Oceans -- only 12 miles from Singapore --represent one of the most attractive industrial, manufacturing and logistical platforms in the subregion. Three main islands that it consists of are Karimun, Batam and Bintan. Batam possesses numerous industrial parks dealing with electronics, biotech, semiconductors and other technology applications, oil services, shipbuilding and a wide range of other industrial and consumer products while Bintan is known primarily for tourism and smaller industrial parks. Karimun the least developed of the three FTZ's attracts space-intensive industries such as shipbuilding and agriculture along with oil and gas exploration. Some major projects are in the pipeline to uplift Bintan.

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• **Galang Batang SEZ.** Operational since August 2018 in Bintan, it is an integrated bauxite downstream center. It is also expected to boost the regional economy and generate 23,200 jobs.

• **Nongsa Digital Park (NDP).** Opened in 2019 in Batam for digital start-ups and companies, it was first proposed by a Singapore-based integrated media entertainment and creative services company Infinite Studios. Currently, it has 50 companies mostly from Singapore. It is being developed by a joint venture between Sinar Mas Land and Citramas Group (the parent company of Infinite Studios) who have appointed Surbana Jurong, an Asia-based urban and infrastructure consultancy group, as master planner. It aims to be a digital bridge between Indonesia and Singapore and is under review for the SEZ status.

• **Aerospace park (Maintenance, Repair and Overhaul)** on Bintan Island will be a part of an existing Bintan Industrial Estate adjacent to the runway of Bintan Airport and will spread over 177 hectares. There will also be a dedicated township, including employee compound houses, dormitory, health center, sports center, convenient stores, to cater to the management and staff in the Park. It is one of the 19 priority estates proposed by the Ministry of Industry for 2020-24 (Cahyoputra 2019).

**Bengkulu.** Bengkulu is prone to natural calamities with several active volcanos. Coal mining is a major economic activity other than agriculture. Agriculture accounts for around 40% of the GRDP. There are initiatives to brand Robusta and Sintaro coffee produced in the province as also Kain Besure and Bumpak woven local batik of Bengkulu. Population is centralized only around the central and western coast, while the hinterland people live in small groups and are dispersed. Bengkulu City and Rejang Lebong are the two most inhabited centers with other regions supporting them (Tatiana et al. 2015). In order to revitalize the economy of the province, the Provincial Government is pushing for *Baai Island Port* to become a Special Economic Zone (KEK) as a future investment destination. It is argued that the port directly faces the high seas and can drive economic development, especially in the central and western coast of the island of Sumatera.

**Jambi.** Jambi situated in Malacca strait is a center of rubber, palm, coconut plantations with a strategic location facing Malaysia and Singapore but its poor quality of infrastructure, topography and human capital remain major constraints in promoting its manufacturing potential. The major projects are discussed below.

• **Jambi integrated city** It is the first integrated industrial estate being developed as a modern city with industrial and logistics (bonded logistics center) parks, a techno park, and residential and commercial infrastructure. The focus is on light consumer industries, rubber, and biodiesel, covering a total land area of 2,020 hectares. Developed by PT Jambi Kemingking Eco park, the city is included in the RPJMN (2020-2024) as an industrial project.

• **Jambi Agro Industrial Park (JAIP)** It is an area of over 100 hectares, which is currently being promoted by the Jambi Provincial Government for the development of agriculture and industry. JAIP is located on the east coast of Sumatera, which is in the East Tanjung Jabung Regency in a lowland and tidal area and is known for several plantation commodities such as corn, soybean and coconut.

**Lampung.** Lampung is Indonesia’s center of pepper and coffee production. It is among Indonesia’s top exporting provinces for animal and vegetable oil and fats, coffee, tea, spices, and mineral fuels. Other prominent export crops are banana, cassava, sugarcane coconut. This provided a good setting for the growth of agricultural processing industries with numerous industrial areas and industrial zones. Currently the focus is on maritime and logistics industry with the following major projects.

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29 The other two are: Kendal SEZs (Central Java), Likupang SEZs (North Sulawesi).
- **Tanggamus Industrial Park** being developed on an area of 800 hectares for maritime industry and logistics will be Indonesia's fourth major shipbuilding area after Surabaya, Cilegon and Batam. The integrated development will be built in stages, eventually covering a total area of over 1,000 hectares owned by the state oil and gas company PT Pertamina. It is expected to generate 10,400 jobs. It is one of the 245 national strategic projects.

- **Pesawaran Integrated Industrial Park** proposed to be a priority project will be spread over 1,200 hectares and will focus on a variety of industries. Located in the proximity of the Trans Sumatera Toll road, it seeks to be an environmentally friendly, sustainable, and environmentally friendly industrial park.

- **Way Pisang Industrial Area in Way Pisang** will accommodate agro-products, plantations, and livestock from the Southern Lampung Province. The 3,500 hectares of land in the area will be developed in three phases and is proposed to be a priority project along with Pesawaran industrial park.

- **Sebalang Integrated Energy Industrial Zone (KIEL).** In addition, the government is also reviewing a proposal from the provincial government to accelerate the development of the Sebalang Integrated Energy Industrial Zone (KIEL).

**Riau.** Riau Province is rich in agro-products, oil palm, rubber, sago and minerals particularly oil and gas. The province has two industrial parks being set up in Dumai and Siak areas, both of which are included in the acceleration program of National Strategic Projects under the Presidential Regulation number 58 of 2017.

- **Dumai Industrial Park.** Spread over 1,000 hectares of land in Riau province Dumai industrial park has been declared as Palm Oil Industrial Cluster and also Palm Oil Green Economic Zone by the government of Indonesia. Strategically located with a private jetty alongside Rupat Straits opposite the famous Malacca Straits, it is being developed in two phases: Phase 1 (400 hectares) and Phase II (600 hectares).

- **Tanjung Buton Industrial Estate** Started in 2004, it was given the priority status in 2017. The development plan is divided into three stages with 3,500 hectares earmarked for industry and 1,500 for the support and basic infrastructure. It is supported by the Port of Tanjung Buton and is considered to be central to the development of trade, the shipping industry and various other investment activities.

**South Sumatera** holds the largest rubber plantation area of 812.57 thousand hectares or 22.85% of the total, followed by North Sumatera (472.14 thousand hectares), Jambi (384.78 thousand hectares), Riau (356.24 thousand hectares) and West Kalimantan (350.75 thousand hectares) and is found to be suitable for a rubber city site.

- **SEZ Tanjung Api-Api** (site for rubber city) The three IMT-GT countries are world's leading producers of natural rubber. Indonesia, Malaysia and Thailand collectively account for 66% of the global natural rubber production. To leverage their production and technological capabilities in rubber production, they are collaborating to develop Rubber Cities within the IMT-GT subregion. The objective is to promote downstream activities and manufacture of value-added products through cross-border value chains. SEZ Tanjung Api-Api launched in 2014 is the site for a rubber city in Indonesia-GT to complement Sei Mangkei in North Sumatera, Kedah in Malaysia and Songkhla in Thailand and is one of the 245 national strategic projects. The zone will focus on three main industries rubber, oil palm and petrochemical. It integrates a modern industrial park with the longest deep sea port called ‘Tanjung Carat’. With the total area of 2,030 hectares, SEZ Tanjung Api-Api is funded and managed by the government of South

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30 https://investlampung.id/desinvestasi
Sumatera Province. It will be divided into four zones, namely export processing zone, logistics zone, industrial zone, and energy zone.

North Sumatera. Among the industries to be developed in the area is a plant for the regasification of liquefied natural gas (LNG), an LNG trading hub, an LNG plant, a petrochemical cluster and an agro-industry and its related products. Three major industrial estates in the province are as follows.

- **KEK Medan Sei Mangkei.** A national strategic project, the Sei Mangkei Special Economic Zone (SEZ) was established through Government Regulation No. 29 of 2012 on February 27, 2012 and was the first SEZ in Indonesia that was officially inaugurated in January 2015 to target investment in palm oil, rubber industry, fertilizer industry, logistics, and tourism (already operational in January 2015). Designated as part of the rubber cities project, it focuses on rubber industry along with palm oil and is expected to become a center for the development of a large-scale, international-quality downstream palm and rubber industries. KEK Sei Mangkei also has supporting businesses namely logistics and tourism due to its proximity to the Malacca Straits. With a total land area of 2,003 hectares, it is open to the potential of other industries, especially in the downstream sector with high added value. It is supported by a dry port and a railway line which connects it to Belawan port. According to the official sources, the Sei Mangkei SEZ when fully operational in 2025 will make a significant contribution to the national economy.

- **Kuala Tanjung Industrial Estate.** Kuala Tanjung international hub port and Kuala Tanjung industrial estate are two national strategic projects, and will be developed in an integrated manner. Kuala Tanjung is located near Malacca Strait, one of the busiest commercial shipping routes in the world. Its water depth is around 15 metre lws (low water spring) to 1 metre lws and it can accommodate large international vessels, which make Kuala Tanjung Port fit to be positioned as an international port. Belawan Port, which is located at an estuary with high sedimentation rate, will evolve into a domestic port and serve as a spoke terminal for Kuala Tanjung.

- **Kawasan Industri Medan (KIM)** The KIM industrial estate developed by a State Owned Enterprise (SOE) was established on October 7, 1988, comprising shares of the Government of Indonesia (60%), North Sumatera Province (30%) and Medan City Government (10%). The developers continue to extend the land area and currently it covers 780 hectares (HKI 2019a). It is strategically located in the proximity of the Belmera Toll Gate and Belawan harbour. Phase I is located on the western highway while Phase II is in the east of the highway and is called circuitry Medan Industrial Estate. Phase II in particular is well planned with modern infrastructure water pipes, waste water, hydrant, gas pipes, electricity and telephone cables. The estate has not only the basic and supporting infrastructure but also commercial area comprising of post office, ATM, gas station. It has social infrastructure such as food court and polyclinic. The estate has some 600 entrepreneurs including multinational corporations operating in diverse sectors including palm oil and its derivatives, rubber, chocolate, coffee, tea and agricultural products including vegetables and fruits, fish canning, food and beverage, forest products, furniture, rattan furniture, building industry (steel) and others.

**West Sumatera:** West Sumatera is rich in cocoa processing, fisheries processing, and the snacks industry. The government is targeting West Sumatera as the center of cacao in Western Indonesia. Initiatives have been taken to provide training to cacao farmers in Cacao Learning Centers. It is also rich in tuna fish and is strategically located for landing and exporting (HKI 2019b). However it has only one industrial estate Padang industrial park spread over 616 hectares. It is one of the bottom provinces in terms of GDP per capita with the share of manufacturing in its GRDP being as low as 11.8% against 28% in Riau islands.
### Table 14. Prominent projects by IMT-GT provinces in Indonesia-GT

<table>
<thead>
<tr>
<th>Province</th>
<th>Existing (Operational Fully/partially)</th>
<th>Under development /Proposed</th>
</tr>
</thead>
</table>
| Aceh           | • KAPET Bandar Aceh Darussalam   
• SEZ Arun Lhokseumawe | • Sabang Free Trade Zone and Free Port                |
| Bangka         |                                         | • Tanjung Kelayang SEZ (Belitung Tourism Zone)     
• Sadai Industrial Estate  
• Tanjung Gunung KEK  
• Sungailiat KEK     |
| Riau Islands   | • Galang Batang SEZ  
• Nongsa Digital Park   | • Bintan Aerospace Park                                |
| Bengkulu       |                                         | • Baai Island Port to become a Special Economic Zone (KEK) |
| Jambi          | • Jambi Agro Industrial Park           | • Kemingking in Muaro Jambi : Jambi Integrated City |
| Lampung        | • Tanggamus Industrial Park            | • Pesawaran Integrated Industrial Park  
• Way Pisang in Way Pisang  
• The Sebalang Integrated Energy Industrial Zone (KIET) |
| Riau           | • Tanjung Buton Industrial Estate*  
• Dumai Industrial Park   |                                                        |
| North Sumatera | • KEK Medan Sei Mangkei  
• Kawasan Industri Medan | • Kuala Tanjung industrial estate                     |
| South Sumatera | • Tanjung Api - Api Special Economic Zone |                                                        |
| West Sumatera  | • Padang Industrial Park               |                                                        |

Source: Compiled by the author from various sources

### IV.2 Malaysia

The IMT-GT covers 8 states of Northern Peninsular Malaysia: Melaka, Kedah, Kelantan, Negeri Sembilan, Penang (Pulau Pinang), Perak, Perlis, and Selangor which form IMT-GT Economic Corridor 2 and parts of Corridor 3. These states which account for 42.6% of national GDP and 19% of the total area host 119 (48%) of 247 major economic zones identified by MIDA in the country and 55% of 216 zones in the Peninsular Malaysia (Figure 6). They contribute 60.5% of the national manufacturing value added. Figure 6 presents economic zones’ map of Peninsular Malaysia. It shows that Penang (with parts of Kedah and Perak) and Selangor (with N. Sembilan and Melaka) form two major manufacturing and logistics hubs comprising 45 (38% of 119) and 57 (48%) economic zones respectively. In addition to publicly developed zones, they also have a sizeable number of privately developed zones albeit the number is not known. The special economic zones such as FIZs, LMWs and FCZs and specialised parks such as halal parks are also concentrated in these areas. Of 22 FIZs 16 are located within these hubs. Similarly, of the 16 FCZs for which we have information all but two are in these hubs along with 7 of 13 HALMAS parks and 56 of 61 cybercities and centers.
Selangor has been historically the most developed state with GDP per capita 63% higher than the average of Peninsular Malaysia in 1971 due to its strategic geographic position with Klang valley at its center and the easy availability of skilled labour. Penang took off when a free export zone (FIZ) was set up near Bayan Lepas airport of Penang in 1971 with the objective of attracting foreign investment in labour intensive industries. The FIZ changed the manufacturing landscape of Penang. As the two poles expanded and the demand for land increased, the peripheral states also benefitted due to relocation of assembly type activity: Negeri Sembilan and Melaka in the proximity of Selangor; and Kedah and Perak on the borders of Penang. Currently, Selangor, Melaka and Negeri Sembilan are among the top 5 states in terms of GDP per capita in Malaysia and account for 38% of manufacturing value added. Penang along with Perak and Kedah contributes another 22% of manufacturing value added. Even though Perak and Kedah are among the 4 lowest GDP per capita states (with Perlis and Kelantan being the other two), yet they contribute 8.5% of national manufacturing value added. Perlis and Kelantan however remain marginalised in terms of industrial growth. Table 15 presents the distribution of economic zones by type and location which is based on an updated version of the MIDA database. The numbers of industrial parks and high tech parks are extracted from the MIDA statistics, the rest are based on their distinct sources. It shows that the IMT-GT Malaysia consists of 201 of 354 EZs in Malaysia with 145 being in manufacturing and logistics, and 56 cybercities and centers. Selangor, Penang and Melaka are at the top followed by Kedah and Negeri Sembilan. Perlis remains at the bottom.

Table 15: Cluster based Economic zones and Manufacturing shares in Malaysia-GT

<table>
<thead>
<tr>
<th>Industrial Parks</th>
<th>Selangor</th>
<th>Penang</th>
<th>Melaka</th>
<th>Negeri Sembilan</th>
<th>Perak</th>
<th>Kedah</th>
<th>Perlis</th>
<th>Kelantan</th>
<th>Total</th>
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<tr>
<td>High tech parks</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Halal parks</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>FCZs (Inc. SBEZ)</td>
<td>6</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

32 https://www.mida.gov.my/home/infrastructure-support/posts/
33 Perak is at the top of the bottom 5 states with its GDP per capita being 30% short of the national GDP per capita while Kelantan is the poorest with its incomes per capita being only 30% of the national average.
Prominent economic zones by state: Proposed and operational

In addition to the existing parks, there are several in the pipeline. Some of the prominent economic zones both operational and proposed are presented in Table 16.

**Penang.** Penang hosts the oldest and most successful free industrial zones in Bayan Lepas and Prai. Penang’s E&E ecosystem especially in the area of semiconductor, solar energy, light emitting diodes (LED), storage technologies and electronic manufacturing services (EMS) is a major driver of industrialisation in the state, the emergence and growth of which owes much to the establishment of SEZs in the state. The industry accounted for 34% of export basket of Malaysia in 2018 with trade surplus (Hai 2019). SEMI, an international organization in the semiconductor field, attributes approximately 8% of the global back-end semiconductor output to Penang, which makes it among the world’s leading location for microelectronics assembly, packaging and testing (Penang Invest)34. Penang also has a strong presence in automotive, precision engineering, plastics, software, and packaging industries. The Penang state government has taken initiatives to transform the Batu Kawan Industrial Park into an innovation district as the “Silicon Valley of the East”.

- **Batu Kawan Innovation District** is envisioned to be a site offering mixed-use housing, office and retail which can serve as test bed for nascent technologies and where leading-edge anchor institutions and industry clusters can interact with startups, business incubators and accelerators leveraging Penang’ strength in semiconductor industry and associated sectors (Choy 2018).

Table 16: Prominent projects by IMT-GT states in Malaysia-GT

<table>
<thead>
<tr>
<th>IMT-GT State</th>
<th>Prominent projects operational (Fully/partially)</th>
<th>Under development/proposed</th>
</tr>
</thead>
</table>
| Selangor     | • Klang Valley  
               • Cyberjaya  
               • Pulau Indah Halal hub | • Halal hub in Pulau Indah (Expansion)  
                                   • An Aerospace and High-tech Park within the Subang Aerotech Park |
| Penang       | • Bayan Lepas  
               • Prai  
               • Penang science park, Batu Kawan industrial park | • Batu Kawan innovation district |
| Negeri Sembilan | • Nilai Industrial Estate  
                                • Enstek Sci-Tech City  
                                • Pedas Halal Park (MIEL) | • Malaysia Vision Valley 2.0 |
| Melaka       | • Melaka Technology Park  
               • Composite Technology City, Elkay Industrial Park  
               • Serkam (halal food hub) | - |
| Perak        | • Parit Lumut Port, Seri Manjung, Kampung Aceh | • A Proton City Automotive Hub in Tanjung Malim;  
                                   • Green Asia Aerospace Technology |

34 [https://investpenang.gov.my/electrical-electronics/](https://investpenang.gov.my/electrical-electronics/)
Melaka has as many as 21 industrial zones attracting investment mainly in 7 sectors: medical, food, electronics, petroleum, transportation, metal manufacturing and non-metallic mineral sectors.

Selangor. Selangor is dotted with industrial parks with FIZs and FCZs forming industrial hubs in 5 major sectors: E&E, life sciences, food (Halal), transport, and machinery. Halal is the fifth largest industry in Selangor. The main driver for the halal-certified food sector is the halal hub in Pulau Indah. Phase I set up in 2003, with an area of 300 acres was the first halal park in Malaysia. Phase 2 with an area of 400 acres is being developed currently. Phase 3 with 300 acres will be developed in the future. Besides, Malaysia Airports Holdings Bhd (MAHB) and Singapore-listed Boustead Projects Ltd propose to jointly develop an aerospace and high-tech park within the Subang Aerotech Park in Selangor over 14.03 hectares within the proximity of the Sultan Abdul Aziz Shah Airport.

Negeri Sembilan. Negeri Sembilan is one of the most industrialised states of Malaysia with 39.7% of GDP contributed by manufacturing. According to the state government’s website, it hosts 50 industrial parks. It is benefitted by its proximity to Klang valley. Seven clusters identified in the state are: biotechnology, automotive, ancillary, food, aerospace, advanced electronics, and medical devices. It has an ambitious project in the pipeline: Malaysia valley 2.0.

Malaysia Valley (MVV) 2.0. It is a state-led private sector-driven development that covers over 153,411 hectares of land in Nilai, Seremban and Port Dickson- an area twice the size of Singapore. The MVV 2.0 will focus on four types of activities — high-tech industry, services and tourism, education and skills-based research, and logistics, aviation and maritime. Sime Darby Property Bhd will be the master developer. The first phase of the project spans over a 30-year development period covering 10,927 hectares of land. Six projects have been identified in this phase — a hi-tech industrial park (1,135 hectares), an integrated transportation terminal and downtown transit-oriented development (3,518 hectares), specialised and integrated logistics services (1,240 hectares), World Knowledge City (2,000 hectares), Biopolis and Wellness City (2,000 hectares) and a tourism district (920 hectares).

Kelantan. Kelantan specialises in food and beverages (F&B) including halal food-based products, herbs, agriculture-based products, and meat-based products. It is proposed to be branded as the country’s main Halal Hub by further enhancing the existing halal parks and...
creating new halal parks in each district with a focus on the production and marketing of local halal products. It plans to strengthen agricultural poultry, and biotechnology industries. It is also a center of hospitality services and distribution. Some important projects that it hosts are:

- **IMT-GT Plaza.** The Plaza IMT-GT in Bukit Bunga is strategically located along the border area of Rantau Panjang-Sungai Golok and Pengkalan Kubor-Tak Bai. It is expected to boost cross-border trade, tourism and commercial industrial development in the area. The Plaza is an organized platform for traders from the IMT-GT countries to introduce, showcase and market their products. It can provide space close to 100 entrepreneurs and create 150 jobs. The commercial areas of the Plaza are almost all tenanted. Prior to shifting to the Plaza most these entrepreneurs were operating from makeshift stalls.

- **Pasar Mas Halal Park (PMHP).** It is being developed by the State Economic Development Council over 43.7 hectares in two stages. Phase 1 (20.23 hectares) is already developed and operating. It comprises of Entrepreneur Business Complex (EBC), warehouse and industrial plots. Phase 2 (23.47 hectares) is under construction. It will comprise of logistics hub, commercial zone, a collection, processing and packaging center and industrial plots. The park is expected to attract 854 units. According to the initial estimates the park is expected to attract RM611 million in private investments and create more than 4,200 job opportunities by 2020.

- **Tok Bali Integrated Fisheries Park (TBIFP)** in Pasir Puteh, along with a collection, processing and packaging center (CPPC) in Pengkalan Kubor is seen as key in developing Kelantan into a hub for fish and marine-based activities.

- **Tok Bali Pasir Puteh.** Spread over the area of 250 acres, Tok Bali Supply Base, an offshore Oil & Gas supply has been given the status of a LMW. Being developed by Matrix Reservoir Sdn Bhd ("MR") it commenced operations in July 2015. It is strategically located and ensures providing an integrated support services and facilities including all-weather 473 meters of berthing facilities with fuel bunker, potable water, liquid mud and dry bulk off take points which can accommodate 5 supply vessels and 3 crew boats at a time. ([https://www.tbsb.my](https://www.tbsb.my))

**Perlis** has the largest proportion of agriculture among four states, and the lowest of manufacturing. In order to diversify the economy of the state, Chuping Valley project has been approved by the Northern Corridor Implementing Authority.

- **Chuping Valley.** Chuping Valley Industrial Area (CVIA) is located in the north east of Perlis in Padang Besar bordering the south of Thailand. Padang Besar serves as a major stopover along the rail routes that stretch from Singapore to Thailand. It is also linked with Thailand through a highway with low value added shopping tourism as the main activity. It is littered with business complexes and duty free complexes. The plan is to transform it into a hub of high value added activity. The CVIA, spread over 1,214 hectares of land is projected to leverage the existing road and rail infrastructure to enhance cross-border trade and increase logistics activities and boost the development of the area. Three clusters are planned: renewable energy, halal and pharmaceutical, and green industries (automotive, E&E, and building materials) with modern facilities including an international school, a Green Manufacturing Integrated Business Center (IBC), Perlis inland port, a solar farm, and a knowledge center.

- **Kuala Perlis Mixed Development Project** is a partnership project of State Economic Development Corporation (SEDC) and TH Properties. It is a mega project to develop a maritime commercial center hosting offices, residential apartments, hotels and malls. Other projects are: Kangar City Center and K-Parc in Seriab, Integrated Public Transport Terminal (Kangar Sentral) and Sanglang Jetty development stretching towards Straits of Malacca and from Sungai Padang to Simpang Ampat.

**Perak**, the second largest state in Peninsular Malaysia hosts around 40 parks (according to the state government’s information). Out of them, 14 are listed by MIDA as prominent (Table
15). It is specialised in agriculture, agro-food, agri-chemical and pharmaceutical. It also hosts a Cyber Center to house MSC corridor status companies. The government plans to give a major push to industrialisation in the state by promoting 4.0 industries through ambitious projects.

- **Perak Hi-Tech Industrial Park (PHTIP).** The PHTIP will be revived by attracting high-tech and high-value added industries as a Global Business Services (GBS) centre. It is seen as a catalyst project for adoption and development of the Fourth Industrial Revolution (IR 4.0) in Perak.

- **Perak Eco Industrial Hub:** Spread over 1,376 hectares of reclaimed land at Mukim Rungkup, it will have an iron and steel integrated industry and other supporting industries as part of the development of Batang Padang and Hilir Perak districts.

- **Other high technology projects:** A number of projects have been proposed in the 11th plan of the state including, Kampung Acheh Free Commercial Zone near the Lumut Maritime Terminal to facilitate import-export of cargo; Proton City Automotive Hub in Tanjung Malim; Batu Gajah Locomotive Hub for locomotive components and maintenance related services; an aerospace park near Sultan Azlan Shah Airport; and an 81 hectares Green Asia Aerospace Technology Park in Seri Iskandar.

**Kedah.** Kedah State has a similar structure of industrial composition of GDP as Perak but its manufacturing share is larger than in Perak. Even though it has a large agricultural sector (rice bowl of Malaysia) manufacturing contributes 29% to its GRDP. Notwithstanding this, it still is among the bottom states in terms of GDP per capita. There are several projects in the pipeline that are expected to transform the state into a thriving industrial power. The thrust is on creating two major growth nodes: Kulim and Bukit Hitam under the concentrated decentralisation strategy.

- **Kulim High Tech Park (KHTP).** Since its opening as Malaysia’s first high-tech science park in 1996 it has attracted several hi-tech multinational companies. KHTP located on the border of Penang is just about 40 minutes from Penang International Airport. However, considering the limited capacity of Penang International Airport, the state of Kedah has proposed a new international airport to be built near the Park. More than 1,760 hectares of land at KHTP has been developed, with a further 2,000 hectares set to be developed in the KHTP Master Plan 2. It is envisioned to be the ‘Science City of the Future’.

- **Manufacturing and Logistics Industrial Hub, Sidam near Kulim.** This will further reinforce the existing cluster in Kulim by promoting high volume manufacturing of electronics and electricals, precision machinery, bio-medicine and logistics Industries (air express logistics, aviation logistics, international distribution center, and e-commerce).

- **Bukit Kayu Hitam Kota Perdana Special Border Economic Zone SBEZ.** Bukit Kayu Hitam-Sadao is the busiest border crossing between Malaysia and Thailand. Thailand is currently Malaysia’s fifth largest trading partner with total trade value of $25.36 billion in 2019 according to the COMTRADE database of the UNCTAD. Approximately 70 per cent of this value is attributed to trade across the land border with Bukit Kayu Hitam-Sadao crossing taking the center stage. To leverage this benefit, Kota Perdana SBEZ is being developed over 1,780 hectares of land in Bukit Hitam by Northern Gateway Sdn Bhd, a company fully-owned by the government. It will be an integrated zone comprising logistics hub and commercial area, Inland port, and a free industrial park, with the Songkhla deep port as the gateway. The project has seven phases and is expected to be completed in 20 years' time. Kedah Bukit Kayu Hitam Immigration, Customs, Quarantine and Security complex (ICQS) project which commenced on June 14, 2014 was

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35 GBS is a business model which provides services beyond transactional functions to deliver higher value functions, such as consulting and business analytics.
completed on June 25, 2019 and is fully operational since August 2019. In the next phase, Bukit Kayu Hitam Inland Container Depot (ICD) over 20.2 hectares of land will be developed and managed by a joint-venture company, Bukit Kayu Hitam ICD Sdn Bhd, a 60:40 partnership between PKT Logistics Group Sdn Bhd (private company) and Northern Gateway Sdn Bhd. The completion is expected in 2020. The ICD, linked to the Bukit Kayu Hitam ICQS complex would be the integrated logistics hub to cater to an annual throughput of 200,000 containers along the warehouses and cross-dock facilities. The ICD will contain a petrol station and multi-storey tower providing office space, a logistics institute, and recreational facilities to cater to the needs of truckers. The logistics hub will catalyse cross-border trade by improving efficiency in cross-border mobility of goods. This zone sets an example of the benefits emanated from regional integration. It will provide South Thailand’s traders access to Malaysian ports in Malacca Straits and Malaysian traders easy access to the Port of Songkhla for trade with East Asia reducing transport cost and will be a win-win situation for both Thailand and Malaysia.

- **Kedah Science and Technology Park.** Located in Bukit Kayu Hitam Industrial Area (North part of Kedah), 2 km bordering Thailand, KSTP will focus on the research and science-based manufacturing and leverage on Bukit Kayu Hitam Special Border Economic Zone (SBEZ) to reinforce the cluster.

- **Rubber City.** In Kedah, the IMT-GT rubber city will cover 1,250 acres in Ladang Bukit Ketapang. It is expected to be catalytic in attracting well-recognized leading rubber product manufacturers in a variety of rubber products including innovative, high value-add and specialized products for niche customer segments, e.g. specialty / surgical gloves, catheters, latex mattresses, adhesives, “intelligent” rubber, precision engineered rubber products and “green” rubber products. Green rubber products are produced using environmentally-friendly processes such as Ekoprena tyres, or reclaimed rubber products such as rubberised bitumen, or products with lower carbon footprint. The rubber city in Kedah is to be developed in three phases with the first phase spread over 504 acres. WZ Satu Bhd has been given the responsibility for infrastructure development for Phase 1. However, the progress has been rather slow.

### V.3 Thailand

The IMT-GT subregion consists of all 14 provinces of Southern Thailand: Nakhon Si Thammarat, Narathiwat, Pattani, Phattalung, Satun, Songkhla, Trang, Yala, Chumphon, Krabi, Phangnga, Phuket, Ranong, and Sura Thani. These provinces are among the most backward regions of the country. The GRDP per capita of the region is less than one third of Eastern region with the average share of manufacturing in GRDP being 11% in comparison with 50% in the latter (Table 17). Agriculture, trade, and tourism are the major sectors accounting for almost 55% of the GRDP. Only four provinces in the region: Phuket, Krabi, Sura Thani and Phangnga have GRDP per capita income close to the national GDP per capita, in the rest of the provinces it is 70% to 30% short of the national average. Most importantly, the contribution of the region to the national manufacturing value added remains less than 4%. Songkhla is the most industrialised province with 20% of GRDP constituted by manufacturing. It is followed by Trang (14.9%) Sura Thani (14.7%), Nakhon (12.8%) and Pattani (12%). In rest of the provinces it is marginal (Table 17).

#### Table 17: Cluster based Economic zones and Manufacturing shares in Thailand-GT

<table>
<thead>
<tr>
<th></th>
<th>Phuket</th>
<th>Sura Th</th>
<th>Ranong</th>
<th>Phang</th>
<th>Krabi</th>
<th>Chumpn</th>
<th>Nakhon</th>
<th>Songkhla</th>
<th>Satun</th>
<th>Yala</th>
<th>Trang</th>
<th>Narath</th>
<th>Phatthal</th>
<th>Pattani</th>
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</thead>
<tbody>
<tr>
<td><strong>IE</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<tr>
<td><strong>SEZ</strong></td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
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<td>0</td>
<td>1</td>
<td>0</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Share in national mfg (%)</strong></td>
<td>0.01</td>
<td>0.7</td>
<td>0.05</td>
<td>0.05</td>
<td>0.1</td>
<td>0.2</td>
<td>0.5</td>
<td>1.2</td>
<td>0.07</td>
<td>0.1</td>
<td>0.3</td>
<td>0.07</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Share of mfg. in GRP (%)</td>
<td>1.7</td>
<td>14.7</td>
<td>7.8</td>
<td>3.9</td>
<td>4.4</td>
<td>11.4</td>
<td>12.8</td>
<td>19.9</td>
<td>8.3</td>
<td>8.3</td>
<td>14.9</td>
<td>6.3</td>
<td>10.3</td>
<td>12.0</td>
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<tr>
<td>Ratio to national GDP per capita</td>
<td>1.5</td>
<td>0.9</td>
<td>0.5</td>
<td>1.0</td>
<td>1.1</td>
<td>0.7</td>
<td>0.5</td>
<td>0.7</td>
<td>0.6</td>
<td>0.5</td>
<td>0.5</td>
<td>0.3</td>
<td>0.3</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Source: Compiled by the author from various sources: National Statistical Office

Figure 7 presents the locational map of industrial estates in Thailand. It shows a large hub of industrial estates in the central region covering Bangkok and Eastern Seaboard areas. The rest of the country has a small share in industrial estates. To address the regional imbalance and leverage the availability of cheap cross-border labour, new industrial areas ‘special economic zones’ have been developed in border areas following which, of late, industrial zones have emerged in the Southern region also.

**Figure 7 Spatial distribution of industrial estates in Thailand**

Songkhla. Despite being a backward province with manufacturing GRDP contributing only 1.2% to national manufacturing value added and GRDP per capita falling 28% short of the national average, Songkhla is one of the most industrialised provinces in the Southern region. Manufacturing in the province is propelled by mainly rubber, para wood and furniture, seafood and halal food. Agriculture which accounts for 15% of GRDP provides abundant raw materials and the basis for agro-industries. The service sector is dominated by low value added services which absorbed 61% of the workforce contributing 46% of the GRDP in 2011. Songkhla has three districts adjacent to Malaysia and has 4 custom check posts (Padang Besar, Sadao, Hat Yai and Songkhla) accounting for most border trade as stated above. Padang Besar and Sadao check post account for as high as 97% of total border trade (Krainara and Routray 2015). Most trade is in rubber and rubber products, electrical and electronics appliances, fertilizer, and automotive parts. The economic zone profile of the province is not very elaborate even though there is an operational industrial estate in the province since 1984.

- **Southern Region Industrial Estate.** It was established in Hat Yai district in 1984. Spanning over 363 hectares it is located at the distance of 47 Kms from Songkhla deep

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36 This information is provided in a PPT during field visit to Songkhla.
sea port and 82 kilometers from the Malaysian border. Phase 1 was developed over 140 hectares with a general Industrial Zone and an IEAT Free Zone. Phase 2 is being developed on 101 hectares of land. The rest of the land is awaiting development. Industrial composition includes rubber industry, para wood and furniture, appliances and electronics, seafood and halal food.

- **Rubber City Industrial Estate.** The Rubber City is located in Phase 2 and 3 of the Southern Industrial Estate. Spanning over 197 hectares of land, it aims to serve as the hub or cluster for rubber products, from midstream to downstream industries, such as rubber innovations, concentrated latex, compound rubbers, and other related downstream industries. The 71 hectares of “premium zone” is for the “clean” general industries. To support the rubber industry, the government has set up a Natural Rubber Innovation Center at Prince of Songkhla University. Besides, a memorandum of understanding has been signed with Qindao University of Science and Technology and the Rubber Valley Group from China for technological development and to introduce joint-double degree programs focusing on learning about rubber products. The rubber city project is complete but it is yet to take off.

- **Songkhla SEZ.** The Songkhla SEZ in coming up in Sadao district over 148 hectares of land, barely 2 kms from Sadao check post. The Industrial Estate Authority of Thailand (IEAT) has signed an agreement to lease a 100 hectares plot belonging to the Treasury Department to set up an industrial estate. It will be the first industrial estate set up as part of a province’s special economic zone. It is divided into seven sections: general industry, free trade zone, logistics service, commercial area, electric station, and public utilities area (managed by IEAT office and Industrial support unit). Other facilities include a school and hospital to accommodate the members in the community. There will be land reserved for green and buffer zones. The target investments for Songkhla Special Economic Zone are processed agricultural products, logistics, halal, textiles and light industry. It may create 3,000 local jobs and increase border trade on the southern border.

- **Chana Southern province model city.** In January 2020, Government designated Chana district in Songkhla as model city under the “Triangle of Stability, Prosperity, and Sustainability” project. The cabinet approved developing five projects in the zone, comprising new town planning in three tambons (sub districts): water transport and a second deep-sea port in Songkhla; land transport linked to the main highway and local roads; electricity plants from natural gas; solar cell or renewable energy; and an industrial estate. The project covering 2,680 hectares of land will have areas allocated for light industries, heavy industries, energy complex, related industries for export and import, logistics and goods distribution, and recreation and accommodation. The development projects are expected to create 100,000 new jobs.

**Narathiwat.** Most of the area in the province consists of primary rainforest jungles and overgrown mountains. It is an agrarian province with agriculture accounting for over 32% of GRDP and the share of industry being less than 5%. The province is being developed as a center for halal food production. There is a large potential for Thailand to expand this industry through collaboration projects with Malaysia and Indonesia, as well as Brunei Darussalam. The province has three custom check points: Sungai Kolok, Tak Bai and Buketa. While there is increase in border trade over time, in relative terms it is rather small.

- **Narathiwat special economic zone** To give an impetus to industrial development, the government has proposed to develop a SEZ. In January 2020, the Southern Border Provinces Administrative Center is assigned to purchase 270 hectares of land from the private company that owns a rubber plantation with a budget of 390 million baht. About 96 hectares of land will be developed as an industrial estate by the Industrial Estate Authority of Thailand, with 160 hectares set aside for rent to the private sector, and the remaining land will be used for the offices of state agencies. The target industries are the
labour intensive industries, namely textiles and clothing, furniture, agro processing, halal, rubber processing.

- **Sungai Kolok model city.** Sungai Kolok district in Narathiwat province has been designated as one of the model cities. It is to be developed as an international border trade city.

**Development of the other model cities under the Triangle of Stability, Prosperity, and Sustainability project.** In addition to Chana and Sungai Kolok cities, two more model cities are proposed in Nong Chik and Betong districts of Pattani and Yala provinces. The plan is to elevate Nong Chik into an agricultural industry city with emphasis placed on the processing of agricultural products, and Betong into a tourism city (Table 18).

<table>
<thead>
<tr>
<th>Table 18: Prominent projects by IMT-GT provinces in Thailand-GT</th>
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<tbody>
<tr>
<td><strong>Operational</strong></td>
</tr>
<tr>
<td><strong>Songkhla</strong></td>
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<td></td>
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<tr>
<td><strong>Narathiwat</strong></td>
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<tr>
<td><strong>Yala</strong></td>
</tr>
<tr>
<td><strong>Pattani</strong></td>
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</table>

Source: Compiled by the author from various sources

**Southern Seaboard Development Plan.** The background of the Southern Seaboard Development Plan was originally proposed in 1975. The first study was done by the Hunting Technical Service in 1975. In 1989, NESDC proposed the Southern Region’s Strategic Development Plan to the cabinet. The cabinet approved only the ‘Land Bridge’ project that connected Andaman Sea and Thai Gulf. This project which consists of a multi-modal transport linkage to combine road, railway, and pipeline in the corridor is regarded as the beginning of the Southern Seaboard Development Plan. NESDC was assigned the task to conduct the master plan of the Southern Seaboard Development Plan. The Plan was completed in 1992 and was in principle approved by the Cabinet in 1993. Of late, the government has accelerated efforts to implement the project, which had been moving rather slowly over the years.

**V.4 Subregional economic zones from economic corridors’ perspective**

The above analysis indicates that the IMT-GT corridors host a variety of economic zones that are at various stages of operation. In all, there are 355 zones of various types in the IMT-GT region for which there is specific information available. Malaysia accounts for 57% of the total subregional zones followed by Indonesia (36%) and Thailand (7%). The pipeline of zone projects in the subregion is rather long with several ambitious and large projects in all three countries, as seen above. However, the density and stage of development of economic zones vary across the priority corridors.

- **Economic Corridor 2 (Malaysia)** which comprises the northern states of Peninsular Malaysia along Malacca strait is most densely populated with economic zones. It hosts most technologically sophisticated EZs attracting high to medium tech industries in E&E, digital technologies, automotive products, and pharmaceuticals. In the Northern States of Kedah, Perlis and Perak, processed food and other resource based products also dominate the zones along with E&E and automotive.

- **Economic Corridor 3 (Indonesia).** It covers the whole of Sumatera in Indonesia, and follows EC2 in terms of the number of zones. It is largely dominated by resource based zones (rubber, palm oil and minerals) and light and medium tech activities in E&E and shipbuilding.
• Economic Corridor 1 (Indonesia-Malaysia-Thailand). EC1 is dotted with diverse economic activities and connects Medan, the industrial center of Sumatera with industrially advanced states of Penang and agriculturally dominated Kedah and Songkhla.
• Economic corridors number 4 (Indonesia - Malaysia) and 5 (Indonesia- Thailand) are essentially connectivity corridors and resonate with transport and trade corridors.

A crucial implication is that in line with the member countries, IMT-GT EZs also form a development ladder in terms of the type, composition and the development levels across the corridors. This ensures factor complementarity which is one of the critical conditions for the success of a subregion. All three countries Indonesia, Malaysia and Thailand can be benefitted from considerable economic synergies in economic zones if economic corridors are effectively implemented ensuring the mobility of capital, people and goods and through coordinated and concerted efforts.

VI. ASSESSING THE ALIGNMENT OF BROADER NATIONAL POLICIES AND STRATEGIES WITH THE IMT-GT SEZS AND ECONOMIC CORRIDOR APPROACHES

The final outcome of a transborder economic corridor hinges on its success in strengthening industrial agglomerations, and driving cross-border and regional value chains to facilitate shared prosperity through regional cooperation along and beyond the corridor. In line with this, the spatial approach of IMT-GT Vision 2036 seeks to promote cross border production networks through collaborative efforts to maximise the economic network externalities of the five priority economic corridors. The economic zones and other production sites are key drivers of this collaborative approach. However, economic zones, SEZs in particular are set up as part of the competitive strategy to attract investment in a way that is not quite consistent with the principles of the collaborative (regional cooperation) approach. This section assesses whether the approach towards the sub-regional economic zones is aligned with the IMT-GT vision agenda. While doing so, it addresses two pertinent questions. First, is the subregional agenda integrated into national plans and priorities? Second, are the subregional economic zones aligned with the collaborative approach of the subregional agenda? It begins by explaining the term ‘collaborative approach’ in the context of EZs and the relevance of its mainstreaming into the national plan agenda.

VI.1 The linkages between subregional economic corridors, EZs and national development: The collaborative approach

As discussed above, in this globalised world where trade and investment are increasingly dominated by global/regional value chains, place-based competencies have assumed a critical role in driving economic dynamism (Ascani et al 2012). However these competencies are generally heavily biased towards one or two core areas at the expense of other peripheral development axes (as seen above). This exacerbates regional inequality and weakens economic growth by pulling down the average productivity in the economy. The policy of setting up economic zones in the lagging regions with attractive fiscal incentives may not achieve the intended outcomes because fiscal incentives alone cannot compensate for other local disadvantages (for instance, Rothenberg et al 2017). The centripetal forces tend to attract investment to the national core/s. The subregional program aims to turn these national peripheries into cross-border growth centres through economic corridors which promote regional development and economic growth by strengthening local specificities, empowering local actors, creating connectivity among them, and facilitating the creation of cross-border production networks through regional integration (Ortiz-Guerrero 2013). They can be instrumental in initiating the subregional flying geese paradigm of regional cooperation (Aggarwal 2019). In this paradigm, firms in the lead region relocate the less complex, lower value-added activities to the following less developed ones in accordance
with their comparative advantage to form cross border value chains (Kusahara 2013). Driven by economic zones, this process leads to simultaneous upgrading of the subregional economies at three levels: intra-industry upgrading from low to high value added activities; inter-industry upgrading from low to high value-added industries; and inter-regional structural upgrading, pushing productivity and in turn economic growth up. The goals are not only to promote value chains in the region but also enhance the capacity of the clusters through the infusion of innovation and conserve environment and natural resources. Further, economic zones along the corridors also benefit by expanded market access and economies of scale. The subregional economic zones, in particular SBEZs have easy access to new cross-border markets, thus creating new opportunities for companies to expand their activities beyond their national borders, as well as providing consumers with a wider range of products and services. Finally, economic cross-border cooperation may spill over into political cooperation leading to peace and stability in these areas which is conducive to growth. As industrial development takes place, economic dynamism further spurs growth and expansion of the clusters expanding spin-offs and suppliers of both the clustered industry and related industries initiating the cumulative causative processes (Myrdal 1965). Figure 8 summarises these channels.

**Figure 8: Links between the IMT-GT subregion, economic corridors and production hubs**

![Diagram of economic corridors and drivers](image)

**The outbreak of Covid19 global pandemic and EZs.** The Covid19 pandemic has further underscored the need for collaborative approach in EZ development. The measures designed to contain the pandemic have disrupted the GVCs by curbing economic activity; restricting mobility of people, goods and services; dampening global demand; and deteriorating the financial environment. Since 70% of the world trade involves GVCs, World trade and investment are forecast to fall substantially due to these measures (WTO 2020). The International Monetary Fund reported that by the end of March, 2020 capital outflows from emerging markets amounted to $83 billion since the beginning of the Covid-19 crisis, and UNCTAD predicts general FDI flows worldwide will plummet by as much as 40% in 2020. The major brunt of the drastic fall in trade and investment will be borne by SEZs which are heavily reliant on exports (Barbieri et al 2020 for literature survey). Some assert that the new normal would be re-nationalising GVCs to insulate countries from the economic consequences of the pandemic. There are others who dismiss this argument as uncompetitive and infeasible in view of the fact that it would require economic restructuring of the home countries of MNCs. They argue that the companies may diversify their supplier base by establishing shorter RVCs which will require subregional EZs to adopt the collaborative approach (Javorcik 2020). Further, the regional cooperation in EZs may contribute to better management of the external shocks. During this pandemic for instance,
food, pharmaceutical and medical equipment industries have emerged as two critical industries. The IMT-GT subregion which has competitive advantage in food, palm oil and rubber (raw material for medical equipment) industries can leverage these advantages through regional value chains and become global suppliers.

VI.2 The need for mainstreaming the IMT-GT subregional agenda in national development agendas for the collaborative approach

The key argument is that internationalisation of the world economy has placed the regional collaborative approach to development at the center stage. The subregional programs along with economic corridors and zones are building blocks in this approach. In principle, however subregional programs are informal because they are not supported by international law or agreements. They are not binding and cannot be enforced. Their success depends on a long-term vision, strong political will and collective ownership, all of which should be backed by generous financial resources. This in turn requires integration of subregional agendas into national development planning. It means that the objectives, targets, and strategic approaches (including economic zones) of the subregional program should be mainstreamed into national development plans and priorities. In the absence of coordination between the subregional programs and national plan agenda, the program may deviate from optimal development outcomes because normally development strategies are locked in structural interdependencies in terms of shared resources, manpower, and organisational and bureaucratic capacities. Thus, unless the subregional initiatives are integrated into national development agendas they may lose out to other plan priorities and may not receive wide governmental support beyond specific line ministries and resource commitments for the program. This is particularly important for the development of EZs which is explicitly cross-cutting. The alignment of the subregional EZ program with the national strategy can help leveraging synergies across different programs and development agencies.

There is yet another important reason for mainstreaming the IMT-GT agenda into national planning. Typically the EZs are set up as a competitive tool to attract foreign investment and technologies. To recognise the regional aspect of the EZs and the linkages between subregional economic corridors, EZs and national development, the subregional agenda of regional integration needs to be integrated into development planning.

VI.3 The forms and approaches of mainstreaming the IMT-GT agenda into national development agendas

The linkages between the IMT-GT and national development agendas can take various forms which vary according to depth and scope. At one end of the spectrum is the broad alignment between the long term vision and objectives of the two agendas but nothing beyond; at the other end is the mainstreaming of the IMT-GT strategic framework into national development strategies. In the middle of the spectrum, two forms of linkages are identified, one of which is the mainstreaming of IMT-GT projects while the other one is an alignment of economic zones with the regional agenda of IMT-GT. Each of these forms will be assessed using qualitative tools. The qualitative analysis will draw on the national development plans documents and will be complemented by a quantitative assessment (Figure 9).

Qualitative approach. The national development planning has been a guiding force in the process of economic development in the IMT-GT countries. The development agenda in each of these countries has been set out in a series of long term, medium term and annual plans. Further, all three countries follow ‘indicative planning framework’ which sets out the broad directions that are operationalized though legislative, fiscal and other policy measures. It signals investment priorities of the government and opportunities to the private sector. All other supporting plans and policies whether at the center or state levels need to be framed within the broad framework of the national plan document. We shall therefore focus on the
long and medium term plans at the national level for the qualitative analysis. An overview of development plans in the three countries is presented below.

- **Indonesia.** In accordance with the Law Number 25 of 2004 on the National Development Planning System Indonesia draws up two inter-related development plans at the national level: National Long-Term Development Plan (RPJPN) and National Medium-Term Development Plan (RPJMN). Corresponding to these, there are long and medium term plans at the regional level. The RPJPN which spans over 20 years is hierarchically most important and is implemented through 4 medium term plans of five years each. These two plans serve as the reference document for all regional development plans: long and medium terms. The current long term plan spans from 2005 to 2025. Under this, the third national medium term plan RPJMN 2015-2020 is recently completed and the final plan 2020-2024 has just started.


- **Thailand.** Thailand follows the practice of 5 years strategic plans. However the current 12th National Economic and Social Development Plan (starting from 2017 – 2021) is guided by the 20-years’ National Strategy (2018 – 2037).

**Figure 9. The linkages between national plans, economic corridors and zones: The conceptual framework**

![Conceptual framework diagram]

**Quantitative analysis.** The purpose of the quantitative assessment is to measure the impact of the program using a set of outcome indicators to gauge if the program is considered a
national priority. The analysis is based on the premise that the success of a program is directly linked with the importance attached to the program at the national level. The performance indicators used in the analysis are organised into three broad categories: immediate, intermediate and final. The analysis required national income accounts data both at the national, and provincial and state levels. For Malaysia, the data was acquired from the Department of Statistics for the years 2010-2018, on request. For Indonesia, we relied on the Statistical Yearbooks of 2019 and 2016 provided on the website of ‘Indonesia Statistics’ with detailed provincial statistics. Thailand’s provincial data was downloaded from the website of the National Economic and Social Development Council. The national accounts data of three countries was supplemented by other databases provided by national and international sources.

VI.4 Mapping of the IMT-GT cooperation program with the national plans: A qualitative approach.

IV.4.1. Linkages between the long term objectives of IMT-GT and national development agendas.

The IMT-GT vision is to create an integrated, innovative, inclusive and sustainable subregion by 2036. At the substantive dimension, there are no contradictions between the IMT-GT vision 2036 and the long and medium term development objectives of the member states (Table 19). These countries have long emphasised the objectives of economic growth, regional (subnational) equity and competitiveness which are in line with the IMT-GT vision of innovative and inclusive growth. In recent years sustainable development has also been mainstreamed into the national planning. The recently launched RPJMN IV for 2020-2024 in Indonesia has internalised the Sustainable Development Goals (SDGs) with the targets of the 17 goals (goals) and indicators accommodated in 7 agendas of development.

Notwithstanding the above, there is a crucial missing link between the two. Indeed, regional cooperation frameworks are booming in the region with subregional programs also gathering momentum alongside the ASEAN Economic Community, the goal of ‘regionally integrated development’ is not yet mainstreamed into the national plan objectives. Thailand has addressed this gap by specifying regional integration as a goal of national importance in the 12th National Social and Economic Development Plan (2017-2021) (Table 19). Further, while elaborating its vision statement in its long term national strategy, it implicitly recognises the importance of regional integration as an economic development tool when it expresses the aspiration to be a key hub for the region’s transportation, manufacturing, trade, investment, and business operations to attain robust development (National strategy 2018-2037). Other two countries are yet to address this gap.

Table 19: Mapping of Long and medium term objectives of National Plans with those of IMT-GT

<table>
<thead>
<tr>
<th>Vision</th>
<th>IMT-GT</th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Developed and self-reliant, just and democratic, and peaceful and united society</td>
<td>Modernize and develop the nation economically, politically, socially, spiritually, psychologically and culturally</td>
<td>A developed country with security, prosperity and sustainability in accordance with the Sufficiency Economy Philosophy’ ‘...a key hub for the region’s transportation, manufacturing, trade, investment, and business operations to attain robust development’</td>
</tr>
<tr>
<td>Medium term plans Objectives</td>
<td>RJMNP 2015-2019 -Creating a developed,</td>
<td>Mid-term Eleventh Plan review (2018-2021)</td>
<td>National development plan 2017-2021 -To promote an economy that is strong, competitive, stable, and sustainable. –</td>
<td></td>
</tr>
</tbody>
</table>
### VI.4.2 Mainstreaming of IMT-GT spatial approach as a strategic pillar

**Indonesia.** The just completed medium term plan RPJMN (2015-2020) highlights the importance of strengthening the role of global, regional and subregional cooperation in achieving the objective of balanced regional development (Chapter 6.3). It sets the target of improved coordination between the related agencies at the central and regional levels in the framework of synchronization policies that support the implementation of subregional economics along with other targets such as: (i) developing mutual cooperation by identifying flagship products and priority according to needs and potential of the local community; (ii) strengthening institutional performance and local government services, and strengthening capacity / capability and competitiveness of the business world in the area; and (iii) developing a partnership pattern between the regional government and business community in the area to develop strategies and operational steps in strengthening the position and competitiveness of Indonesia for mutually beneficial subregional economic cooperation. Apparently, the Plan document expresses its commitment to the subregional program by highlighting the need to build capacity of the local governments and business community to ensure that the program is implemented in a mutually beneficial way. However, the IMT-GT agenda is yet to be aligned with the national development plan as a strategic pillar.

**Malaysia:** Until the 10th Development Plan (2012-2016), there had been little mention of the IMT-GT subregion in the plan documents of Malaysia. As part of the strategic focus on accelerating regional growth for better geographic balance, the 11th development plan proposed the Border Economic Transformation Program (BETP) to bring about inclusive development and prosperity to the border regions of Malaysia. The strategy outlined was to “start the BETP with the Malaysia-Thailand border with the aim of attracting investment, creating jobs and increasing incomes for the local communities in and around border areas”. Despite the adoption of the border transformation program with a focus on Malaysia-Thailand border, there was no direct reference made to the IMT-GT subregional program undermining the role of the subregional program in the border transformation program (Table 20).

<table>
<thead>
<tr>
<th>The strategic objective</th>
<th>11th Plan: Strategic Pillar</th>
<th>Mid-Term Review: Strategic pillar (added)</th>
</tr>
</thead>
</table>
| Enhancing inclusiveness towards an equitable society | The border economic transformation program | Enhancing ASEAN subregional cooperation:  
- Accelerating development in SEZs  
- Enhancing connectivity in the IMT-GT and BIMP-EAGA subregions. |

Source: author based on the 11th Plan and Mid-term Review.

The Mid-Term Review of the Eleventh Malaysia Plan in 2018 (GoM 2017) which embarked on new priorities and outlined revised socioeconomic targets for 2018-2020 taking into consideration the aspirations of the new Government saw a link between the border area...
transformation and IMT-GT agenda. It recognised that the subregional cooperation platforms have not been utilised to accelerate and facilitate economic development particularly in border areas, and explicitly committed to intensify the ASEAN subregional programs to stimulate economic activities in bordering areas. Towards that goal, the IMT-GT subregional cooperation was set out as a strategic pillar for achieving the objective of balanced regional development (Mid Term Review 2017). Even though the role of the subregion was partially recognized by incorporating it as a strategic component in addressing regional imbalances (its role in economic growth did not receive adequate attention), this was a major step forward towards integrating the IMT-GT cooperation program into the national development agenda.

Thailand. In Thailand the long term vision of security, prosperity and sustainability under the National Strategy of 2018-2037 is to be achieved through 6 key strategies: national security, growth with competitiveness enhancement, development of human capital, equality, environmental-friendly development and growth, and improving government administration (NESDC 2018). Although regionally integrated development is not an explicit pillar of the long term strategies, there are references to regional connectivity and trade facilitation in the strategic directions for competitiveness enhancement. Further, the medium term plan (2017-2021) formulated under the broad framework of the Long Term National Strategy sets regional integration as an objective of national importance in line with the vision statement (Table 19) and translates the objective into proposed actions by integrating the IMT-GT cooperation program as one of the strategic pillars. More specifically, the Plan is built on 10 strategic pillars with the ‘Strategy for International Cooperation for Development’ being the 10th pillar supported by a number of targets and their indicators. The IMT-GT strategic approach is mainstreamed into this strategic pillar. It sets the targets to

- revise laws and regulations to support Thailand as a production, investment, and services hub to increase intraregional and subregional volume of transport in goods and services; cross-border trade value; and investment;
- promote subregional and ASEAN value chains; and
- increase trade and investment value between Thailand and countries in the region.

The predecessor of the 12th National Development Plan, the 11th Plan Document also emphasised the need for cooperation for mutual benefit with ASEAN countries and other neighbours with respect to labour, energy, natural resources, production bases, supply chains, goods processing, and logistics systems. Yet, the focus was on ASEAN rather than the subregional programs. It did however acknowledge the importance of the subregion as the most important element in Thailand’s foreign policy and key mechanism that serves as the foundation for cooperation within ASEAN (GoT 2012 : 95). Against this background, the 12th national plan is a major step forward in institutionalising and internalising the subregional programs in Thailand.

VI.4.3 Mainstreaming of IMT-GT projects in national planning documents

The ‘IMT-GT Vision 2036’ has adopted a project centric approach for ensuring the region-wide physical integration and regulatory reforms. The target is to implement a total 400 cross-border projects by 2036 with direct MSMEs and social enterprises’ participation, which means 20 projects per year (CIMIT 2017a). The projects encompass construction and upgrading of roads, bridges, seaports, airports, CIQ facilities, ICT infrastructure, and technical administrative and regulatory reforms to improve mobility of resources, persons, goods and services. Here we assess whether these projects are integrated into the national development agendas of the three countries which is crucial to link them with the budget cycle and ensure that they receive annual budgetary allocations to fund their implementation. However, there is a caveat. The IMT-GT projects are essentially national projects with regional implication and are automatically included in the national plans. In our assessment, we shall therefore focus on whether the regional dimension of these projects has been recognised in the plan documents. The national and IMT-GT agendas originate
from two different perspectives: national and regional. Even if the projects overlap, the underlying principle could be different; and our argument is that it is the latter that needs to be mainstreamed to mark political ownership of the IMT-GT agenda.

**Indonesia.** The country has a national list of 28 economic zone projects of national strategic importance, out of which 3 projects overlap with the IMT-GT projects. Besides, as expected there is overlapping of connectivity projects included in the RPJMN 2015-20 and IMT-GT Blueprint. However, there is little mention of the strategic importance of these project from the perspective of subregional connectivity. Thus the projects envisage only the long term plan vision of ‘internally united Indonesia’; their regional dimension is not fully recognised.

**Malaysia** Up until the 11th Development Plan there was little mention of the subregional projects in Malaysian development plan documents. The 11th Plan included a range of large-scale economic growth projects to be developed in the border areas including the Chuping valley, Perlis Inland Port in Perlis, Rubber City in Kedah, IMT-GT Plaza as well as the redevelopment of Kampung Laut in Tumpat, Kelantan. However, there was no direct reference made to the IMT-GT subregional program. The Mid-Term Review of the 11th plan (2016-2020) however changed that. It explicitly refers to all 9 IMT-GT connectivity projects. These include, construction of the new Immigration, Custom, Quarantine and Security Complex in Bukit Kayu Hitam, Kedah, as well as two new bridges: (i) between Rantau Panjang, Kelantan and Sungai Golok, Narathiwat; (ii) between Pengkalan Kubor, Kelantan and Tak Bai, Narathiwat. In addition, it refers to the memorandum of understanding on air linkages that the IMT-GT member states were then finalising to enable better connectivity for the subregional areas and that is finally signed on the sidelines of the ASEAN Transport Ministers' Meeting on November 9, 2018. Yet, the focus is only on connectivity projects, other projects have received little attention. For instance, the plan document proposes to develop SBEZ in Bukit Kayu Hitam and promote the Rubber city with little reference to the IMT-GT agenda. While it acknowledges that these initiatives aim to enhance border trade activities, improve local businesses and create employment in border areas of Perlis, Kedah, Perak and Kelantan, there is no reference to cross border cooperation.

**Thailand.** In contrast to Indonesia and Malaysia, Thailand has integrated in the 12th NESDP (National Economic and Social Development Plan) all regional IMT-GT projects for all 7 pillars as provided in the IMT-GT Implementation Blueprint with an explicit reference to cross border cooperation and the IMT-GT agenda (Table 21).

### Table 21. List of projects included as part of the IMT-GT subregional program in the 12th Development Plan of Thailand

<table>
<thead>
<tr>
<th>IMT-GT pillars</th>
<th>Projects covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport and ICT connectivity</td>
<td>• Construction of the new Sadao CIQ in Songkhla and Border Post facilities in Songkhla (arrival);</td>
</tr>
<tr>
<td></td>
<td>• Upgrading of Padang Besar customs house in Songkhla</td>
</tr>
<tr>
<td></td>
<td>• Betong customs house in Yala and Upgrading of BuKe Ta customs house in Narathiwat</td>
</tr>
<tr>
<td></td>
<td>• Expansion of Wang Prachan CIQ in Satun</td>
</tr>
<tr>
<td></td>
<td>• Construction of the new Tak Bai CIQ in Narathiwat</td>
</tr>
<tr>
<td></td>
<td>• Construction of the second bridge over the Golok River connecting Sungai Golok Narathiwat with Rantau Panjang, Kelantan</td>
</tr>
<tr>
<td>Trade and investment facilitation</td>
<td>• Sadao-Kedah and Sadao-Perlis, and Narathiwat-Kelantan SEZs</td>
</tr>
<tr>
<td></td>
<td>• Thailand-Malaysia Rubber City Project</td>
</tr>
<tr>
<td></td>
<td>• Cross-border Trade and Transport Facilitation</td>
</tr>
<tr>
<td></td>
<td>• IMT-GT Database of Trade, Investment, and Tourism</td>
</tr>
</tbody>
</table>

37 It is also observed that the Northern Council of Economic Region (NCER) that has initiated the Super Fruits project on 25 hectares of land in the Chuping Valley with FigDirect Sdn. Bhd. as the anchor company misses out on mentioning on its website that it is IMT-GT supported.
VI.4.4 Alignment between the economic zones’ policies and IMT-GT approach of promoting regional or cross-border value chains with infusion of innovation and environmentally sustainable EZs

Economic zones are a critical tool in the IMT-GT spatial approach of subregional cooperation. In conformity with this approach, as seen in Section V, the subregion is awash with various types of operational and proposed economic zones. Thus, there seems to be convergence between the national policy of creating economic zones in the subregion and the IMT-GT strategic approach of economic corridors. However, the underlying principles of both may be different. The spatial approach proposed in the IMT-GT Vision is founded on the principle of collaborative approach i.e. stimulating cross-border integration to augment the resources and opportunities to foster cross-border/regional value chains with EZs as a tool. In contrast, in national development planning and policies, the subregional EZs may be treated at par with other national EZs which are internally connected with domestic factor and product markets and are competing regionally.

A review of the evolution of economic zones in the three member countries in Section III reveals that the EZs have been profoundly linked with the evolution in national development goals and policies in the three IMT-GT countries. Economic zones were introduced to kick start the process of industrial diversification in all these countries with Malaysia taking the lead and Indonesia and Thailand following it in that order. While the general economic zones were created to provide subsidised industrial infrastructure to domestic investors and promote import substituting industries, special economic zones aimed at attracting export oriented foreign direct investment by offering relaxed regulatory regimes along with a host of financial incentives. Over time, as regional equity became a development concern, economic zones were spread out spatially to generate economic activity and employment in backward regions. In the 1990s and early 2000s when industrial upgrading became a development objective, economic zones were upgraded to promote high tech industries and new high tech parks were launched. Post Asian Crisis, all three countries moved to cluster approach for accelerating the growth process and moving up the value chains. Indonesia primarily focuses on leveraging its abundant natural resources by expanding industrial areas to achieve regionally balanced growth. Malaysia adopted the concept of high density cluster development with EZs at the centre to promote the growth of cities, which are seen as the locus of the forces that power growth: innovative firms, skilled workers, supportive public and private institutions, and modern infrastructure. Thailand followed it. It introduced the Eastern Economic Corridor (EEC) initiative by far the most ambitious SEZ program in the subregion.
to transform three Thai provinces into smart cities to drive Thailand 4.0. Thus the objectives of the EZs evolved with the evolution of the national development agenda. However, the contribution of EZs to regional integration is yet to be recognised. The proliferation of economic zones in the IMT-GT subregion can thus be attributed to the national development agenda: It is not in line with the IMT-GT spatial approach.

Notwithstanding the above, in recent years Thailand emerged as an exception to this. Table 21 shows that it has integrated the IMT-GT cross border SEZ projects in the 5-years Plan (2017-2021): Sadao-Kedah and Sadao-Perlis, and Narathiwat-Kelantan SEZs. It has also set the target of promoting cross border trade and investment. More importantly, in 2015, Thailand announced the formation of 10 SEZs (SBEZs) in border areas to leverage the cross-border availability of cheap labour, prevent the influx of unskilled labour, bring prosperity to border areas and solve security problems. Two special border economic zones were set up in the IMT-GT subregion, one each in Songkhla and Narathiwat under the program to promote the development of the border areas by leveraging regional integration. Although the SEZ program is not originated from the IMT-GT subregional agenda rather it is an outcome of the domestic challenges, yet it is mainstreamed into the national development agenda (Section VI.3.2). The 9th Master Plan of SEZs (2020) envisions them as ‘economic gateways connecting with the neighboring countries for the people to have better quality of life’. The Songkhla SEZ is the most successful SEZ and as of July 2020, has attracted 9 billion Baht worth of investment (51% of total SEZ investment) in 15 projects (NESDC 2020). Narathiwat has also attracted 218 million Baht worth of investment in 4 projects. Thailand thus seeks to leverage regional cooperation to promote economic transformation using EZs. Other member countries may follow it. Malaysia is already committed to develop a special border economic zone in Bukit Kayu Hitam but with a focus on logistics services to leverage border trade and not manufacturing.

To sum up, there is a growing recognition of the importance of IMT-GT subregional program in national strategic plans, documents and agenda and all three countries have explicitly or implicitly incorporated the IMT-GT subregion in their national development agenda albeit in varying degrees. Thailand has taken a lead and is followed by Malaysia and Indonesia in that order. Yet, the role of the ‘IMT-GT spatial approach’ in particular that of economic zones in unlocking subregional potential is not fully recognised with a few exceptions.

VI.5 Assessing the achievements: A quantitative approach
The plan documents are not an end in themselves in the indicative planning framework that the three countries follow. The objective of indicative planning is to communicate the preferred strategic directions and represent policy intent (Chimhauw et al 2019). Their actual implementation depends on the availability of finance, national priorities and other political economy factors. Thus, the pertinent question is how effectively the policy intent is translated into actions in order to accomplish strategic objectives and goals. While the integration of IMT-GT into national policies and planning is a necessary condition for their success, effective implementation is a sufficient condition. Thus the mapping of IMT-GT goals and targets with the actual performance is crucial to understand if the IMT-GT integration into planning is rhetoric or it matches the reality. The relevant literature yields a large set of indicators of the performance of the subregional corridors. For a structured analysis, we organise the selected ones into a three layered system: immediate, intermediate and final outcomes.

Immediate Outcomes
- Projects completed One of the approaches of the IMT-GT Vision is project centric. The countries have committed to implement a total of US$47 billion worth of 38 physical connectivity projects to enhance physical connectivity across the IMT-GT subregion. Of them, only 6 projects worth less than USD 1.3 billion could be implemented over time. These include 4 projects involving the total investment of $75 million in Thailand
(Thungsong distribution center phase 1, Songkhla rubber city, The Customs, Immigration and Quarantine in Wang Prachan, The Customs, Immigration and Quarantine Padang Besar), and 2 projects of 1.3 billion in Indonesia (South Sumatera Light Rail Transit in Palembang, and Kuala Tanjung port). Despite the fact that the IMT-GT projects are mainstreamed in national development agendas with or without explicit reference to the program, the progress in regional connectivity projects has been rather slow.

**Intermediate indicators**

- **Intra-regional trade.** According to the data provided by the Asian Regional Integration Center of the ADB, intra-subregional trade as share of the total trade grew by 5% points between 1990 and 2003 from 3.3% to 8.3%. Thereafter the growth slowed down. In the next 10 years, the increase was 2% points to 10.2% (Figure 10). It reached the peak in 2012, since when it has been sliding slowly. Intra IMT-GT trade intensity as measured by its share in world trade has been moving downwards since 2006. A similar trend can be observed in cross-border trade between Malaysia and Thailand in recent years. It grew rapidly between 2007 and 2015 from 180 billion Baht to 500 billion baht per year, accounting for more than half of all Thailand's border trade that also includes Cambodia, Laos and Myanmar (Parpart 2016). Since then it has not shown any increase. In 2019, it has in fact declined due to fall in the exports of rubber products and computers (Econ 2019). Border trade between Thailand and South China on the other hand is growing rapidly. The most favourable products are fresh fruit and vegetables, computer parts and dried longan. Thailand and Malaysia share a border that stretches for 647 kilometres, and their bilateral trade is already the largest in ASEAN in terms of value. To promote it further, these countries have agreed to build new bridges at the checkpoints between Rantau Panjang (Kelantan, Malaysia) and Sungai Kolok (Narathiwat, Thailand) and between Tak Bai (Narathiwat) and Pengkalan Kubor (Kelantan). The objective is to reduce congestion. However, non-tariff barriers remain a major obstacle to the cross-border mobility of trade in goods and services between the two countries (as discussed later).

**Figure 10: Intra IMT-GT Trade Patterns: 1990-2017**

![Graph](attachment:figure10.png)

- **Foreign direct Investment.** Intra ASEAN FDI accounted for 17% of total FDI attracted by the region between 2014 and 2018. Year-wise break up shows little variation. Of the total intra ASEAN FDI, that in the IMT-GT countries constituted 29%. ASEAN statistics on the composition of intra ASEAN FDI inflows by the three IMT-GT countries shows that most investment is in real estate, and financial and insurance services (Figure 11). Mining and quarrying is also somewhat prominent. These three sectors formed 87% of total intra ASEAN FDI attracted by Indonesia. Manufacturing inflows are negative. In Malaysia and Thailand, intra ASEAN inflows are more diversified with manufacturing featuring among the top 4 sectors. However, it accounts for less than one fifth of total investment.
Figure 11. Sectoral composition of Intra-ASEAN average FDI inflows attracted by IMT-GT countries: 2014-2018

Note: Prefixes TH, MY and IN represent Thailand, Malaysia and Indonesia respectively.
Source: ASEAN Statistical Year Book, 2019

**Final indicators**

- **Gross domestic product.** Figure 12 reveals that the GRDP of the subregion as % of the national average has declined between 2012 and 2016 (the first five years of the IMT-GT Implementation Blueprint) in all member states including in Malaysia which has the most advanced states of Selangor, Penang, Melaka and Negeri Sembilan covered in the subregion along with the most backward ones, indicating that the IMT-GT has not had an overall catalysing effects in the region.

Figure 12. Share of subregional economies in national GDP (%) and GDP per capita

- **GDP per capita.** One of the targets of IMT-GT is the rise in GDP per capita from $13,844 in 2015 to US$ 32,120 in 2036 at the rate of over 6% for 21 years. It means that the GDP per capita in the subregion should grow faster than the national average which has been 3-4% since 2015. However Figure 12 shows that the subregional GDP per capita is diverging from the national GDP per capita rather than catching it up. The trend seems to be reversed somewhat in 2014 in Thailand.

Overall, the IMT-GT corridors and proliferation of economic zones are not seen to have made the subregion better off relative to other regions. One may argue that the simple
analysis of trends conducted here is not eligible to make a definitive conclusion and that it
would be important to know the counterfactual i.e. what would have happened in the
absence of these initiatives. However, even though the possibility that these regions would
have further marginalised in the process of globalisation cannot be ruled out, one can
conclude that the catching up process has not set in as envisaged in the IMT-GT
Implementation Blueprint (2017-2021).

VII. EZs as engine of subregional growth: Importance and Challenges

VII.1 The role of economic zones in driving growth

The IEs and export zones have played an important role in economic transformation of all
three IMT-GT countries and put them on a high growth trajectory. As discussed above, In
Malaysia, free industrial zones became instrumental in plugging the country into the value
chains of the electronics industry which became the main engine of growth with FIZs and
LMWs together accounting for approximately one third of Malaysia’s total exports in 2018
(Rasiah 2018) and providing jobs to 575,000 workers in 201938. There are over 200 plants of
MNEs in Penang alone, which directly employ over 250 thousand workers (Athukorala &
Narayanan 2018). There have been spillover effects of industrial clustering in the state, as
well. Kulim High-Tech Park which is benefitted by relocation of activities from Penang, for
instance created 30,000 high income jobs by 2015 (ibid.). The regional economic corridors
that have created 1.87 million jobs since inception have been reinforcing these gains39. In
Indonesia, the bonded zone and industrial estates established the country as a hub for
production of automobile, electronics products, oil and gas and shipbuilding industries. While
there are studies that do not find evidence of significant contribution of Indonesian bonded or
free trade zones to the economy (Rothenberg et al 2017, Wicaksono et al 2018), the
available statistics indicates that the Bonded and KITE Zone facilities in 2016 contributed
37.76 % of national exports and 3.59 per cent of GDP; attracted investment of Rp168 trillion;
assembled 2.1 million workers equivalent to 13.5 % of the national industrial labour; and
increased state revenues significantly (Sulistyawati et al 2018). Industrial estates in Thailand
have transformed the agriculture based economy of Thailand into a hub of automobile,
electronics and petrochemical industries. Whereas in 1975, agriculture and live animals
constituted over 59% of Thailand’s exports and the share of machinery and transport
equipment was 1.27%, in 2019, machinery and transport constituted 42% of its overall
exports (Ajanant 1987). They have put Thailand on the global map of automobile industry.
Thailand has come to be known as the ‘Detroit of the East’. A large number of global
companies including Honda, Nissan, Toyota, GM, BMW, Isuzu, and Ford have set up their
assembly operations in these industrial zones (Kuchiki and Tsuji 2011) and contributed
significantly to industrial diversification of Thailand by creating production capabilities in
diverse sectors. However, since the mid 2000s, despite massive investments in building
EZs, these countries have been in a synchronised slowdown.

VII.2 Weakening of the link between economic zones and growth

Figure 13a which depicts the growth patterns of GDP in the three countries reveals five
phases in their growth process: early 1970s-mid 1980s (initial growth spurt); mid 1980s -
1997(growth acceleration); 1997-mid 2000s (crisis and recovery) and the mid 2000s
onwards (stagnation in growth rates). The initial growth spurt and growth acceleration
phases of the 1970s to late 1990s are directly associated with proliferation in economic
zones. However, this relationship is weakened in the last phase of mid 2000s onwards. The
growth rates in the post crisis period plateaued despite an aggressive drive to build
economic zones with massive incentives. Figure 13b shows that Malaysia is the only country
of the three that surpassed the global average GDP per capita. Thailand has managed to

industry-malaysia/
maintain the gap with the global average while Indonesia finds it growing. Despite vigorous zone policy, however Malaysia missed the goal of being a high income country by 2020. Further, all three countries have witnessed profound changes in the economic structure in terms of the decline in the share of the primary sector in GDP (Figure 13c). As noted above, EPZs and IEs together have contributed significantly to industrial diversification in these countries by creating production capabilities in diverse sectors. However, in the post mid 2000s, the process started slowing down with almost one third of the population in Indonesia and Thailand still in the primary sector (Figure 13d). Finally, the share of the three countries in world trade is declining and so is their share of high technology exports (Figures 13e and 13f).

Figure 13. The level of GDP per capita (USD at constant 2010 prices) and its distance from the global average: The IMT-GT countries
VII.3 General and specific challenges to IMT-GT corridors and EZs

**External shocks**

The **EZs, in particular SEZs are heavily reliant on export oriented manufacturing. They are propelled by the global value chains (GVCs), the expansion of which has been a dominating trend in the world trade and investment since the early 1970s. However, over time inserting into GVCs has become increasingly difficult for several reasons.**

- *Intensified competition for GVC linked FDI* with new centres emerging in Africa and Asia;
- Increasing protectionist sentiments across the developed world;
- The China-US trade war;
- The rise of digital technologies which may lead to re-shoring of production within the borders of the developed parts of the world (Wijeratne et al 2019); and
- Of late, the Covid 19 pandemic and lockdowns to contain it.

Evidence suggests that since 2011, the expansion of GVCs has stopped. Indicators measuring the length of value chains confirm that even before the Covid 19 pandemic, GVCs had become shorter i.e. for each dollar of output there had been less trade in intermediate goods and services (Miroudot and Nordström 2019). The corona virus pandemic and shutdown measures to contain it have worsened the situation. A survey conducted by the Kiel Institute for the World Economy (IfW Kiel) in partnership with the World Free Zones Organisation (World FZO) showed that some 91% of the zones reported limitations to their production due to lockdown restrictions (Gern and Mösle 2020). According to World Bank forecasts, the global economy will shrink by 5.2% this year which would be the deepest recession since the Second World War, with most economies experiencing declines in GDP per capita (World Bank 2020). The countries with heavy reliance on global trade, tourism, commodity exports, and external financing will be most severely affected. The IMT-GT countries despite having moderate incidence of the pandemic will be among the most vulnerable countries group.
Domestic conditions
Regional disparities which continue to persist in these countries have also hampered EZs in economic peripheries. Centripetal forces are attracting investment in the core areas. But there is a threshold level beyond which growth slows down even in the core and increasing returns which are vital for growth are undermined due to diseconomies of agglomerations. This requires a rise of new growth centers which means that the marginalised areas must take off.

Limited spillover effects. All three countries are aspiring to upgrade their industrial structure and have accelerated their efforts to promote EZs. However, a major challenge is the lack of spillover effects of these zones, SEZs in particular. Indeed, Malaysia has experienced remarkable growth in the electronics and electrical (E&E) industry with E&E exports accounting for over 34.4% of total exports in 2018. Yet, it could not shift to a high value trajectory along the lines of its East Asian predecessors. The upgrading success remained limited to Penang. According to Rasiah et al (2015), the electronics sector contributed 27% to the country’s manufacturing output, 49% to exports and 32.5% to overall employment in 2010, yet almost all of related investments were foreign. In 2011, a staggering 93.23% (almost 6 billion USD) of investment in the Malaysian electronics sector was foreign. Similarly, a study by AJC (2019) on automobile value chains in Thailand shows that over the past two decades, the share of foreign value added (imported inputs) in the exports of automobiles from Thailand remains 70–75 per cent of the total which is an indicator of small domestic productive facilities and capacities in the industry. Indonesia's involvement in GVCs has been increasingly relying on providing primary and raw materials to other economies despite rapid growth in the number and types of EZs (ADB 2019). This implies that the FDI attracted by these countries could not create spillovers that would generate significant multiplier effects in other industries within the local economy and there remains huge potential for strengthening linkages among sectors for the benefits of specialization to trickle down.

Proliferation of EZs and competition. The proliferation of EZs in the region has intensified regional competition for GVC linked investment affecting performance of these zones (Aggarwal 2019). A growing number of zones also affect the quality of infrastructure provisions in new zones. Further, as the number of zones increases, they tend to be located in suboptimal locations, which inflates the cost of setting them up and in turn return.

Subregional Challenges
Gaps in physical connectivity and transport facilitation. One of the key stumbling blocks in promoting cross-border production networks is the lack of mobility of resources, goods and services within the subregion. As seen in Figure 3 the IMT-GT subregion is geographical fragmented. The necessary condition for the collaborative approach of EZs within the subregion is to restore the natural economic spatiality and mobilise the resources and markets between different regions across member. This in turn requires physical integration of the subregion through falling costs of transport and trade extending economic geography beyond the national borders. However, there are still strategic gaps in connectivity in the subregion and the progress in connectivity projects has been slow (as discussed in Section VI). Transport-related laws also vary across countries inhibiting cross border mobility. As already discussed, ASEAN-wide agreements for transport facilitation have not yet been implemented due to delays in the ratification of key protocols and/or in the enactment of necessary domestic laws and regulations (Umezaki 2019).

Non-tariff trade barriers and custom facilitation. Significant progress has been made in reducing tariff barriers within the ASEAN region. However, non-tariff impediments to trade have gone up in the region from 1,634 to 5,975 between 2000 and 2015 (Menon 2008). Further, according to the 2017 data from the ESCAP–World Bank International Trade Cost Database, the overall cost of trading goods (both, transport and regulatory) among
ASEAN members is 76% average tariff on the value of goods traded. It means that trade facilitation can bring higher trade gains than even a lessening of trade barriers (e.g., Anderson and van Wincoop 2004, Hoekman and Nicita 2010, 2011, Arvis et al. 2016, Hummels 2007). Progress has been slow in simplification of customs procedures for intra-ASEAN movement of goods, removal of non-tariff barriers (NTBs) to trade, and harmonisation of standards and regulations. There is evidence that investors are increasingly sceptical about the effects of regional ASEAN integration on their business prospects due to inefficient customs procedures and NTBs. In the EU-ASEAN Business Sentiment Survey 2019 – which polls European firms in the region, only 3% of respondents said that economic integration under the AEC is progressing fast enough compared to 11% last year. And when asked whether ASEAN has achieved its aim of creating a single market and production base, only 4% agreed – compared to 12% in 2018 (EU-ASEAN 2019).

**Heterogeneity in cross border policies, rules and regulations.** It is observed that knowledge-gaps about economic processes and sales opportunities on the other side of a border along with different rules, technical standards, and rules and regulations, structures and proceedings hamper the initiatives by regional companies to form cross border RVCs.

**Weak alignment between the national development agendas and IMT-GT economic corridor approach.** Collaborative approach in EZs development still needs to be fully appreciated. Connecting the EZs with regional markets and fostering agglomeration economies through cross border production networks can be a useful tool for debottlenecks the growth potential of these regions. It will not only turn the marginalized border areas into growth centres but also upgrade the central cores where diseconomies have kicked in (Gordon and McCann 2000). The IMT-GT is a natural economic territory which forms a development ladder. It has the most developed regions of Selangor, Penang, Negeri Sembilan and Melaka on the one hand and the industrially most backward provinces of Southern Thailand on the other. In the middle of the ladder is Sumatera which has acquired production capabilities in medium and low tech industries. This creates synergies to immensely benefit the region and trigger the flying geese paradigm if implemented effectively. These benefits may be further reinforced by aggregation of resources, diversification of markets and infusion of innovations. However, to leverage the regional synergies, there must be alignment between the national development and subregional agendas of deepening regional integration.

**General treatment to EZs in the subregion.** Lagging regions face several structural challenges including adverse sectoral structures, poor business environment, skill deficits and absence of support services. Therefore, development of the EZs in the lagging border areas needs special and differential treatment to overcome the disadvantages that these areas have. This requires a customised package of infrastructure, management and governance with relaxed immigration rules. However, their treatment is essentially at par with other national zones in these countries. This affects the incentives to invest in subregional zones when zones are proliferating in core areas too.

The rest of the report sets forth recommendations for enhancing the development role of economic corridors and zones in the subregion. Following the literature on public policy, recommendations are broadly grouped into the remaining three stages of public policy making:

i. strategy and policy development,

ii. policy adoption into planning agenda, and

iii. policy implementation strategy and its adoption.

The following section IX focuses on strategy and policy development and will be followed by policy adoption and implementation in sections IX and X respectively.
IX. THE PROPOSED STRATEGIC APPROACH TO THE SUBREGIONAL EZS: THE COOPETITION STRATEGY

Typically, economic zones (in particular, SEZs) are a tool of competitive strategy to attract GVCs linked FDI. But competition between regional partners may constrain the potential of EZs in attracting investment due to limits posed by domestic comparative advantages, factor endowments and market size. There is also a possibility of competition leading to a race to the bottom in terms of fiscal incentives which may subsidise large multinational corporations with little gains to member countries. To counter these challenges, the subregional agenda views the EZs in economic corridors as a means of 'collaborative approach' which is expected to facilitate region-wide industrialisation based on value addition in cross border and regional value chains (RVCs). The collaborative approach towards EZs in the subregion involves acquiring access to subregional resources and markets, and forming regional and cross value chains. It can maximise mutual gains by maximising the positive externalities generated by industrial complementarity, economies of scale and large market size (Figure 10). Nonetheless, full cooperation is not without its cons. It may pose challenges if some member countries are relatively less benefitted. This possibility cannot be ruled out given the fact that the member countries are at different levels of development. Further there are socio, political and security issues that can hinder full cooperation. There are thus two contradictory approaches to EZs development in the subregion: collaborative and competitive, neither of which is without cons. We propose here to combine the elements of the collaborative approach with that of the competitive approach to synergise the pros of both approaches and address the cons. This is termed as the 'coopetition strategic approach'. Coopetition is defined as a situation where economic zones of subregional countries simultaneously cooperate and compete with each other. This is a strategy through which the economic agents jointly create added value while they simultaneously compete to capture a part of that value. A central idea is that the coopetition approach enables countries to augment their capabilities by having access to subregional resources and markets to enhance their competitive advantage which they can use for competition to attract more investment. As Brandenburger and Nalebuff (1996) noted, 'coopetition is a game where different players increase the business “pie” (markets) by cooperation in making markets and then compete for dividing up the markets. The two pillars: cooperation and competition reinforce each other despite being contradictory. Indeed, the literature recognises the paradoxes and tensions originated from the co-existence of two contradictory forces of competition and cooperation, and challenges in managing them (Peng et al. 2017 Fernandez et al., 2014; Raza-Ullah et al., 2014; Gnyawali et al., 2016). Yet, coopetition has been widely used as a win-win strategy by economic agents. It is argued here that this strategy towards subregional EZs can present a sustainable alternative to either full collaboration or competition in the subregion.
In what follows, we discuss the strategic elements of the cooperative and competitive approaches as depicted in Figure 14. Each of the two approaches consists of strategies, which are broken down into strategic interventions that are further divided into enabling actions.

**VIII.1 Collaborative approach: Strategies, strategic interventions and enabling actions**

**VIII.1.1 Strategy: Effective implementation of the subregional economic corridors.**
The imperative of collaborative approach consists in viewing the subregion as a transborder hybrid zone the potential of which can be unlocked by establishing a single market and production base in the subregion. The two pre-requisites for this are: (i) seamless connectivity through transport infrastructure, and (ii) transport and trade facilitation for uninhibited mobility of people, goods, materials and services. Subregional economic corridors serve to meet these prerequisites. They reduce the cost of transport as well as journey time: reduce the transaction cost of trade: and influence both the factor and product markets through mobility of labour, people, capital (location/relocation of firms) and freight (trade) leading finally to acceleration in the growth of cross border production networks and economic growth (see, Melecky et al 2018, Quium 2019, Berg et al 2017, Regmi and Hanaoka 2012 for a rich literature review).
Thus, one of the most critical elements of the collaborative approach of IMT-GT economic zones is the effective implementation of the priority economic corridors which call for a set of systematic strategic interventions, as under. Each strategic intervention and enabling action is given a serial number which is later used in Tables 27-29.

**Strategic intervention 1: Mainstream the IMT-GT Vision agenda, objectives and strategic approaches into national plans and programs**

1.1 The IMT-GT Vision agenda. In the preamble of the IMT-GT vision 2036 (CIMT 2017a), the leaders of three countries have expressed their commitment to enhancing trade, investment and connectivity within the sub-region and have also agreed to strengthen and accelerate the economic cooperation to achieve mutual goals. This resonates with the ‘ASEAN Economic Community Vision 2025’ which reads: “Our ASEAN Economic Community by 2025 shall be highly integrated and cohesive; competitive, innovative and dynamic; with enhanced connectivity and sectoral cooperation…” (ASEAN 2015: p.15). As a first step, these basic principles of regional cooperation need to be integrated into long and medium term national development plans to recognize ‘regional integration’ as a national development strategy.

1.2 The objectives and spatial approach of the IMT-GT. The success of subregional EZs requires a long term vision and collective efforts, which in turn should be backed by generous financial resources. For that purpose, it is important that the IMT-GT spatial approach of promoting cross border production networks is integrated into national development agendas and that it receives wide governmental support beyond specific line ministries (UNESCAP 2017). This in turn requires the long term objectives of IMT-GT to be mainstreamed in the long term plan. Further, these need to be broken down into medium term targets to be integrated into the medium term plans.

**Strategic intervention 2: Improve physical connectivity through efficient and integrated physical infrastructure**

2.1 Expedite the completion of the existing IMT-GT projects by removing all obstacles. In general, heavy infrastructural costs are a stumbling block to implementation of large infrastructure projects which require large ample financial and technical resources for the preparation of projects, plans and construction as well as large tracts of land. Since the availability of such resources, especially in the public sector, is limited in developing countries, projects with the most favourable economic, social and environmental impacts at the regional level may be prioritized for implementation.

2.2 Develop a pipeline of physical connectivity projects. The subregional countries would need to develop a well-planned pipeline of regional connectivity projects to

- close gaps in physical integration to ensure connectivity within the region which can improve transportation efficiency, reduce cargo damage, reduce transportation costs, reduce highway congestion, and promote energy savings and emissions reduction (Steadie Seifi et al. 2014 as quoted in Chen et al. 2019);
- bring the corridors up to the required quality and capacity standards and meet future projections;
- develop the feeder network to spread local socioeconomic benefits of corridors; and
- develop transport nodes and access links.

2.3 Constitute Project Selection Committee (PSC) to strengthen the project selection process: In principle, project proposals come from the working groups (WGs), national secretariats (NSs), Chief Ministers and Governors’ Forum (CMGF), Center for IMT-GT Subregional Cooperation (CIMT), or Joint Business Council (JBC). Before they are approved and included in the IMT-GT agenda they pass through various stages of appraisal and assessment of their contribution to IMT-GT goals by working groups and the Project Appraisal Committee see ADB 2016 for the detailed procedure). In this...
project cycle, the sector/line ministries that are involved in the IMT-GT working groups play a critical role. But their human and financial resources and capacity in identifying and formulating sound projects is an area of concern (ADB 2016). Further, the National Secretariat (anchored in a line ministry) has little influence over other line ministries to manage their involvement in the working groups (ibid.). It is proposed here to constitute a Project Selection Committee (PSC) which may comprise of independent technical and economic experts and private sector representatives along with working group members and other stakeholders.

2.4 Adopt ex ante approach in developing a project pipeline. Notwithstanding the ‘in principle’ project selection process as described above, the IMT-GT infrastructure projects typically are national projects which have regional implications. We recommend here to develop an independent project pipeline from the perspective of strengthening subregional connectivity by identifying all existing connectivity bottlenecks based on a detailed analysis of corridor features, future projections of growth, and well-defined costs and benefits criteria. The PSC can take a lead in coordinating such studies of mapping the bottlenecks along the corridors.

2.5 Develop a techno-analytic criteria for project assessment. The techno analytic criteria involves an objective assessment of technological, social, and environmental feasibilities and certainties, and potential economic effects in order to assess and evaluate the projects. The current approach of project selection is open and subjective. There are few specific guidelines for the assessors and assessment. Besides, it is not clear who the assessors are and how they reach a particular conclusion. An objective set of criteria based on the elements of sustainability by approved agencies is important at least for large connectivity projects to ensure that the projects are technically feasible, economically sound, socially impactful and environmentally safe. If a detailed assessment is already done at the national level, it should be further assessed by experts in the PSC from the regional perspective.

**Strategic intervention 3: Remove impediments to mobility**

3.1 Pilot test ASEAN agreements on transport facilitation in the subregion. Transport facilitation means the removal of nonphysical hindrances that make movement of people, vehicles, and goods across national borders onerous, time-consuming, and expensive to ensure efficient, safe, seamless and sustainable movement of people and freight (UNESCAP 2018). It requires (i) harmonization of technical and operational standards of the modes of transport across-borders, and (ii) implementation of uniform commercial and legal framework involving harmonization of the regulatory framework, transport documents, safety rules, inspection procedures and streamlining of border crossing procedures to facilitate international traffic. Recognising the importance of transport facilitation, ASEAN Member States concluded four agreements: (i) in 1998, ASEAN Framework Agreement on the Facilitation of Goods in Transit (AFAFGIT), (ii) in 2009, ASEAN Framework Agreement on the Facilitation of Inter-State Transport (AFAFIST); (iii) in 2005, ASEAN Framework Agreement on Multimodal Transport (AFAMT); and (iv) in 2017, the ASEAN Framework Agreement for the Facilitation of Cross-Border Transport of Passengers by Road Vehicles (CBTP). Of the four agreements, only two, AFAMT and the AFAFIST have been enforced amongst a limited number of ASEAN member states who have ratified them; Malaysia and Indonesia are not among them. Ratification is only a first step towards implementing an agreement. Even after ratification, operationalisation of these agreements may be constrained due to conflicting domestic laws, rules and regulations. To explore the potential of transport facilitation, the subregional countries should pilot test these agreements within the subregion in the short and medium run without first ratifying them.

3.2 Pilot test trade facilitation agreements in the subregion. The ASEAN Single window launched in 2018 after long delays has a limited number of member states (Singapore, Malaysia, Indonesia and Viet Nam) on board and at the time of writing this report, only one functional module is implemented: the electronic exchange of preferential
certificates of origin. The rest are yet to be implemented. A recent study shows that in Indonesia, even the limited implementation of ‘ASEAN Single Window’ has helped improve efficiency and import export activities through its service contribution (Arifin et al. 2020). Besides, an ASEAN Custom Transit System has been developed for end-to-end computerisation of transit operations with a single electronic customs transit declaration. However it is not yet ratified by all IMT-GT countries. Indeed, the member states are committed to remove trade barriers and tariffs under the AEC umbrella. Yet, there is a need to expedite the processes in view of the changing global trade and investment scenario. The subregion can be used as a test lab to move forward.

3.3 Relax labour mobility Cross-border labour mobility which is likely to offer a number of advantages to subregional EZs by allowing a more efficient matching of workers' skills with job requirements is also a challenge. By 2017, mutual recognition agreements (MRAs) have been reached for eight professional qualifications, but these cover only 1.5% of ASEAN’s total workforce (Menon and Melendez 2017). Labour mobility needs to be improved by putting favourable policies and rules in the subregion.

3.4 Ensure seamless mobility within the subregion in the long run beyond the ASEAN agreements. At the subregional level, the most critical impediments in product and factors markets may be identified and addressed to improve the mobility of goods and services as a way forward to create conditions for the success of economic zones. According to a study by Dosch (2013), it may take some time to implement the common market at the regional level due to the disparity in terms of economic development between member states. However, the IMT-GT subregion that comprises of three major economies of the region provides an ideal setting for pilot testing the existing agreements to be implemented in the wider economies but go beyond them in the long run.

VIII.1.2 Strategy: Augment regional capabilities through cooperative strategies
The second critical condition for the collaborative approach of economic zones is to augment subregional capabilities to attract investment. The three IMT-GT countries have had a long experience of building economic zones. However, the most successful economic zones in these countries are geographically concentrated in one or two strategically most attractive locations: West coast of Malaysia, Eastern Seaboard in Thailand and Jakarta and Batam in Indonesia. They all are benefitted due to their proximity to the capital city and/or international shipping routes. The subregional zones in the lagging regions have locational disadvantage which need to be compensated by additional benefits. Realising this, the three countries have designed additional fiscal incentives in economic zones located in these regions. Yet, they have received a lukewarm response from investors (Rothenberg et al 2017 for CAPETS). Apparently, fiscal incentives are not the most critical success factor. Evidence suggests that SEZs are successful only if sufficient extant industrial capacity and organizational skills in the area exist in terms of networks of specialized firms, service providers, human skills, start-ups, and consortia that create an eco-system for the industry development and upgradation (Kim and Zhang 2008). For unlocking the potential of these areas therefore a transformative approach needs to be adopted to collectively address the institutional and infrastructural challenges facing the zones in these areas. Cross border cooperation can overcome the locational disadvantages of these peripheries by pooling cross border resources, capacities, eco-systems and markets. But this requires strategic interventions.

**Strategic intervention 4: Promote cross-border cooperation programs to build production capabilities of MSMEs by engaging the private sector**

4.1 Engage large subregional firms in promoting the MSMEs. According to ASEAN website SMEs account for between 88.8% and 99.9% total establishments and between 51.7%

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40 The study is jointly conducted by the University of Rostock, Germany and the CIMB ASEAN Research Center (CARI).
and 97.2% of total employment in ASEAN member states.\textsuperscript{41} Their development is the key to regional development. The local governments can collaborate with large regional firms through JBC to organise training in quality control, client-centric services, and compliance with domestic and internationally recognized standards and certifications for MSMEs to develop a business eco-system in the region. These efforts may be initiated as part of the ‘corporate social responsibility’. These countries have a long history of industrialisation and have nurtured a strong private sector. The governments need to engage the private players in strategy and planning as a first step towards creating viable investment condition in the subregion.

4.2 Engage MSMEs Associations in the subregional program to increase their awareness of opportunities and capabilities. They may identify cross-cutting constraints that are encountered across all sectors in the region with an agenda of addressing them and work with large firms to promote linkages between the two.

4.3 Initiate industry specific programs involving local governments, industry associations and other development partners to target and develop the capacity of MSMEs through industry specific joint entrepreneurship and management training programs based on their competitive advantages. Besides, the CIMT may spearhead such projects with funding committed by the local governments. A case in point is the halal industry which is one of the key subregional industries. Box 1 highlights the importance of upgrading the MSMEs which are the key actors in the industry, to compete in the world markets (Box 1). This requires joint programs which may be initiated in the subregion as pilot projects. There are several such projects initiated in European countries which aim at strengthening the MSME Sector in the Cross Border Regions and there is evidence that such programs affect the performance of these enterprises positively (Raposo et al 2014).

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Box 1: Halal food Industry in the subregion \\
\hline
Globally, the Halal food industry is expected to reach US$ 1.9 trillion by 2023 according to the State of the Global Islamic Economy Report 2018/2019. However, the export data of 2017 shows that the share of Malaysia in world exports stood at 0.7% while that of Indonesia was 0.3%. In an interview given to “food navigator-asia.com” the CEO of Malaysia External Trade Development Corporation attributes it to the dominance of MSMEs in this sector which have limited skills, knowledge of marketing and branding and capacity to scale up. About 98% of firms in the industry are MSMEs which are not in a position to leverage the elaborate eco system that the country has developed along with certification facilities. Indonesia which has been mainly exporting raw materials due to the absence of certification facilities has very recently enforced a Halal Law (October 17, 2019) making certification of all halal products mandatory by the established Halal Products Certification Agency (BPJPH). However, this will require upgrading of the capacity of MSMEs. Cross border cooperation projects within the subregion synergise the existing capabilities and build on them. This will help in promoting the region as a hub of halal products.

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4.4. Initiate pilot projects in the sub-region for digital transformation. Digital transformation is rearrangement of customer relationships, operational processes and business models to ensure new values for customers and employees driven by digital technologies, e- commerce, social media, big data, internet-of-things , artificial intelligence, augmented reality, chat box, smart phones, cloud computing, 3D printers, block chains and so on and so forth. Digital technologies enable MSMEs to improve production processes,

market intelligence, access to distant markets and knowledge networks at relatively low cost; and allow the MSMEs to participate in international activity. These technologies also allow them to scale up their activities without increasing fixed costs, improve their processes and link them with networks and open innovation systems to improve their competitiveness (OECD 2018). MSMEs need to be integrated into the process of digital transformation. This requires a roadmap for digital transformation with a focus on MSMEs. A multipronged strategy needs to be drafted including education and training, financial support, consultations, technological infrastructure, and policies and regulations. The digital free trade zones is forward looking in this direction but it needs to be associated with building capabilities of MSMEs to have far reaching effects. The CIMT may start an initiative by engaging JBC to develop pilot projects.

**Strategic intervention 5: Promote cross-border cooperation programs to build a strong technological base**

The architects of the IMT-GT Vision 2036 have envisaged an innovative subregion by 2036 with innovative agricultural and industrial sectors as two priority goals. However, one of the challenges the subregion faces is that there is no robust cross-border mechanism or program to promote active technology transfer, adaptation and innovation. Rising research costs have made it increasingly difficult for individual developing countries/firms to conduct original research. To overcome the financial constraints joint research capabilities may be promoted in the subregion.

5.1 Institute an IMT-GT research fund with contributions from the three governments and private sector. The research institutions, universities and the private sector may be invited to apply for collaborative research projects each for 3 to 4 years. The projects appraisal may be based on established criteria. These projects may focus among others on improving productivity of rubber and palm plantations, greening of these sectors, developing downstream products, and diversification of the plantations. The precedence of the collaborative approach in R&D has already been set by the MOU signed between relevant IMT-GT universities for collaboration on the Super Fruit Project, SurathRed Goat and other projects designated as IMT-GT projects. However, these efforts need to be upscaled and institutionalised within the regional framework and as part of the regional agenda (Box 2). One of the most important success factors of China’s SEZs was that the government at an early stage emphasized building R&D and innovation capabilities by increasing investment and building R&D infrastructure alongside offering special incentives to attract high-tech companies. SEZs made a significant contribution to R&D funding in the country.

<table>
<thead>
<tr>
<th>BOX 2</th>
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<tr>
<td><strong>Horizon 2020: The Research Fund of the European Commission</strong></td>
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</table>

The European Commission has initiated Horizon 2020 the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) with the backing of political leaders. The objective is to achieve ‘Innovation Union’ with its emphasis on excellent science, industrial leadership and tackling societal challenge to promote economic growth and job creation.

5.2 Strengthen knowledge transfers through faculty exchange and internship programs. International internships are a very effective way to gain skills. It is proposed that a part of the research fund proposed above may be used to fund prominent students or early stage skilled professional in the target industries for institutionalizing internship programs. Applications may be invited every year to shortlist the most prominent ones for studies in some of the most research oriented universities in the region and world. The project may be instituted as part of the flagship program of university networks called ‘UNINET Strategic Proposed actions’. The Young Farmer Training Programmed to
promote the participation of youths and new entrepreneurs in the subregion may also be covered under this fund.

5.3 Intensify efforts to build R&D alliances in palm oil and rubber industries. The region is dependent on two major agricultural products: rubber and palm oil, which are critical raw materials for a large number of industries and have benefitted millions of farmers and households in the subregion. Malaysia and Indonesia alone account for 85% of global palm oil production with Indonesia taking the lead. Similarly over 66% of natural rubber is produced in these countries with Thailand in the lead. However, these products are under scrutiny for their environmental effects, large scale deforestation, land rights issues and social abuses. Palm oil which is the world’s most versatile, economical and widely used oil in both food and commercial production is particularly controversial in Europe that has put palm oil in the black list of bio-fuels to phase it out by 2030. Multinational companies are increasingly committing themselves to source ecologically sustainable palm oil. While all three IMT-GT countries have well developed certification institutions in place, there is a need for massive R&D efforts in the region to improve yield, explore environment friendly processing techniques and develop downstream products for sustainability of palm oil. Similar issues persist in rubber also. In addition, natural rubber produced in these countries is facing tough competition with synthetic rubber. Many end users in automotive, construction and footwear industries are shifting their preferences to the latter due to superior toughness, elasticity, high head resistance, and abrasion resistance. With the advent of electrical vehicles, the completion in the tire sector has further toughened. The three countries need to adopt joint mechanisms to compete internationally and establish the subregion as a sustainable and formidable hub of rubber and palm oil industries. This requires promotion of regional research alliances at the private and public sector levels. Research alliances can take various forms including joint research agreements, technology sharing, bilateral technology flows, unilateral technology flows, or technology licensing.

5.4 Form research alliances with international companies to promote international exchange of knowledge and technology transfers. It is seen that extra-regional cooperation has a positive impact on the firms’ performance in border areas due to limited technological capabilities within these areas (Barzotto et al 2019).

5.5 The sustainability certification criteria for palm oil may match the international standards. Tightening of the certification standards to match the internationally acceptable Roundtable on Sustainable Palm Oil (RSPO) standard may be useful in meeting the criteria of the sustainable and climate-friendly palm oil production and procurement, and ensure the competitiveness of these countries in international markets. According to the Bangkok Post (28 August 2013), Thailand has already adopted the RSPO standards to enter the international markets in particular European markets.

Strategic intervention 6: Engage local governments and private sector to strengthen social capital

6.1 Institute small funds for building social capital. Social capital is a critical success factor for building cross border production networks. Social capital means cross border networks and trust relationships between people (Mirwaldt 2012). According to Krätke (1998), social capital precedes economic development and is important as a condition in stimulating economic cooperation. Realising the importance of social networks, IMT-GT has also taken a number of initiatives including setting up an IMT-GT Plaza, initiating annual IMT-GT trade fairs, and creating a Joint Business Council (JBC). The UNINET Strategic Action Plan 2017-2021 (USAP 2017-2021) provides strategic directions for UNINET to achieve its goals. UNINET is managing programs such as IMT-GT Summer Camp, Innovative Competition on Smart Farming, Internship and Visiting Researcher Program at CIMT Office, 100 Million LED Bulb Campaign for ASEAN, Joint Conference on Bioscience, Joint conference on ICMSA, IMT-GT UNINET STEM and IMT-GT Varsity Carnival.
Small funds should be instituted at the local government level to upscale and broad base these efforts and ensure their continuity on regular basis. These funds may be used for projects that bring people, businesses and local governments together. They can be used to fund business seminars, conferences, sports festivals, cross border market surveys by small firms and travels to attend important cross border events and meets. Realising the important of promoting social capital for economic collaborations, EU encourages the regional governments to maintain small projects funds as part of cross-border programmes for promoting cross border people to people contacts. Its administration is devolved to local governments with simplified application procedures. The project managers apply for funding and before receiving the final payment write the final report which is submitted to the local governments. There is evidence albeit sparse that contribution of the small funds to fostering cross border social networks has been impressive (Mirwaldt 2012).

VIII.1.3 Strategy. Promote regional/cross-border value chains.

**Strategic intervention 7: Leverage the development ladder formed within the subregion**

Participation and integration into the GVCs has been a central element of the industrial strategy of IMT-GT economies, and economic zones have been the lynchpin of this strategy. However, as shown above these economies seem to have hit a roadblock. The collaborative approach of promoting regional and cross-border value chains in the IMT-GT could offer them an opportunity to reengineer their growth processes. This requires repositioning of the IMT-GT countries and areas to leverage the development ladder in the subregion.

7.1 Global strategic repositioning of IMT-GT countries and GT-areas. Strategic global repositioning is a process of repositioning a country in the global economy. Malaysia leads in terms of industrial development and technological sophistication with Malaysia-GT covering the most developed states of Selangor, Melaka and Penang in Malaysia. It is followed by Sumatera in Indonesia and Southern Thailand in that order. The development ladder (or flying geese pattern) within the subregion can be leveraged to foster regional value chains. For this, Malaysia needs to assume the role of a leading goose with appropriate initiatives. In 1991, it set the vision of being a high income knowledge based nation by 2020. All subsequent medium term plans have followed the strategies to achieve this vision. However, according to the UNIDO database, the share of high and medium industries in its manufacturing value added has actually been gradually declining. It fell from 57% in 1999 to 44% in 2017. To achieve the aspiration of being a high income country, it needs to strategically focus mainly on high value added activities such as high value added products, R&D, branding, logistics, distribution and services and let the processing activities pass on to the following geese. This has been earlier done by Japan, Republic of Korea, Taipei, China, Singapore and most recently China. Malaysia can also address the challenge of excessive reliance on low-skilled foreign workers by moving up the economic ladder. This will also help the other two countries reposition their GT areas.

**Strategic intervention 8:Tailor made trade and investment policies in the subregion that can generate cross-border economic and institutional synergies**

8.1 Map the business eco systems in each of the three economies. The first step towards cross-border chains is a broad understanding of the economic, institutional and social forces shaping business ecosystems in each of the three countries and the existing value chains status within the country. This requires commissioned studies covering a wide range of activities, actors, and service suppliers, availability of finance, skills availability, factor availability, R&D institutions and markets.

8.2 Map and harmonise product standards and rules and regulations. The CIMT may institute a project with private sector partners for mapping the industry specific rules and regulations which need to be followed by their harmonisation. Harmonise product and
technical standards not only in halal industry but other industries and services as well in the subregion. The focus should be on creating a single market and production base with a free flow of goods, services, investment, skilled labour and capital which is recognised by the AEC as one of the four pillars of integration. Pilot testing of this aspiration in the subregion will have a major impact on cross-border investment in manufacturing and services and relocation of activities.

8.3 **Harmonize data on relevant policies and standards.** Since harmonization of the policies, rules and standards may take rather long, the focus in the medium term may be on harmonisation of data on industrial policies, technical standards, and rules and regulations.

8.4 **Compile the above information in a comparable framework in the short term and make that available on the website of IMT-GT and directly to the SME associations.** An ideal example is the US State Department’s ‘Investment Climate document’ published every year which is an effort to harmonise the investment climate data for its investors to facilitate location decision.

**Strategic intervention 9: Plan direct policy interventions to promote cross-border chains**

9.1 Identify the sectors where RVCs and cross-border value chains can be set up. Considering the factor endowment, the value chains look promising in agribusiness, rubber, palm, metal products, electronics, automotive, and industries related with them.

9.2 Identify the structure of value chains of the selected products. Each industry has its own value chain. It is normally divided stages, products, processes, and actors. The understanding of the value chains provides a framework for the assessment of the strengths and comparative advantages of each country in different segments. Tables 25 and 26 present illustrative value chains in the rubber and palm oil industries, the two largest industries in the subregion. Each value chain is divided into three stages: upstream, midstream and downstream.

<table>
<thead>
<tr>
<th>Box 3: Value chains of rubber and palm industries</th>
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</thead>
<tbody>
<tr>
<td>Table 22: The value chain of the rubber industry</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Upstream</th>
<th>Midstream</th>
<th>Downstream products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plantation</td>
<td>Crude output</td>
<td>Refining</td>
</tr>
<tr>
<td>Extruded materials</td>
<td>Latex</td>
<td>Latex concentrate</td>
</tr>
<tr>
<td></td>
<td>Value added specially rubber</td>
<td>Niche products: green tyres, sealants, adhesives</td>
</tr>
<tr>
<td>Wood</td>
<td>Coagulated rubber</td>
<td>Rubber blocks</td>
</tr>
</tbody>
</table>

Source: Shabinah Sharib and Anthony Halog(2017)

<table>
<thead>
<tr>
<th>Table 23: The value chain of palm oil</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Upstream</th>
<th>Midstream</th>
<th>Downstream</th>
<th>Support industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plantation</td>
<td>Crude output</td>
<td>Refining</td>
<td>Products</td>
</tr>
<tr>
<td>Early stage</td>
<td>CPO CPKO</td>
<td>Crude palm, olenipalm</td>
<td>Cooking oil, shortening, margarine, Vanaspati, frying fat</td>
</tr>
<tr>
<td></td>
<td>Crude palm steampalm kernel stearin RBD palm oil/olein/stearin</td>
<td>Cocoa butter substitute, dough fat, salad oil, confectionery fat, non-dairy creamer Chocolate products</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Microencapsulated POP, emulsifiers, food ingredients, Powdered ice cream, salad</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Competitively priced local products, Specialized packaging materials to</td>
<td></td>
</tr>
<tr>
<td>Middle state</td>
<td>Increased supply of CPO/CPKO</td>
<td>Trans-fatty acid-free POP Red POP</td>
<td></td>
</tr>
</tbody>
</table>

90
Specialty fats (e.g., high carotenes, high lauric, high olein)

Increased volume of current products dressing/oil, Low-calorie products, palm oil-based cheese, genetically modified oils/fats, vitamins E and B, carotenes, Pharmaceuticals and other nutrient products

meet consumer and environmental requirements Locally made equipment for domestic use and export Adequate dedicated services and facilities

High value added Cloning to get better pericarp breeding Mehanization

Oleochemicals derivatives, biofuels and renewable energy, biotechnology and biomass based products nutritional foods and ingredients, bio fertilisers, Marketing, branding, logistics, packaging, R&D,

Source: Based on various sources

9.3 Map the performance of the three countries in value chains segments of the selected industries. The assessment may use the framework of the Porter’s Diamond according to which competitiveness of the countries in a particular industry depends on: the market structure (the role of large vs. small and foreign vs. domestic actors), factor availability, demand conditions, related and supporting industries including technological capabilities and government policies. Mapping of these conditions and their linkages and interactions should inform the policies and joint actions. The objective is to identify the levers and challenges to be overcome in order to set up regional value chains (RVCs).

9.4 Map the strengths and weaknesses of the three countries in each segment of the value chain. Table 24 and 25 provide a broad illustrative assessment of the competitive strengths of the countries in different stages of the value chains of rubber and palm oil. There are apparent cross country complementarities which can be leveraged to build cross border value chains. Malaysia has lost comparative advantages in upstream industries with a shift towards mid and downstream industries. However it needs to strengthen its position in quality downstream products. Thailand and Indonesia have to catch up. Cross border value chains in these industries in refining and downstream products with complementary resources such as storage facilities, technology transfers and technology development may help build formidable regional industries through aggregation, branding, packaging, storage, and logistics facilities well developed in the region.

Table 24: Competitive strengths and weaknesses of the IMT-GT countries in rubber industry value chains

<table>
<thead>
<tr>
<th>Countries</th>
<th>Plantation</th>
<th>Upstream</th>
<th>Mid stream specialisation</th>
<th>Downstream strengths and weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>Largest area under plantation with relatively low productivity and low quality (Andoko 2019)</td>
<td>Refining</td>
<td>Footwear and other industrial products and tires (low value added products)</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>High productivity but lagging behind Thailand</td>
<td>Latex</td>
<td>Dominant exporter of rubber gloves, latex threads, balloons, gloves, finger stalls and foam. Strong home grown companies</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>Upstream (Plantation) Technology transfers from Malaysia initially but currently has built strong technological capabilities with the highest productivity (Kawano 2019)</td>
<td>Coagulated rubber</td>
<td>Tires and other automotive parts. Also a major producer of condoms. Weakness: Most production is in under the MNCs.</td>
<td></td>
</tr>
</tbody>
</table>

Table 25: Competitive strengths and weaknesses of the IMT-GT countries in palm oil industry value chains

<table>
<thead>
<tr>
<th>Countries</th>
<th>An illustrative assessment of comparative advantages in palm oil industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>Largest producer of palm oil with the largest area. Also produces superior quality palm oil. This is because oil palm fruits have to be processed within 24 hours to minimise the build-up of fatty acids, which adversely affects the quality of oil palm fruits. More oil can be extracted from high-quality fruits during processing. Similarly, the raw material, CPO also</td>
</tr>
</tbody>
</table>
contains acid. It cannot be stored for long because the acid can increase. The higher the acid, the lower is the quality of palm oil. Indonesia being the largest producer has the advantage of processing it quickly and hence being the quality producer of palm oil. However, low productivity and underdeveloped downstream industries are major weaknesses.

**Malaysia**

Malaysia has lost revealed comparative advantage in crude and refined oil stages to Indonesia and may like to focus more on downstream industries through functional upgrading and cross border cooperation (Nambiappan et al. 2016).

**Thailand**

In Thailand consumption is directed to domestic markets. However, it has set the target of adopting the Roundtable on Sustainable Palm Oil (RSPO) standard to meet the international criteria to enhance its share in international markets.

9.5 **Develop a strategic vision.** Promotion of cross-border cooperation requires planning which in turn involves the choice of strategy. Three types of strategies may be identified: (i) horizontal (improving process, product or volume within the existing nodes); (ii) vertical (upgrading by performing downstream activities, such as processing, grading, transporting, bulking up, or advertising); and (iii) a combination of the two. This sets the context of joint actions by identifying the areas of collaborative agreements.

1. **Form consortia of industry associations, academic institutions, and research organizations in prominent industries.** The consortia will work closely with the governments of the three countries to develop the vision and strategic plans to promote shared development in these industries. They work together for the discovery and research and development, skills and training, and harmonization of rules and standards in these industries. Indonesia and Malaysia have collaborated at the government level to set up the “Council of Palm Oil Producing Countries” (CPOPC) an intergovernmental organization for promoting mutual cooperation among palm oil producing countries. Even though it focuses mainly on marketing, it sets a precedence of collaborative effort in palm oil. We propose to set up industry consortia for promoting production and technological capabilities with industry partners who must coordinate with elaborate state bodies regulating these industries.

9.6 **Develop strategic plans short, medium and long terms actions through collaborative efforts by industry consortia and state bodies** Develop joint strategic master plans for targeted industries which must include:

i. business friendly policy environment,

ii. harmonisation of policies, regulations and standards to create a single production, and market base

iii. Sustainability issues,

iv. Skills and training,

v. R&D agreements, technology licensing, bilateral or unilateral flows of technology

vi. Financing mechanism

vii. Marketing and distribution mechanisms

Industry consortia can play an important role in developing these plans in collaboration with the relevant state bodies. The policies should be developed based on the broader strategies, both nationally and jointly to leverage cross border comparative advantages.

9.7 **Mainstream the joint strategic plans in national plans and programs** It is crucial for the budgetary support and implementation of the joint mechanisms as discussed in Section VII.

9.8 **Identify and encourage regional and domestic companies as anchor firms in targeted sectors.** Anchor firms are well established influential businesses that have significant capacity to multiply outputs and form value chains. Local governments in collaboration with industrial associations can identify potential anchor firms domestic or regional in designated target sectors. These firms can also be engaged in business planning exercises in the SEZs and economic zones to identify sectoral barriers and remove them.
9.9 Adopt a systematic approach to build capabilities of regional firms to participate in regional value chains. Develop implementation strategies of the strategic plan including identification of projects, project funding, time frames and possible outcomes. Partnerships may be developed between large and small firms, and regional and international organizations (or development partners) to create capacities to extend production networks beyond the national borders.

VIII.1.4 Branding and marketing of the region.

In today’s competitive world branding is important to make a significant impact as well as to gain and sustain a sizeable market share. It requires cohesive strategic approach towards IMT-GT positioning as an attractive destination with projected and perceived values through joint marketing initiatives.

**Strategic intervention 10: Position the IMT-GT region as an investment destination for food, palm and rubber industries**

10.1 Position the subregion as a global hub of rubber and palm industries. The IMT-GT has a large agriculture sector creating a large number of jobs in the subregion and uplifting a sizeable proportion of population out of poverty. This sector needs to be leveraged to promote three major regional industries: food, palm oil and rubber. The IMT-GT vision document has also identified these industries as priority industries in the subregion. In particular Indonesia, Malaysia and Thailand are the leading producers of rubber and palm oil in the world as stated above. The sub-region may therefore be promoted as a global hub of rubber and palm industries through a well-designed marketing program. This program is also important to address the negative image of these industries and attract investors.

10.2 Engage IPAs. The investment promotion agencies (IPAs) of each member state can develop a national webpage on IMT-GT subregional economic zones. The information on economic zones should be updated regularly.

10.3 Develop an integrated information portal. Link the national web pages with the IMT-GT website of the CIMT that serves as an integrated information portal on subregional portal. Public relations activities, press releases and research notes may be adopted as instruments to promote the subregional zones.

10.4 Strengthen the IMT-GT website. The IMT-GT website needs to be upgraded to provide more data and information regarding markets, production and investment opportunities in the subregion. It’s a powerful tool for branding and reaching out to regional and global investors. Member countries may commission research papers and policy briefs on market and production trends, and blogs on latest developments in the regional industries featuring entrepreneurs, their R&D and other achievements. These may be uploaded on the IMT-GT website to make the subregion visible.

To sum up the discussion, the collaborative approach is critical for the success of EZs in the subregion. This is because investors in EZs assess the scale advantages to economize production and for this they look beyond national borders to leverage the regional capabilities. According to the EU-ASEAN Business Sentiments Survey (EU-ASEAN 2019), European firms view ASEAN as the region of best economic opportunity; yet, the slow progress in regional integration has dulled enthusiasm among them for the AEC and they are now adjusting their business strategy according to local environments, rather than regional synergies. These findings clearly highlight the need for proactive approaches to use the IMT-GT subregion as an opportunity to create conditions to capture positive sentiments of these investors.

VIII.2 Competitive strategies

Competition generates pressures and challenges in attracting investment and can benefit economic zones by driving their investment climate, growth and efficiency. Thus the collaborative approach should be combined with competitive strategies to expand and
strengthen the SEZs and GEZs within the overall framework of the coopetition strategy. A two pronged competitive strategy is recommended here. (I) Improve the attractiveness of national SEZs; (II) Maximise the spillover effects.

VIII.2.1 Improve the attractiveness of SEZs and industrial zones
There are three elements of the SEZ investment climate: micro, meso and macro. All these dimensions need to be addressed simultaneously to build competitive SEZs and other economic zones (Figure 16).

Figure 16: Enabling conditions for attractiveness of economic zones

**Microclimatic factors**
Micro climatic factors refer to the investment climate prevailing in the SEZs and IZs. This in turn depends on two sets of factors (i) structural and (ii) legal and institutional. As discussed above, structural factors constitute size, location, composition of economic activity and the level of development. Legal and institutional factors comprise of policies and operational practices adopted in the zones. While strategic intervention 11 captures our recommendations for upgrading structural characteristics, the rest focus on policies and practices.

**Strategic intervention 11: Promote sustainable economic zones**

11.1 Promote logistics zones or parks. A logistics park is an important logistics facility that can have a significant impact not only on economic efficiency in the movement of goods and commodities (as discussed above) but also on environment by reducing for instance CO₂ emissions and air pollution through combining multiple distribution centers and logistic operators into a single park (Zhang et al. 2017). There is a growing trend to introduce logistics parks in both developed and developing countries. In China, for example, the number of logistics parks stood at 1638 by the end of 2017 in comparison with 1210 in 2015 according to the fifth survey report conducted by the China Federation of Logistics & Purchasing. Of them, 1,113 (67%) were operational; the rest were under construction/planning (Wang et al. 2020). In comparison, within the subregion, Malaysia has 14 operational FCZs. The data on BLPs in Indonesia is not available (overall it has 91 BLPs) while Thailand develops logistics areas as part of the industrial estates and SEZs. It is therefore recommended to fill the gaps in logistics facilities.

11.2 Incorporate sustainability criteria in site selection. In border areas, the proliferation zones may cause irreversible destruction of ecosystems and biodiversity and cause environmental degradation and pollution. It is therefore important that sustainability issues are incorporated into site selection (Ahmed et al. 2020). Further, their
establishment should be restricted to the most ideal locations with a high probability of their success. Besides, there should be assessment of availability of land in the existing zones before planning the new ones in less than ideal locations. Globally, the proliferation of SEZs is accompanied by failure of several of them. One of the major reasons for this failure is setting up of zones in less than ideal locations in the hope of attracting investment.

11.3 **Promote Eco industrial parks particularly in rubber and palm.** As discussed above, despite the economic benefits of palm oil and rubber industries, there have been negative social and environmental externalities such as displacement of rural communities, deforestation, soil erosion, and the loss of biodiversity. The two industries can be made more sustainable by adopting a zero-waste approach by recycling the waste and by-products generated in the processing of these products. This is also known as the industrial symbiosis or circular approach in which industries and organisations located within eco-industrial parks are open to opportunities of sharing by-products generated in processing with other industries which develop niche business potential using these waste products. It is strongly proposed to develop such parks to promote these industries.

11.4 **Promote environment friendly infrastructure in the existing zones.** The economic zones need to have infrastructure focusing on the green conveyance, treatment, recycling and reuse of waste water; the management of sewage and waste; energy conservation building; solar powered vehicles and buildings within the zones; and use of environment certified equipments and appliances. The best global practices include China’s green SEZs, India’s green SEZ guidelines and Thailand’s EITs. These measures are needed to be complemented by training and skills development, as well as the creation of a virtual platform for the exchange of best practice technologies.

11.5 **Apply the circular/industrial symbiosis approach in the Rubber cities to begin with:** As discussed above, it is becoming increasingly urgent to erase the negative image of rubber and palm oil industries. One proposal is to promote the rubber cities as eco-industrial parks. It is a low hanging fruit because the rubber cities are already operational in Thailand and Indonesia. There is a need to adopt the ‘industrial symbiosis’ concept as a strategic plan in conjunction with the rubber industries that can be integrated into the national economic, social and environmental agenda for industrial development and the sector’s strategies (Chiu and Yong 2004). It will ensure the sustainability of Rubber Cities with efficient utilisation of energy, water resources and waste such shown in Figure 17. This will also improve the image of the industry in the region. The regulatory agencies of the three countries: the Malaysian Rubber Board, Rubber Authority of Thailand and the relevant agencies in Indonesia (Indonesia does not have a centralised agency), may coordinate to develop a master plan along with the consortium of industrial organizations.
Strategic intervention 12: Compensate the locational disadvantages through strategic master planning of the EZs

12.1 Location specific innovative onsite infrastructure solutions may be critical in attracting investors. A variety of infrastructure including, plug and play factories, transport, logistics and financial infrastructure, common facilities, connections to utilities need to be designed in the master plans. The physical infrastructure provided within EZs must be able to compensate for what the location lacks. Sei Mangkei for instance has its own railway line that connects the SEZ with the Port of Kuala Tanjung, saving large logistics costs.

12.2 For specialised zones, the master plan needs to cater to the target investor. A case in point is food parks, which benefit from the presence of livestock and food testing, certification facilities, quality controls, warehousing, logistics, and R&D facilities. Similarly other specialized zones have their own requirements related to facilities and infrastructure. One-North Innovation District of Singapore which caters to the biomedical science and high-tech industries is designed to create an atmosphere of casual vibrancy which stimulates creativity and imagination (Cheong 2018). The Jurong Island petrochemical complex has common utilities such as water and gas supplied centrally to various investors in the complex. In India, the presence of environment related infrastructure in pharmaceutical SEZs is found to be a success factor in attracting foreign investors (Aggarwal 2012a).

12.3 Onsite social infrastructure. The master plan of SEZs must compensate for the deficiencies in social amenities such as food outlets and food courts, super markets, gymnasium, sports complex, housing, schools and healthcare facilities in the border areas. Most economic zones in the subregion are typical industrial estates away from the cities. The presence of onsite/offsite social amenities may enhance their attractiveness.

12.4 Training centers for the labour. It is crucial for the zones to acquire sufficient manpower. One of the structural constraints in the border areas is the lack of relevant skilled or semi-skilled workers and getting necessary technology support. A critical success factor is to have well-equipped skills training centers, which work closely with technical and vocational schools, colleges and universities to provide relevant skills training and technology support for the firms in the zones. Zones may also have incubators to nurture new start-ups with certain seeds money.

Figure 17. List of potential industrial symbiosis of rubber

| Rubber block process | Ammonia waste | Fertilisers
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Rubber crumbs</td>
<td>Rubber crumb filler in cement concrete in concrete industry/ polymer asphalt</td>
</tr>
<tr>
<td>Tire production</td>
<td>Solid waste water</td>
<td>Cement concrete industry and polymer asphalt binder</td>
</tr>
<tr>
<td></td>
<td>Water</td>
<td>Recycle water</td>
</tr>
<tr>
<td>Glove manufacturing</td>
<td>Rejected gloves pieces</td>
<td>Waste latex incorporated into rubber filler</td>
</tr>
<tr>
<td></td>
<td>Rubber traps</td>
<td>Capet backing</td>
</tr>
<tr>
<td>Waste water</td>
<td>Methane recovery</td>
<td>Natural gas for gloves production</td>
</tr>
<tr>
<td></td>
<td>Treated effluents</td>
<td>Bio fertilisers</td>
</tr>
</tbody>
</table>

Source: Shabinah Sharib and Anthony Halog (2017)
12.5 Offsite infrastructure. While the focus is on onsite infrastructure, development of offsite infrastructure is often neglected. Investors sometimes face huge bottlenecks in accessing ports, highways, and airports due to poor roads and logistics. Off-site connecting and logistics infrastructure and services are crucial for the success of zones. There is evidence that privately-managed industrial estates prefer to operate in or around ‘Greater Jakarta’ despite higher wages due to access to Jakarta’s superior infrastructure and offer better infrastructure at higher prices (Octavia 2016).

Strategic intervention 13. Provisions of investor friendly one stop services
13.1 One-stop-shop and custom facilitation. Both Thailand and Indonesia provide one-stop-shop services to investors. In Malaysia investors are facilitated by MIDA and state investment agencies. Upgrading these services may further add value to EZs in the subregion. Hawassa industrial park (SEZ) in Ethiopia a successful venture, for instance, offers a one-stop institutional service center with new banking, visa and immigration facilities, import/export licenses, work permits, and customs clearance, all in one building within the zone to help speed up decision making and reduce set-up costs. This may cut transaction costs for regional firms undertaking investment in the EZs and facilitate the formation of cross-border value chains.

13.2 Provide specialised Management services. Several zones provide value added management services beyond the regular ones. Jabel Ali in Dubai one of the most successful zone in the world offers ready to use, fully furnished and equipped offices with no set up cost, retail showrooms, and fully equipped business centers. Further it offers its services as development management consultant whereby it assists the customer in developing the facility. It can also build and deliver the facility as per customer specification and budget or build the facility as per customer specification on the basis of long term occupational lease. These value added services which enhance the attractiveness of the zone may be identified and offered by the zone authorities in the peripheral areas.

13.3 Digitisation of services and transactions. Covid pandemic and the lockdowns to contain it have posed a challenge to policy makers to attract foreign capital to fund current activities or even expand the free zones; competition among free zones is likely to increase. It has underscored the need to go digital in all services and transactions with companies, assess long-term strategic plans and explore new methods of facilitating management of EZs.

13.4 Offer customised incentives in core and peripheral areas. While in the core areas fiscal incentives may be offered to high value added industries, in the subregion labour or resource intensive industries may be granted preferential tax treatment. The differential tax incentive structure may eliminate competition for investment between the core and peripheral areas.

Meso climatic factors

Strategic intervention 14: Improve general investment climate in the locations where EZs are located
14.1 Improve regulatory institutions in the border regions. Border areas have their own institutional disadvantages due to low quality development. The key is to enhance economic climate in these regions. Table 26 presents highlights from the regional enterprise surveys of the World Bank for Indonesia and Thailand. In each country two subnational regions are selected. While one of them is a capital region, the other is a part of the IMT-GT subregion. Jakarta and North Sumatera from Indonesia and the Central and Southern regions from Thailand are represented here. It shows that debottlenecking is required in the IMT-GT regions to improve infrastructure, governance, regulatory environment and finance.
Table 26: Doing Business environment in subregional economies vs. national capitals: Indonesia and Thailand

<table>
<thead>
<tr>
<th>Doing business indicator</th>
<th>Indonesia</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior management time spent dealing with the requirements of government regulation (%)</td>
<td>1.6</td>
<td>0.1</td>
</tr>
<tr>
<td>% of firms visited or required to meet with tax officials</td>
<td>14.4</td>
<td>23.4</td>
</tr>
<tr>
<td>% of firms identifying tax rates as a major constraint</td>
<td>0.4</td>
<td>21.2</td>
</tr>
<tr>
<td>% of firms identifying tax administration as a major constraint</td>
<td>0.2</td>
<td>17.1</td>
</tr>
<tr>
<td>% of firms identifying business licensing and permits as a major constraint</td>
<td>0.4</td>
<td>19.3</td>
</tr>
<tr>
<td>% of firms experiencing electrical outages</td>
<td>16.1</td>
<td>11.4</td>
</tr>
<tr>
<td>Number of electrical outages in a typical month</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Average duration of a typical electrical outage (hours)</td>
<td>2.7</td>
<td>17.4</td>
</tr>
<tr>
<td>% of firms identifying electricity as a major constraint</td>
<td>7.6</td>
<td>32.1</td>
</tr>
<tr>
<td>% of firms experiencing water insufficiencies</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>% of firms identifying transportation as a major constraint</td>
<td>7.6</td>
<td>29</td>
</tr>
<tr>
<td>% of firms identifying customs and trade regulations as a major constraint</td>
<td>2</td>
<td>19.3</td>
</tr>
<tr>
<td>% of firms identifying an inadequately educated workforce as a major constraint</td>
<td>3.3</td>
<td>10.5</td>
</tr>
<tr>
<td>% of firms identifying access to finance as a major constraint</td>
<td>3.8</td>
<td>12.8</td>
</tr>
<tr>
<td>% of firms expected to give gifts to public officials “to get things done”</td>
<td>37.7</td>
<td>73.6</td>
</tr>
</tbody>
</table>


14.2 Urban development in areas surrounding EZs. International experience suggests that if SEZs are located in backward areas with poor social and economic infrastructure and lack of industrial culture their performance is likely to be below expectation (Aggarwal 2005). Urban centers in the proximity of EZs are an important factor critical to their success. This ensures more accessible and uninterrupted utilities, better services, availability of skilled labour, and quality of life for investors. A good practice is to develop the zones as part of the urban development program with integration between zones and cities in terms of infrastructure and social services (Zheng 2016). Malaysia’s spatial policy of ‘concentrated decentralisation’ is a good illustration of this practice. Malaysia has been developing several zones under this framework including Malaysia Vision Valley, Chuping valley or ECER SEZ. Thailand’s model cities in Southern Thailand also plan to integrate industrial estates into these cities. A key lesson learned is that the EZs need to be developed within the overall context of urban development.

Macro climatic factors

Strategic intervention 15: Expedite Global and regional integration efforts for the smooth operation of GVCs, particularly in these uncertain times of Covid pandemic

15.1 Establish ASEAN Economic Community. A major push to the subregion may come from the achievement of ASEAN economic community itself. While the subregion is a building block for AEC and a testing lab for the latter, it will in turn be benefitted by progress in ASEAN integration. Macro-regionalism leads to more ‘trust’ among the parties on both sides of the borders so that cross-border cooperation to address common policy challenges or to manage shared resources becomes more likely (Schiff and Winters, 2002). Macro-regions promote cross-border micro-regionalism in
a ‘top-down’ fashion through particular policies and incentives that target the border areas (Lombaerde 2010). The ASEAN and IMT-GT subregional frameworks should thus be viewed as mutually reinforcing. While ASEAN has had phenomenal success in establishing ASEAN Free trade Area (AFTA), it fell short of its target of realizing the ASEAN Economic Community (AEC) by the end of 2015. The AEC agenda has been rolled out with a largely unfinished agenda (Menon and Melendez 2017). As discussed above, non-tariff measures, and barriers to trade in service, labour mobility and harmonisation of rules still persist. This may be affecting the performance of the subregional corridors and economic zones as well. Efforts should be expedited to implement the AEC.

15.2 **Introduce broader economic reforms.** Despite the fact that SEZs are designed to overcome institutional deficiency in the wider economy, in practice their success itself is linked with the extent to which the host economies are globally integrated. It is seen that within the subregion, Malaysia which is the best performing economy in terms of various indicators of global integration (De Backer and Miroudot 2013, ADB 2019; AJC 2019; WTO 2019) also leads in various indicators of development (as shown above) and technological sophistication with more than 44% of manufacturing value added accounted for by medium and high tech industries as against 35% and 40% in Indonesia and Thailand respectively (UNIDO database). In contrast, Indonesia is the least integrated globally with its forward and backward linkages weakening further (ADB 2019, AJC 2019). It specializes in the export of natural resources with downstream industries dominated by relatively simple GVC-related activities. Thailand lies in the middle in terms of both globalisation and its economic performance. Thus, acceleration in economic reforms at the macro level is likely to be directly linked with the performance of the economy.

**VIII.2.2 Improve spillovers through Horizontal and vertical policies.**

To maximise spillovers from economic zones within the national economy, two complementary approaches may be adopted.

**Strategic intervention 16: Adopt a smart approach to maximise spillover effects**

It means aligning the production activities outside the zones with those inside them to reinforce investment within the zone.

16.1 **Identify and promote the production of goods and services required by SEZs.** A range of goods and services are required by the SEZ residents that must be available at competitive prices and quality. The government needs to be proactive in promoting domestic enterprises to produce them in GEZs and supply to SEZ firms. Thus SEZs may be linked with GEZs through backward linkages driving diversification of technological capabilities and skills base in the wider economy. The textile industry in a SEZ for instance, needs dress materials, buttons, embellishments, machines and equipment; human skills in cutting designing, tailoring, marketing; and a network of institutions supporting logistics services, financial services, testing and certification services, and research and development. Policy makers need to carefully assess these opportunities and build capabilities among SMEs to cater to the requirements in SEZs. Taipei, China adopted this strategy successfully and became a powerhouse of SMEs (Hidalgo et al. 2007).

16.2 **Link the subregional companies with extra-regional firms particularly those participating into GVCs.** Lagging regions lack the production and technological capabilities. They can benefit from extra regional collaborations with efforts to build co-operative networks. It may be achieved by setting up virtual or physical knowledge networks. These can help in setting up contacts between the subregional and extra subregional firms. The European Commission for instance supports projects that involve extra-regional collaboration of firms in the lagging regions through, for instance, the EU’s H2020 and Interreg programs. There are similar programs at the national levels via initiatives such as the UK’s Knowledge Transfer Network (Bazotto
et al 2019). In the IMT-GT subregion such linkages may strengthen the capabilities of the firms in the subregion but at the same time, can strengthen spillover effects within the subregion.

16.3 Target subregional companies and link them with SEZ companies. In the initial stages selected subregional companies may be targeted to be promoted through direct interventions. As firms are upgraded, a more general approach may be adopted. Taipei China for instance insists on localization of components and raw material by MNCs to promote spillovers and offers non fiscal incentives to domestic SMEs to help them grow with MNCs.

16.4 Develop skills required in SEZs. To bridge the demand-supply gap in skills, map the demand of skilled workforce with supply, identify skills gap and develop skills required in the SEZs. The zone companies which are offered huge tax benefits may be encouraged to invest in skill development. The tax benefits may be conditional to companies’ investing a part of their revenue in research and skill promotion. In China foreign employers played an important role in skills development.

16.5 Lower the transaction barriers between SEZs and domestic firms to promote backward and forward linkages between them to promote capacity building outside the zones.

The smart approach means place based policies. In this case, these is a SEZ-based approach and focuses on capacity building of domestic firms in those sectors that cater to SEZs by improving their market access, sales, product and services offerings, quality controls, financial management, and productivity.

**Strategic intervention 17. Complement the vertical approach of promoting targeted sectors with a horizontal approach**

17.1 Build structural capabilities in the location surrounding EZs through strategic interventions. Policy makers ought to complement the smart approach with horizontal policies to create conditions for the cluster development by promoting entrepreneurship, subsidising venture or other early stage finance, building workforce skills and management capacity, and helping firms forge international links (Bresnahan and Gambardella 2004, Nathan and Overman 2013). Governments should also take initiatives to promote investment in skills, technologies, R&D and infrastructure in the wider economy to create conditions for spillovers from the SEZs. It must be noted that SEZs build on the existing capabilities; they do not build these capabilities.

**IX. ADOPTION OF THE PROPOSED STRATEGIC INTERVENTIONS AND ENABLING ACTIONS INTO THE IMT-GT AGENDA AND NATIONAL PLANNING**

**IX.1 Adopt a holistic approach: Complement mainstreaming with a targeted approach**

As discussed above economic zones policy is cross cutting. The success of subregional economic zones in particular hinges on many different forms of cross-sector and cross-border interventions which go beyond ensuring favourable business climate in them. The coopetition strategic framework proposed in Section VIII which combines the collaborative approach with competitive approach complicates the EZs policy further. A wide ranging cross sector and border strategies are proposed, which are further broken down into strategic interventions and enabling actions. This section focuses on the adoption of the policy prescriptions into the IMT-GT and national development agendas. Its contention is threefold.

- **First**, it contends that the IMT-GT member states need to adopt a holistic and integrated approach that requires the adoption of all the broad policy prescriptions simultaneously as a package. A piecemeal approach cannot be effective.

- **Second**, it proposes to break down the strategic interventions into three time frames: short-, medium-, and long-term. Short term programs are incremental actions that do
not require an extensive preparatory effort (CIMT 2017b). Medium term interventions focus on the existing pipeline projects that do not require consensus before they can be implemented. Both short and medium term actions are low hanging fruits. Long term actions require a long process of negotiation and consensus building before they can be implemented.

- **Third**, it proposes to mainstream all proposed strategic interventions and enabling actions for economic zones into the relevant sectoral /thematic strategies of the development plans, and the 7 working groups (WG) : WG on Agriculture and Agro-based Industry (WGAA); WG on Tourism (WGT); WG on Halal Products and Services (WGHAPAS); WG on Transport and ICT Connectivity (WGTIC); WG on Trade and Investment (WGTI); WG on Human Resource Development, Education and Culture WGHREC; and working group on environment (CMGF). Further, special programs and initiatives need to be designed to implement them effectively in the subregion. This is termed as the **mainstreaming with targeted approach**. This requires mapping of the strategic interventions and enabling actions with sectoral strategies and working groups’ agendas, as a first step.

**IX.2 Mapping of the strategic interventions and enabling actions with sectoral strategies and IMT-GT working groups’ agendas**

The three countries adopt different planning frameworks depending on their strategic thrusts. Notwithstanding this, there are three basic themes covered by all: economic, social and environmental. Economic development covers macroeconomic goals and strategies on the one hand and sectoral development planning on the other. The latter cover agriculture, industry, infrastructure, transport, finance, trade, services, research and innovation, and regional equity. Tables 27 and 28 map the collaborative and competitive strategic interventions and enabling actions proposed above with sectoral/thematic strategies in the development plans on the one hand and working groups agenda and time frame on the other. The serial numbers given to strategic interventions and enabling actions in the tables match with those given above in Section VIII. The mapping should be followed by targeted programs and initiatives for the subregion in each thematic area.
### Table 27. Mapping of the collaborative strategies of EZs with thematic/sectoral areas of the national plan agendas and IMT-GT Working Groups

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Strategic intervention</th>
<th>Enabling actions</th>
<th>WG</th>
<th>National plans</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIII.1.1</td>
<td>Effective implementa</td>
<td>1. Mainstream the IMT-GT Vision agenda, objectives and strategic approaches into national plans and programs</td>
<td>WGTI</td>
<td>Macroeco</td>
<td>ST</td>
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<tr>
<td></td>
<td>tion of the subregion</td>
<td>2: Improve physical connectivity through efficient and integrated physical infrastructure</td>
<td></td>
<td>nomic objectives</td>
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<td></td>
<td>l economic subregiona</td>
<td>2. Expedite the completion of IMT-GT projects</td>
<td>WGTI</td>
<td>Transport</td>
<td>MT</td>
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<tr>
<td></td>
<td>tion of the IMT-GT</td>
<td>2. Develop a pipeline of physical connectivity projects.</td>
<td></td>
<td>and infrastruct</td>
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<td></td>
<td>2.3 Constitute a Project Selection Committee (PSC) to strengthen the project selection process:</td>
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<td></td>
<td>2.4 Adopt ex ante approach in developing a pipeline</td>
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<td></td>
<td>2.5 Develop techno-analytic criteria for project assessment.</td>
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<td></td>
<td>3: Remove impediments to mobility</td>
<td>3.1 Pilot test ASEAN agreements on transport facilitation in the subregion</td>
<td>WGTI</td>
<td>Transport and Trade</td>
<td>ST to MT</td>
</tr>
<tr>
<td></td>
<td>3.2 Pilot test trade facilitation agreements in the subregion</td>
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<td>to</td>
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<td></td>
<td>3.3 Relax labour mobility</td>
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<td></td>
<td>3.4 Ensure seamless mobility within the subregion in the long run beyond the ASEAN agreements</td>
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<tr>
<td>VIII.1.2</td>
<td>Augment regional capabilities</td>
<td>4: Promote cross-border cooperation programs to build production capabilities of SMEs with the private sector participation</td>
<td></td>
<td>SMEs</td>
<td>MT</td>
</tr>
<tr>
<td></td>
<td>through cooperative strategies</td>
<td>4.1 Engage large subregional firms in promoting the eco system for production.</td>
<td>WGTI</td>
<td>Agriculture Industry Research and development</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.2 Engage SMEs Associations</td>
<td>WGHRA DEC</td>
<td>ST to</td>
<td></td>
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<td></td>
<td></td>
<td>4.3 Initiate industry specific programs</td>
<td>WGAAPAS</td>
<td>LT</td>
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<td></td>
<td>4.4 Initiate pilot projects in the sub-region for digital transformation</td>
<td>WGAAPAS WGHRA DEC, CIMT JBC</td>
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<td></td>
<td></td>
<td>5: Promote cross-border cooperation programs to build a strong technological base</td>
<td>WGHRA DEC WGAAPAS WGAAPAS CMGF JBC</td>
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<td></td>
<td></td>
<td>5.1 Institute an IMT-GT research fund with contributions from the governments and private sector.</td>
<td>WGHRA DEC WGAAPAS WGAAPAS CMGF JBC</td>
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<td></td>
<td></td>
<td>5.2 Strengthen knowledge transfers through faculty exchange and internship programs.</td>
<td>WGHRA DEC WGAAPAS WGAAPAS CMGF JBC</td>
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<td></td>
<td></td>
<td>5.3 Intensify efforts to build R&amp;D alliances in palm oil and rubber industries.</td>
<td>WGHRA DEC WGAAPAS WGAAPAS CMGF JBC</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.4 Form international research alliances</td>
<td>WGHRA DEC WGAAPAS WGAAPAS CMGF JBC</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>5.5 Tighten the certification criteria for palm oil</td>
<td>WGHRA DEC WGAAPAS WGAAPAS CMGF JBC</td>
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<td></td>
<td></td>
<td>6: Broad-base cross-border cooperation programs by engaging local governments and private sector to strengthen social capital.</td>
<td>WGHRA DEC CIMT JBC</td>
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<tr>
<td></td>
<td></td>
<td>6.1 Institute small funds for building social capital.</td>
<td>WGHRA DEC CIMT JBC</td>
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<tr>
<td>VIII.1.3</td>
<td>Promote regional/cr</td>
<td>7: Leverage the development ladder formed within the subregion to foster cross border and regional value chains</td>
<td></td>
<td>Human</td>
<td>ST</td>
</tr>
<tr>
<td></td>
<td>oss-border value</td>
<td>7.1 Global strategic repositioning of IMT-GT countries and GT-areas.</td>
<td>WGTI</td>
<td>Capital</td>
<td></td>
</tr>
<tr>
<td></td>
<td>chains</td>
<td>8: Tailor made trade and investment policies in the subregion that can generate cross-border economic and institutional synergies.</td>
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<tr>
<td></td>
<td></td>
<td>8.1 Map the business eco systems in each of the three economies.</td>
<td>WGTI</td>
<td>Industry</td>
<td>MT</td>
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<tr>
<td></td>
<td></td>
<td>8.2 Map and harmonise product standards and rules and regulations.</td>
<td>WGTI</td>
<td>Industry</td>
<td>MT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.3 Harmonize data on relevant policies and standards.</td>
<td>WGTI</td>
<td>to</td>
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<tr>
<td></td>
<td></td>
<td>8.4 Compile the above information in a comparable framework.</td>
<td>WGTI</td>
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<tr>
<td></td>
<td></td>
<td>9: Plan direct policy interventions to promote cross-border chains</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
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<td></td>
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<td>9.1 Identify the sectors where FVCCs and cross-border value chains can be set up.</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
<td>Industry Balanced</td>
<td></td>
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<td></td>
<td>9.2 Map the structure of value chains of the selected product.</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
<td>regional growth</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>9.3 Map the performance of the three countries in value chains segments of the selected industries</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
<td>SMEs</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>9.4 Map the strengths and weaknesses of the three countries in each segment of the value chain</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
<td>Industrial policies</td>
<td></td>
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<td>9.5 Develop a strategic vision.</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
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<td></td>
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<td>9.6 Form consortia of Industry associations, academic institutions, and research organizations in prominent industries</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
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<td>9.7 Develop strategic plans short, medium and long terms actions through collaborative efforts by industry consortia and state bodies.</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
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<td>9.8 Mainstream the joint strategic plans in national plans and programs</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
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<td></td>
<td></td>
<td>9.9 Identify and encourage regional and domestic companies as anchor firms in targeted sectors.</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
<td></td>
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<td></td>
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<td>9.10 Adopt a systematic approach to build capabilities of</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
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<tr>
<td></td>
<td></td>
<td>regional firms to participate in regional value chains.</td>
<td>WGHRA PAS WGAAPAS WGHRA DEC CIMT JBC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIII.1.4</td>
<td>Branding and marketing of the region.</td>
<td>10. Position the IMT-GT region as an investment destination for food, palm and rubber industries.</td>
<td>WGTI CIMT</td>
<td>Industry and industrial policies</td>
<td>ST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10.1 Position the subregion as a global hub of rubber and palm industries.</td>
<td>WGTI CIMT</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>10.2 Engage IPAs</td>
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<td></td>
<td>10.3 Develop an integrated information portal</td>
<td>WGTI CIMT</td>
<td></td>
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<td></td>
<td></td>
<td>10.4 Strengthen the IMT-GT website.</td>
<td>WGTI CIMT</td>
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</tbody>
</table>

Source: Author
### Table 28: Mapping of the competitive strategies of EZs with thematic/sectoral areas of the national plan agendas and IMT-GT Working Groups

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Strategic intervention</th>
<th>Enabling actions</th>
<th>WG</th>
<th>Thematic area in plans</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIII.2.1 Improve the attractiveness of SEZs and industri al zones</td>
<td>Micro Climate 11: promote sustainable economic zones</td>
<td>11.1 Promote logistics zones or parks. 11.2 Incorporate sustainability criteria in site selection 11.3 Promote Eco industrial parks particularly in rubber and palm. 11.4 Promote environment friendly infrastructure in the existing zones. 11.5 Apply the circular/industrial symbiosis approach in the Rubber cities to begin with.</td>
<td>CMGF WGTI</td>
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<td>12: Compensate the locational disadvantages through strategic master planning of the EZs</td>
<td>12.1 Location specific innovative onsite infrastructure solutions may be critical in attracting investors. 12.2 For specialised zones, the master plan needs to cater to the target investor. 12.3 Onsite social infrastructure. 12.4 Training centers for the labour. 12.5 Offsite infrastructure.</td>
<td>WGTI WGT (Tourism zones)</td>
<td>Industry Services, Industrial and policy</td>
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<td>13.1 One-stop-shop and custom facilitation. 13.2 Provide specialised Management services. 13.3 Digitisation of transactions and governance</td>
<td>WGTI WFTIC</td>
<td>Industry Services, Regional development, Industrial and policy</td>
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<td>16.1 Identify and promote the production of goods and services required by SEZs. 16.2 Target domestic support companies. 16.3 Develop skills required in SEZs. 16.4 Lower the transaction barriers between SEZs and domestic firms</td>
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<td>WGTI</td>
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### Source: Author

#### IX.3 Promotion of the IMT-GT rubber cities

Of late, efforts to promote the IMT-GT rubber cities have been accelerated. A major outcome is that the Working group on trade and investment facilitation (WGTI) has agreed to form a Project Implementation Team (PIT) in the 12th IMT-GT meeting in Medan, Indonesia taking into consideration the 12th Strategic Planning Meeting in Kota Bharu, Kelantan in March 2019 and a workshop on Developing Rubber Cities in the IMT GT, Putrajaya, Malaysia (23May 2019). It has also set the targets of (i) promoting regional consumption of rubber to stabilize the price of rubber, (ii) Utilization of rubber products in the infrastructure and consumable sectors; (iii) shift from a low value added commodity producer to a high value added rubber products manufacturing region; and (iv) export of high value added rubber products. There are several proposals made in the workshop on developing rubber cities in Putrajaya. One of which was tailor made concept development for the rubber cities in addition to regional policies, harmonization of labour standards, mutual recognition of test laboratories, collaboration in R&D and so on and so forth.
It is proposed here to develop a tailor made concept for the rubber cities using a systematic and holistic approach informed by an in-depth analysis of the structure of the rubber industry globally and regionally and involving the participation of the private sector. This is an opportunity to establish the subregion as a hub of rubber products. We have proposed ‘eco industrial parks’ (EIPs) as the theme for the development of rubber cities. A number of steps in developing rubber EIPs and cross border value chains have been suggested in the strategic framework. The enabling actions correspond with those proposed in Section VIII and summarized in Tables 27 and 28 with the same serial numbers. Descriptions of these interventions have been provided in a separate column.

<table>
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<th>Strategic themes</th>
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<td><strong>Institutional support</strong></td>
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<td>Form consortium of industries in rubber industry by engaging the JBC, CIMT and WGTI</td>
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<td>Develop strategic plans</td>
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<td>Mainstream the joint strategic plans in national plans and programs</td>
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<td>9.9</td>
<td>Identify and encourage regional and domestic companies as anchor firms in targeted sectors.</td>
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<td>9.10</td>
<td>Adopt a systematic approach to build capabilities of regional firms to participate in regional value chains.</td>
<td></td>
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</tbody>
</table>

| **Mapping the rubber value chains in the three countries** | 9.2 | Map the value chains of the selected industries | |
| 9.3 | Map the performance of the three countries in value chains segments of the selected industries | |
| 9.4 | Map the strengths and weaknesses of the three countries in each segment of the value chain | |

| **Collaborative strategic plan** | 9.5 | Develop a strategic vision. | |
| 9.6 | Develop strategic plans | |
| 9.7 | Mainstream the joint strategic plans in national plans and programs | |
| 9.8 | Identify and encourage regional and domestic companies as anchor firms in targeted sectors. | |
| 9.9 | Adopt a systematic approach to build capabilities of regional firms to participate in regional value chains. | |

| **Harmonisation of standards and policies in rubber cities** | 8.2 | Map and harmonise product standards and rules and regulations. | |
| 8.3 | Harmonize data on relevant policies and standards. | |
| 8.4 | Compile the information on policies and standards | |

| **Build technology alliances for developing downstream industries** | 5.3 | Intensity efforts to build R&D alliances rubber industries both at the private and government levels to leverage the technological gaps within the region. | |
| 5.4 | Form international research alliances | |

| **Master Planning of the rubber cities** | 11.3 | Promote the cities as eco industrial parks | |
| 11.4 | Promote environment friendly infrastructure in the existing zones. | |
| 11.5 | Apply the circular/industrial symbiosis approach in the Rubber cities | |

| **Customised design of the rubber cities** | 12.2 | The master plan needs to cater to the target investor. | |
| 12.3 | Training centers for the labour | |
| 12.4 | Offsite infrastructure including logistics | |

| **Branding and marketing of the region.** | 10.1 | Position the rubber cities as a global hub of rubber industries | |
| 10.2 | Engage IPAs | |
| 10.3 | Develop an integrated information portal | |
| 10.4 | Strengthen the IMT-GT website. | |

### X. THE IMPLEMENTATION STRATEGY

Implementation is the process that turns strategies and plans into actions in order to accomplish strategic objectives and goals. Sections VIII and IX present recommendations for policy development and adoption. But these can be translated into reality only through
effective implementation strategies of the three member countries. The focus should be on overcoming structural and institutional barriers, increasing the pace of implementation and reducing the costs of implementation. This calls for an integrated approach towards implementation covering a range of implementation issues.

X.1 Institutional approach

**Strategic intervention 18: Introduce evolutionary changes in the institutional framework for subregional EZs**

18.1 **Set up a sub-working group for economic zones within the working group of trade and investment (WGTI)** The WGTI has been mandated to implement three priority strategies: simplify technical, administrative and regulatory barriers to trade and investment; improve logistics services, and increase trade and investment promotion activities. While the implementation of the first two focuses on regulatory reforms, the third strategy requires simplification of investment procedures, trade fairs, promotion of MSMEs and the assessment of special incentives in the subregion. The subgroup on EZs within this WG would focus on the business conditions and regulatory reforms in EZs. It would work in coordination with all other working groups to promote sustainable economic zones within the subregion through the coopetition strategy.

**Strategic intervention 19. Broad base stakeholders’ participation in decision making process**

Typically, the underlying principle of a subregional program is to promote bottom up processes in contrast with macro-regional programs such as ASEAN which require a top down approach. However, the institutional structure of the subregion has been modelled after that of ASEAN. Indeed, it is pragmatic, flexible and incremental maintaining respect for countries’ differing needs and sensitivities. But, it is central government centric with dominant presence of national agencies (IMT-GT Roadmap for Development 2007–2011: p.27). The CIMT plays the role of a coordinator providing little inputs for capacity building. There are forums of local governments and private businesses but there is a need to make their participation outcome oriented. In contradiction to the bottom up approach for project selection as emphasised by the IMT-GT Implementation Blueprint 2017-2021, the framework for project selection, design, implementation, monitoring and evaluation as outlined in the IMT-GT Project Manual shows the dominance of the national agencies in the process. While this approach offers some benefits in terms of autonomy and flexibility, it is time consuming and costly, and can produce suboptimal outcomes (UNESCAP 2019). It is further complicated by the fact that these countries are part of a multitude of bilateral, regional and multilateral arrangements that have placed a heavy burden on scarce technical, human and bureaucratic resources at the national level. The best practice for the institutional structure of the subregion will be to delegate greater powers and responsibilities to the local governments with the role of the nodal national agency being that of coordinator. However any drastic change in the organisational structure is not foreseen. The second best practice will be to mainstream the role of local governments and private sector in the implementation of the program

19.1 **Mainstream the local governments and private sector in all three stages of project cycle: design, implementation and monitoring.** In the current institutional framework for IMT-GT, the role of local governments and the private sector is limited to proposing the projects along with other stakeholders. It is proposed here that their role should be broad-based. Their capacity and involvement can be strengthened through direct participation in the subregional processes. One of the reasons of the lack of capacity of the local governments (LGs) is the lack of capacity building opportunities which in turn may be an outcome of the lack of empowerment. There is thus a vicious circle
created which can be overcome by making their role more effective at the subregional level. A good practice example is set by Thailand where the Chief Ministers’ and Governors’ Forum (CMGF) Secretariat located in Prince Songkhla University has a clear mandate from the Central Government of Thailand to support and empower the LGs of Thailand-GT. It conducts structured trainings for LGs such as in areas of developing project proposals for submission to relevant IMT-GT forums and national government; it monitors the implementation progress and evaluates the impacts of Thailand-GT projects. It has a relatively formalised system to consolidate the LGs’ positions for elevation to Central Government of Thailand and IMT-GT official meetings, and serve as a central depository for Thailand-GT (As reported in CIMT 2017a). The proposal is to extend such practices in other two countries as well. Indonesia which is pursuing an ambitious program of decentralisation has already set the targets of greater participation of local governments and private sector in the subregional program. However, it needs to be translated into reality. Malaysia can follow suit. Thus institutionalisation of LGs and private sector participation at various stages of decision making is an achievable goal which can go a long way for effective implementation.

19.2 Engage the private sector and local governments in various strategic interventions as proposed above. The industry associations for both small and large companies should be engaged through JBC in setting up industry consortia, and development of strategic plans and their implementation to promote regional capabilities and cross border chains. Similarly inter-governmental cooperation at the local level may be promoted to engage local governments in the development of the subregion. The unparalleled success of SEZs in China in the economic history of the world can in part be attributed to decentralization of administrative and fiscal powers to states and provincial governments for implementing the SEZ policies.

19.3 Extend the role of CIMT Incorporate the research and technical wings into CIMT. Research outputs of the former can inform the Secretariat’s inputs. It can also advise on projects, compile primary and secondary databases and continuously analyse the data to produce research outputs. The research wing can invite interns and visiting scholars from different member states based on well established selection criteria. It will serve to engage and connect the researchers’ community across the three countries. The technical wing can play an important role in Project Selection Committee and contribute to the assessment of technical eligibility/feasibility and environmental impacts of the projects. It can also have experts who work to strengthen and continuously update the CIMT website to make it more substantive and informative (Strategic intervention 10). Finally, the CIMT needs to work closely with the JBC to engage the private sector in implementing the proposed strategic interventions.


**Strategic intervention 20. Capacity building initiatives for bureaucrats**

It is generally difficult to implement cross-national policies because the actors are trained and shaped to view the policies from the national perspective. They need to have a greater understanding of the philosophy and prerequisites underlying the regional policies and projects. The implementation of regional policies therefore requires tremendous managerial and technical skills. This brings the concept of learning, training, and incentive structures to the center of implementation.

20.1 Training programs for upgrading bureaucratic capabilities. Organise training programs for building institutional capabilities and developing competencies and capabilities to create culture which is conducive to implement the subregional programs and EZs within them. An evaluation study of the ADB training programs makes several recommendations to improve the effectiveness of these programs (ADB 2011). These include (i) develop better mechanisms for needs assessment; (ii) establish better
control over the selection of participants (they must satisfy the minimum standards set by the ADB); (iii) use a variety of instructional tools; (iv) develop post training participants’ networking and knowledge exchange; (v) develop follow-up sessions and (vi) ensure follow up actions for knowledge dissemination at the institutional level through presentations by the participants to build institutional capabilities.

20.2 Autonomy. To achieve the specified objectives, implementing agencies must be given the means, including the necessary authority, autonomy, and resources. There is robust evidence that granting bureaucrats more autonomy is positively associated with the effectiveness of bureaucracies (Rasul et al 2017).

20.3 Accountability. All participants in the implementation process should have a clear understanding of their roles and relationships with implementing agencies. They should know who they are accountable to and for what. They should know the key activities that must be undertaken, the processes to organize them, and the criteria of evaluating their performance.

X.3 Cost management approach.

Strategic intervention 21. Risks management strategy

21.1 Develop mechanisms to manage social and environment costs. Economic zones are getting bigger and their establishment may have wide ranging social costs including dispossession of people from land, unfair compensation, inadequate resettlement and rehabilitation packages to the affected people and aggravation of poverty (Regondi et al 2013, McMichael and Healy 2010). It is also widely acknowledged that the border zones may inflict direct costs to the environment such as depletion of natural resources, deforestation, biodiversity loss, and degradation of ecosystems. The implementation of these projects needs to be supported by legal instruments to minimise the social and environment costs.

21.2 Strengthen border security measures. There are security related risks due to facilitation of mobility within the economic corridors. Lower costs of cross-border transport may encourage illicit trades in timber, drugs, humans, wild animals, and arms (Fujimura 2014). This requires reorganization of border protection agencies and strict enforcement of law.

21.3 Develop mechanisms to deal with SEZ related fraud, tax avoidance and money laundering. There is a possibility of misuse of SEZs for money laundering, tax avoidance, trafficking of counterfeit and piracy products, narcotics, and smuggling and financing of terrorism. These risks arise due to inadequate anti-money laundering mechanisms; relaxed oversight by competent domestic authorities; weak procedures to inspect goods and register legal entities, including inadequate record keeping and ICT systems; and the lack of adequate coordination and cooperation between zone and customs authorities. The risks are heightened in border economic zones. Awareness should thus be created in the private sector and relevant competent authorities, namely SEZ administrators, customs authorities, and bank regulators to better identify the cases of SEZs misused by criminals. A stronger focus on training programs on these issues is essential to raise awareness about the potential misuse of SEZs. There is also a clear need to improve cooperation between competent authorities at the national and international level, as the exchange of information is a key element to better identify illicit activities (e.g., fraud schemes) using SEZs. Finally, several organizations have developed reference tools for addressing some of these issues, including Caribbean Financial Action Task Force guidelines (2001) and the World Customs Organization instruments and standards. These may be used as guide for building measures to counter these risks (FATF 2010).

21.4 Macro management. Unsound monetary or fiscal policies can lead to bloated fiscal deficit. This in turn can cause Inflation affecting the producer in terms of higher local
costs, difficulty in planning, and currency depreciation. The success of economic zones depends on the prudent macro management of the economy.

- **External shocks management.** Business cycles, alternating periods of recession and recovery are integral to all free market economies. During downturns, exports and investments slow down, affecting SEZs as well. Currently, Covid 19 pandemic has disrupted GVCs and affected the zones rather adversely, as already discussed. There should be strategies in place to manage these external shocks which should include the following.
  - Diversification of economic activities, export destinations, and FDI source countries within SEZs;
  - Promotion of the clustering of both domestic and foreign firms within SEZs;
  - Provisions of flexibility in the rules regarding domestic market sales during crises to provide support to SEZ tenants;
  - A focus on improving the business climate in SEZs during crisis;
  - Vigorous marketing of SEZs;
  - Flexibility in the criteria of approving economic activity in the zones during the crisis. For instance, the Covid19 pandemic led to a sharp increase in the demand for food, medicines, vaccine, testing kits, scientific and laboratory equipment, rubber gloves, and private protection equipment. Promotion of such activities in the zones may have favourable economic and social impacts. Thailand, Malaysia and Indonesia which already have their respective competitive advantages in such products can leverage them by forming an alliance and cross border value chains and establish themselves as global suppliers of these products. Risk coping flexibilities may thus pay off.

### X.4 Establish an effective M&E framework

The IMT-GT Implementation Blueprint 2017-21 has mandated result based monitoring to capture the outputs, outcomes, and impact of the IMT-GT projects. Under the Framework as outlined in the Project Manual (ADB 2016), the CIMT is tasked to ensure that all IMT-GT project proposals that it receives and processes must include a section on result based management (RBM) framework with specific, measurable, achievable, relevant and time bound indicators, as well as data sources and risks and assumptions. Evaluation is also an integral part of the IMT-GT project cycle. It has two dimensions: self-evaluation by the project manager and independent evaluation by an external party. However, there are challenges in the M&E process that need to be addressed to make it more effective.

**Strategic intervention 22: Generate relevant databases**

**22.1 Strengthen database management** The most critical element of an M&E framework is collection and analysis of data to generate insights for policy makers about the success of the program. ADB assisted the countries in producing an IMT-GT statistical booklet compiling the aggregate subregional data and facilitated the development of a sustainable time-series database for IMT-GT. It also provided technical support to CIMT to manage the statistical database in coordination with the Working Group on Trade and Investment. In addition, support was provided to standardise the data ensuring consistency and comparability of statistics compiled and published by the national statistical systems and international organizations. Statistical brochures were published with ADB support for the Summit in 2017. However, its continuity could not be maintained. Further, the data gathered and compiled at the subregional level were not necessarily in the standardised format that ADB assisted to develop. Currently, the cross country data is not strictly comparable due to the use of different variable definitions, concepts, units and classifications as well as differences in collection and processing approaches. We propose to develop a

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42 The countries, led by the CIMT, are in the process of preparing an updated statistical database in 2019.
harmonised (preferably homogenised) system of definitions and classification systems to have a meaningful data. It is also necessary for the countries to adopt standard classifications such as the System of National Accounts 2008, International Standard Industrial Classification, Harmonised System, etc, which would ensure that data across countries can be aligned and compared.

22.2 Institutionalize Mechanisms. The IMT-GT’s statistical working groups (SWGs) comprise of National Statistics Organizations from the member countries (with subnational and national representation). SWGs are in-charge of: (i) compiling the aggregate subregional data; (ii) managing the sustainable time-series databases for the two subregions; and (iii) producing the annual statistical brochures. ADB provides technical and capacity building support to SWGs and subregional secretariats (CIMT and BIMP-FC) for database and brochures development from time to time. However, it needs to be institutionalised to ensure continuity. Further, it needs to be made available on the website of CIMT. Mekong Institute for instance provides data on key variables pertaining to the Greater Mekong Sub-region (GMS) on its website.

22.3 Create economic zones database. There is an explosion of economic zones in the three countries not only in the national cores but also in IMT-GT subregion and other border and backward areas. However, no systematic database exists on the number of SEZs or GEZs, their size and their location. There are indeed some exceptions such as data on industrial estates and KEKs in Indonesia and industrial estates and SEZs in Thailand. Recently MIDA has also posted data of 247 economic zones in the country. However, it is not comprehensive. Further, the data are almost completely missing for key performance indicators, such as the size, job creation (direct and indirect), revenues growth, and exports. As suggested above, the presence of these databases can offer policy makers important insights on what works and what does not and help in better planning them. Currently, much of the information pertains to expected gains. There is little data on the actual performance.

- Consolidate information on SEZs and other industrial zones at the national level (size, year of establishment, location).
- Update information on their current status of operation (such as approved, under construction, operational)
- Generate data on performance indicators of these zones with clarity of their measurement and update this information regularly (land occupancy, sectoral composition, FDI, total investment, origin of investment, employment, exports, production and so on).
- Provide links on the IMT-GT website as suggested above.

Strategic intervention 23. Strengthen the M&E framework for EZs

23.1 M&E framework for economic zones. Each of the three countries may institute its own M&E framework to gauge the impact and success of the economic zones program. This requires compilation of a database which covers various aspects of the zone functioning as suggested above, and an institutional mechanism in place to monitor them regularly. The data should be made public for greater transparency. From time to time, there should be evaluation of the investment in expanding industrial areas. There is a range of methodologies for evaluation but there is no best model for EZs. Much depends on the availability of information, objectives of M&E, indicators identified for evaluation, data availability, and human resources.

23.2 Reorient the perspective towards M&E framework. One of the problems is that the M&E process is designed as a mechanical exercise aimed at funders and /or senior management. Its role in providing policy insights on the roadblocks and possible solutions is less appreciated. There is a need to change the perspective. It should be seen as a means to learn from past/current experiences; improve the design, implementation, planning, and allocation of resources; and demonstrate results as part of accountability to key stakeholders. Its importance in improving the project implementation must be made clear to all those who are engaged in this exercise.
23.3 Dissemination of the results. It is important to engage different layers of stakeholders and not just funders and senior management in the dissemination of results. It may serve as a tool to mainstream various stakeholders into the program and motivate them. It is also important that the findings become a regular part of planning, rather than a one-off exercise.

23.4 Follow up actions. M&E is worthwhile only to the extent it is actually used by the IMT-GT decision makers for follow up actions. To ensure this, monitoring and updating the status of evaluation follow-up actions must be mandated.

X.5 Adoption of the implementation strategy

Table 30 summarizes the implementation strategic approaches alongside strategic interventions and enabling actions needed for the desired outcomes. The strategic interventions and enabling actions are represented by the same serial numbers as assigned to them in Section X.4. The table maps the working groups and the government agencies that need to collaborate closely to adopt these strategies into policies and to deliver the desired results.

<table>
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<tr>
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<th>Strategic interventions</th>
<th>Enabling actions</th>
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<td>X.1 Institutional approach</td>
<td>18. Introduce evolutionary changes in the institutional framework for subregional EZs</td>
<td>18.1 Set up a sub-working group for economic zones within the working group of trade and investment (WGTI)</td>
<td>WGTI and National secretariats</td>
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<td>19.1 Mainstream the local governments and private sector in all three stages of project cycle: design, implementation and monitoring.</td>
<td>19.2 Engage the private sector and local governments in various strategic interventions as proposed above. Extend the role of CIMT</td>
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<td>X.2 Human resource management approach.</td>
<td>20. Capacity building initiatives for bureaucrats</td>
<td>20.1 Training programs for upgrading bureaucratic capabilities</td>
<td>WGTI CIMT</td>
<td>Economic zones regulatory bodies and relevant department/ministries</td>
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<td></td>
<td>20.2 Autonomy</td>
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<td>20.3 Accountability</td>
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<td>X.3 Cost management approach.</td>
<td>21. Risks management strategy</td>
<td>21.1 Develop mechanisms to manage social and environment costs</td>
<td>WGTI</td>
<td>Ministries/ Departments of environment, Law enforcing agencies, EZ authorities and the planning bodies</td>
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<td>21.2 Strengthen border security measures.</td>
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<td></td>
<td>21.3 Develop mechanisms to deal with SEZ related fraud, tax avoidance and money laundering.</td>
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<td>21.4 Macro management.</td>
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<td>21.5 External shocks management.</td>
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<tr>
<td>X.4 M&amp;E framework for EZs</td>
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<td>22.2 Institutionalize Mechanisms.</td>
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<td>22.3 Create economic zones database.</td>
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XI. CONCLUSION.

Since the early stage of development manufacturing has been the central element of the development strategy of the three IMT-GT countries. All three countries have undergone substantial industrial and social transformation alongside rapid economic growth and development, and have transformed their economic base from agriculture to export-oriented manufacturing. This is largely achieved by integrating key manufacturing production into global value chains, and SEZs have played an important part in this policy approach. A renewed thrust on zone programs in recent years is expected to infuse a new dynamism to economic growth of these economies. However, this requires changes in perspective and process selection of the economic zones. The first wave of economic zones in particular SEZs emphasized cost advantage. The vision of the current wave of SEZs should be to create value and their repositioning to capture future opportunities offered by regional integration. Alignment of regional integration frameworks to national development agenda and assigning them national priority is an innovative solution for policy makers tasked to find new solutions to enter into new paradigms of growth. This requires a systematic approach of envisioning a desired future mainstreamed into national plans and priorities, and translating this vision into broadly defined goals or objectives and a sequence of proposed actions based on joint initiative to achieve them.

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