

Review of Indonesian Economic and Business Studies

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THE ROLE OF CONNECTIVITY FOR ACCELERATING ASEAN–INDIA ECONOMIC INTEGRATION¹

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ABSTRACT

Connectivity is one of the key factors that are important to accelerate economic integration between ASEAN and India. Improved connectivity is critical to increase ASEAN–India economic relations and to strengthen ASEAN–India's share in regional and global production networks. To build and strengthen this connectivity, several strategic measures are needed. First, there is a need for a clear regional connectivity framework, a multi-modal, multi-functional and multi-tier approach, which includes land, maritime and air connectivity. Second, there is a need to establish strong regional institutions for cooperation in terms of planning, managing and funding the infrastructure needs. Third, ASEAN and India need to address wide infrastructure variations within their member countries and states. Specifically, significant resources and time must be dedicated to build and strengthen infrastructure in Myanmar and the northeastern region of India, given their strategic location as the connecting nodes of ASEAN–India connectivity. For infrastructure development, there must be a clear strategy to encourage more private sector participation. Public–private partnership seems not only promising but also challenging given the complexity and cost of infrastructure investment. A fair distribution of risk remains a big constraint to the promotion of public–private partnerships. Fourth, ASEAN–India connectivity should be integrated with regional development plans and linked to the international production network. And finally, there is a need for strong political commitment to execute most of the policies and strategies that have been agreed to by the ASEAN countries and India.

Keywords: Connectivity, Transport, Regional integration, ASEAN, India

JEL Classification: O18, R11, R41

I. INTRODUCTION

ASEAN is to launch an ASEAN Economic Community (AEC) by 2015. With the establishment of the AEC,

there will be free movement of goods, services, investment, capital and labour within the ASEAN region. ASEAN member countries will benefit from the diversity in natural and human resources that characterises the region. The AEC will also provide opportunities for business complementarity with ASEAN partners. The success of

¹ This paper was presented at the ASEAN–India Network of Think Tanks (AINTT) Meeting, New Delhi, 7–8 August 2012

² The author would like to thank Dr Thee Kian Wie and Dr Saowaruj Rattanakhomfu for their excellent comments.

the AEC will in turn make ASEAN a more dynamic and competitive segment of the global supply chain.

In light of the AEC, it is imperative to promote connectivity among the ASEAN member countries and with ASEAN partners. Improved regional connectivity will be the key to future Asian economic growth. Better connectivity will improve regional economic growth, and will be driven by the emerging middle class in ASEAN member countries and ASEAN partners. This growth dynamism will, in turn, benefit smaller and poorer countries in the region through spill over effects or fragmentation (or both) of production processes in the regional supply chain, thus reducing development gaps in the region (Banomyong and Ishida, 2010).

Improved connectivity will lower trade costs and increase economic efficiency. Efficiency is the key factor for participating in the global production network. Consequently, a more efficient production network within the region would increase regional trade and investment and deepen ASEAN's economic integration with other countries, especially with the most rapidly growing economies in the region like China and India. In this sense, better connectivity will unleash opportunities generated by the dynamic growth centres in Asia.

According to the *Master Plan on ASEAN Connectivity* (ASEAN, 2011), ASEAN needs to build connectivity

in three dimensions, that is, physical connectivity, institutional connectivity and people-to-people connectivity. Physical connectivity includes transport, information and communication technology, and energy. Institutional connectivity includes trade liberalisation and facilitation; investment and services liberalisation and facilitation; mutual recognition agreements; regional transport agreements; cross-border procedures; and capacity building (ASEAN, 2011).

Physical and institutional connectivity are two sides of the same coin, which will become the backbone for deepening economic integration and narrowing development gaps within the region. This paper will focus on physical connectivity issues with regard to the economic cooperation between ASEAN and India. India has become a new economic powerhouse in the world. It is also the biggest democratic country in the world and is continuously reforming its economy from a relatively closed to a more open economy. The more open Indian economy has allowed better economic relations with its trading partners, including ASEAN. This study, in particular, will discuss the transport infrastructure needed to increase physical connectivity between ASEAN and India. The next section will discuss why ASEAN and India need to improve connectivity with each other. The third section will discuss the challenges of physical infrastructure, with which India and

many member countries of ASEAN are struggling. The fourth section will discuss a strategy to promote connectivity, which is built on previous studies of how to promote physical connectivity in the region. The last section discusses the way forward.

II. WHY ASEAN AND INDIA NEED TO IMPROVE CONNECTIVITY

The idea of ASEAN connectivity goes beyond the ASEAN economic region. The *Master Plan on ASEAN Connectivity* (ASEAN, 2011) also includes linking ASEAN with neighbouring countries, including China and India, the two most rapidly growing economies in the world. The rise of China and India as the new global economic powerhouses has motivated increased dialogue to reinvigorate their relations with ASEAN and to find new opportunities for future economic cooperation. Over the past few years, China has grown at 9 to 10 percent annually, although its growth has slowed as its exports to the struggling Eurozone have declined, and India has grown at 8 percent annually (Thee, 2012). Together, China and India have almost 40 percent of the total world population (Abdoolcarim, 2011). Especially for India, there is an immense potential for it to be the future economic superpower because of its demographic bonus.³

India has been reforming and liberalising its economy since 1991 when it experienced a serious balance of payments crisis (Thee, 2012). India's 'Look East' policy and economic liberalisation has made its economy more competitive and outward looking, opening up great potential from closer economic relations with its ASEAN partners. Unlike China, India is a democratic country and has an economy driven by private enterprise.

China and India are rapidly becoming ASEAN's major trade and investment partners (ASEAN, 2010). ASEAN sees India as the future potential partner for further economic cooperation because of its size and its consistency in reforming its economic policies. Trade between India and ASEAN has increased at an average annual rate of 18 percent between 1993 and 2010 (ASEAN, 2010). ASEAN is India's fourth-largest trade partner, with a total trade value of more than USD50 billion in 2011. India is also the seventh-largest trade partner for ASEAN. Trade between the two economies is to reach USD70 billion in 2012 and to increase further to USD100 billion in the coming year (Zainuddin, 2011). Furthermore, India and the countries of ASEAN have the potential to complement each other through their respective comparative advantages.

³ A demographic bonus is defined as the demographic situation in which the productive, work-

ing-age population is increasingly at a greater rate than the non-productive-age population, thus the dependency ratio is declining.

According to an UNCTAD survey (2010), of the top twenty most promising investor countries, China occupies the second position in the global ranking, India is ranked sixth and the Russian Federation ninth (Figure 1). The survey result shows the increasing global importance of China and India as the sources of foreign direct investment (FDI). There is an increasing number of transnational companies (TNC) from China and India that are carrying out large-scale international investment programs.⁴ According to Thee (2012), in view of their technological and firm-specific capabilities, Indian TNCs have great potential for expansion in several sectors, including food processing, textile fibres, plastics, wood products, agriculture and bio-technical products, pharmaceuticals, telecommunications, and information technology.

UNCTAD's survey (2010) shows that China and India are in the top three of the priority list of the emerging host economies for foreign direct investment (FDI). The four major emerging markets: Brazil, the Russian Federation, India and China (a group that has been given the acronym BRIC) are among the top five investment destinations according to those global transnational companies (TNC) that were surveyed. The relative importance of China and India seems

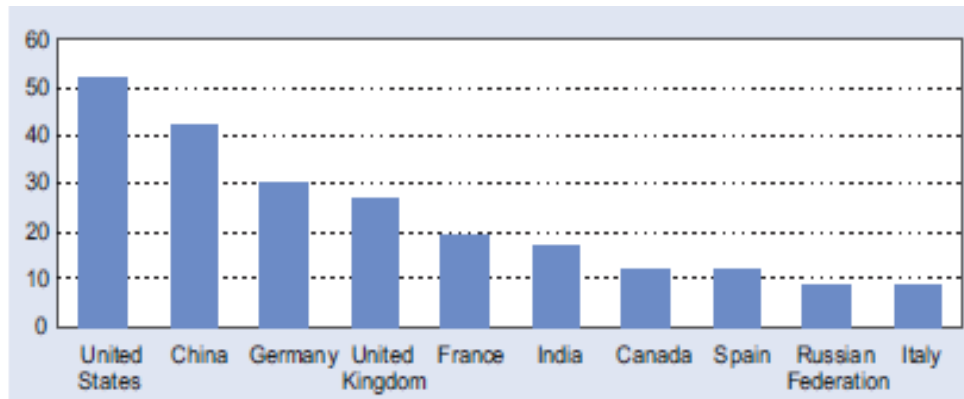
to be further on the rise, given the declining attractiveness of developed countries after the 2008 global financial crisis (Figure 2).

The ASEAN–India FTA, which came into force in January 2010, will pave the way for the creation of one of the world's largest free-trade areas with a market of almost 1.8 billion people (India has a population of 1.2 billion and ASEAN one of 600 million) and a combined GDP of USD2.8 trillion (India's GDP is about USD1 trillion and ASEAN's GDP is about USD1.8 trillion). In view of this huge market potential, increasing ASEAN–India connectivity will be a necessary prerequisite for benefiting from improved trade and investment relations.

The role of connectivity is also critical for narrowing development gaps within countries and within the region. There are wide income divisions and disparities in economic development among the ten Southeast Asian economies that comprise ASEAN. Similarly within India, the disparities among its states are quite large. Unless concerted action is taken to connect the underdeveloped regions with those more advanced, ASEAN and India could be prevented from realising the full benefits of a single economic community.

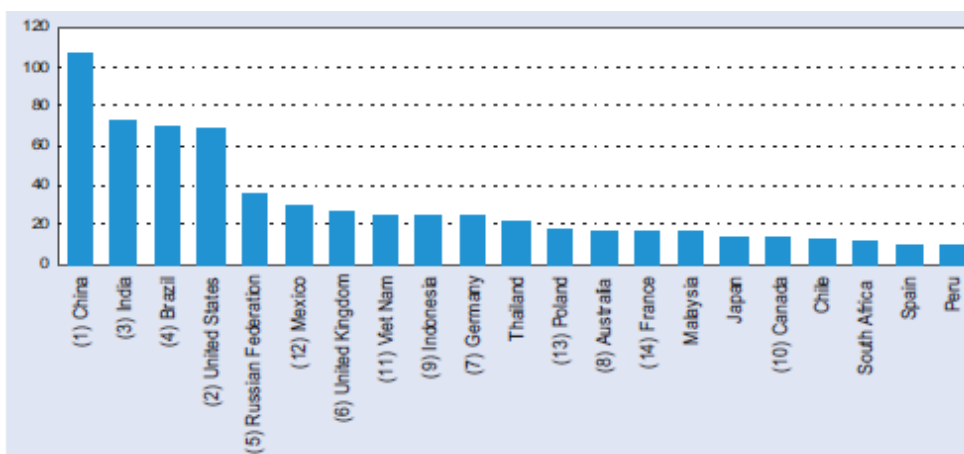
India's strong economic growth in the recent, and possibly in the coming, decades along with robust ASEAN growth rates will bring potential economic benefits to the global

⁴ Indian companies have invested in Southeast Asian countries, including Indonesia, since the 1970s.



Source: UNCTAD, 2010: 11

Figure 1. The most promising investor countries according to investment promotion agencies



Source: UNCTAD, 2010: 13

Note: the number in brackets is the ranking in the previous year.

Figure 2. The top priority host countries for FDI

and regional economies. With this growth dynamism, ASEAN–India’s bilateral trade is estimated to increase significantly over the next decade as middle-income population grows. Therefore, promoting connectivity between ASEAN and India is necessary to boost the growth and competitiveness of the region.

III. THE ROLE OF PHYSICAL INFRASTRUCTURE

Inadequate physical connectivity has been impeding ASEAN–India trade and investment relations. Better physical connectivity correlates highly with the quantity and quality of physical infrastructure. As economies grow, there will be increased demand for

more and better quality infrastructure. Several empirical studies find a positive relation between physical infrastructure and a country's economic development. Figure 3 depicts the relation between the composite infrastructure index and the countries' real GDP per capita. The regression line shows clearly that there is a strong positive association between a country's economic development and its infrastructure development.

To improve physical connectivity, ASEAN and India need to increase investments that support physical infrastructure, such as roads, railways, ports, air and maritime transport. Within ASEAN, there are wide physical infrastructure variations among its member countries. Singapore has a very high physical infrastructure composite score and Malaysia and Thailand scores are at the upper middle level. Indonesia and Vietnam are at the lower middle level, and Cambodia, Laos and Myanmar are at the lowest level. This wide infrastructure disparity is considered to be one of the main factors constraining the promotion of the ASEAN connectivity.

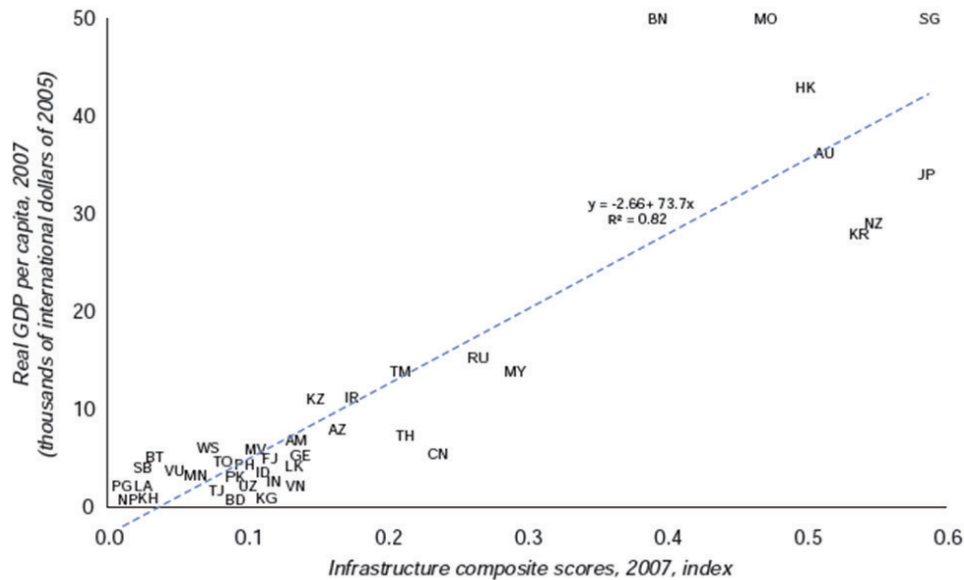
Similarly, physical infrastructure in India has been perceived to be one of the key bottlenecks that impede increases to trade and investment within that country and with its partners.[□] India's infrastructure composite score is significantly below the other BRIC countries. India ranks 46th among the 155 countries surveyed in the World

Bank's Logistic Performance Index (LPI) in 2011 (Figure 4).

The LPI survey captures six dimensions of logistic performance measures: efficiency of the clearance processes by border control agencies; quality of trade and transport related infrastructure; ease of arranging competitively priced shipments; competence and quality of logistics services; ability to track and trace consignments; and likelihood of shipments in reaching their destinations within the scheduled or expected delivery time.

The LPI also shows that there are very wide logistic performance variations among ASEAN member countries. Singapore with its superior infrastructure ranks number one in term of logistic performance. In contrast, Cambodia, Laos and Myanmar with their inferior infrastructure rank almost at the bottom of the logistic performance index. This implies there is strong positive association between the quality of a country's infrastructure and its logistic capability.

Using LPI results, one can compares countries' relative logistic performance or capacity. For instance, one can compare logistic performances among India, China and Indonesia in the six dimensions measured in the survey (Figure 5). The dimensions are on a scale from 1 to 5 (lowest to highest). Based on the LPI survey, India's logistic performance is relatively better than Indonesia's, but relatively poorer than China's. In terms of customs



Source: ESCAP, 2011: 108

Notes:

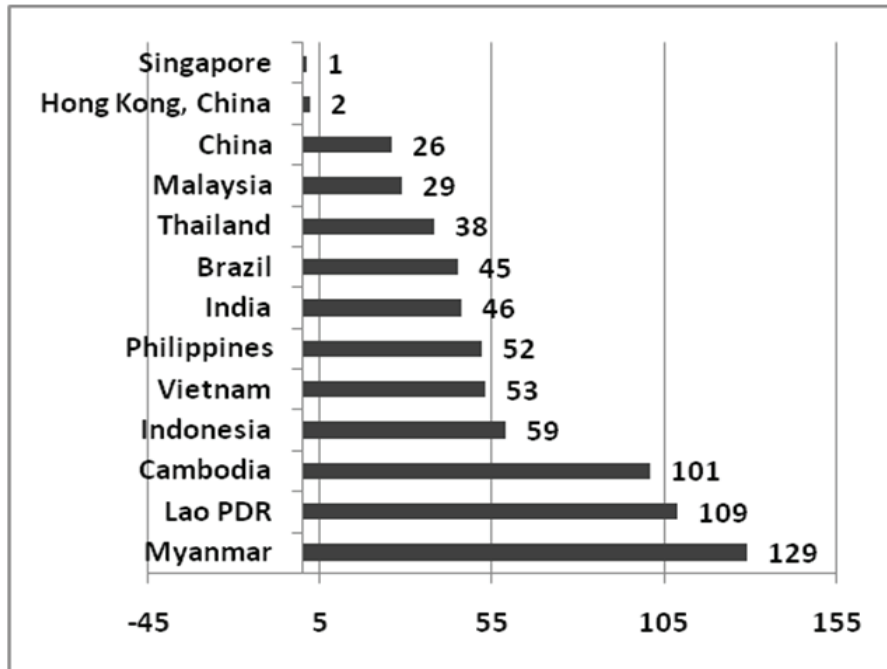
1. The composite measure of infrastructure development is calculated based on eight physical infrastructure indicators in ESCAP member countries.
2. CN = China; HK = Hong Kong; ID = Indonesia; IN = India; JP = Japan; LA = Lao People's Democratic Republic; KH = Cambodia; KR = Republic of Korea; MY = Malaysia; RU = Russia; SG = Singapore; TH = Thailand; VN = Vietnam.

Figure 3. Physical infrastructure is positively correlated with GDP per capita

efficiency, infrastructure quality and logistic competence, India outperforms Indonesia. China is superior in all six dimensions of logistic performance measures compared with India and Indonesia.

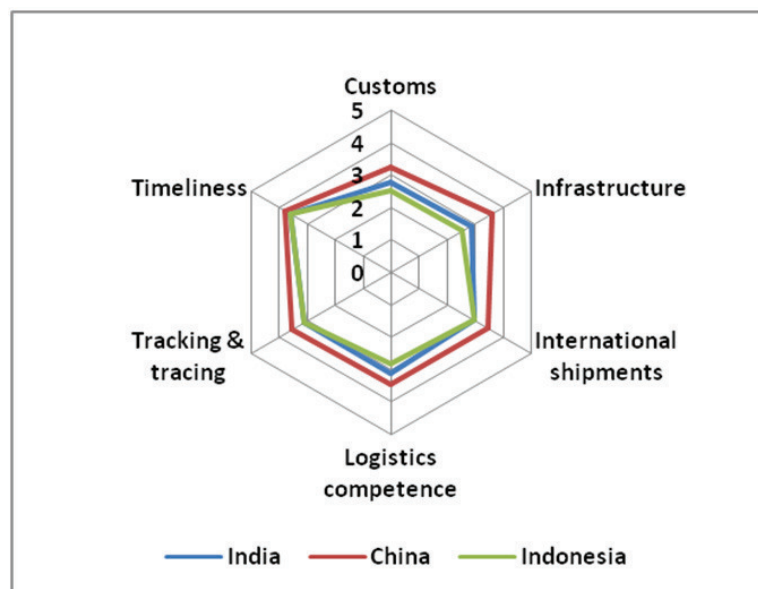
China strong logistical performance is arguably supported by its strong liner shipping performance. Figure 6 shows that China is at the top of the ranking of the global liner shipping connectivity index. □ Meanwhile India ranks 23rd on the

index, which is slightly lower than Thailand (21st). Most ASEAN member countries (with the exception of Singapore, Malaysia and Thailand) are not on the list. Again, this ranking shows that there are wide infrastructure and capacity disparities within ASEAN. Given all these indicators, clearly there is significant investment needed to improve transport infrastructure in several ASEAN member countries and in India for them to be on par with China, Hong Kong and Singapore.



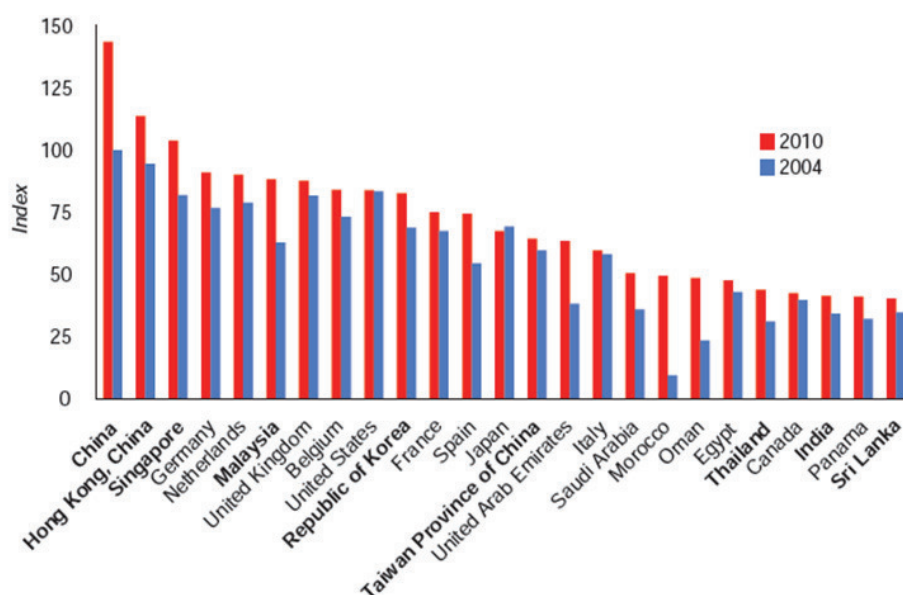
Source: World Bank, 2012

Figure 4. Logistic performance index for selected countries



Source: World Bank, 2012

Figure 5. India, China, and Indonesia LPI



Source: ESCAP, 2011: 122

Figure 6. Liner shipping connectivity index

Another challenge in developing transport infrastructure in the region is the choice of transport systems. Land transport is still the main mode of transport in the region. In fact, most countries in South and East Asia put more emphasis on road infrastructure compared to maritime or rail networks. Data from ESCAP show that the growth of road networks in India reached four percent on average over the period 1993–97 to 2003–07. This increase also reflects the significant increase in the use of motor vehicles in the region (ADB, 2010). The latter growth in the use of motor vehicles, which has been much greater than the growth of road networks, has created heavy traffic problems in several major cities in ASEAN member countries and in India. The use of railways, which are more efficient for mass

transport, has been neglected partly because of difficulties with infrastructure financing.

From Figure 7, one can notice that there is a disconnection between the *Master Plan on ASEAN Connectivity* (ASEAN, 2011) and the reality. The plan emphasises the importance of developing multi-modal transport systems but the reality is that road networks have increased much more than the rail networks. To improve connectivity in ASEAN countries and in India, there is a need to develop and expand railway networks because they are a cheaper and a more efficient way of transporting goods and people on land.

Another mode of transportation that should be considered for overcoming geographical constraints

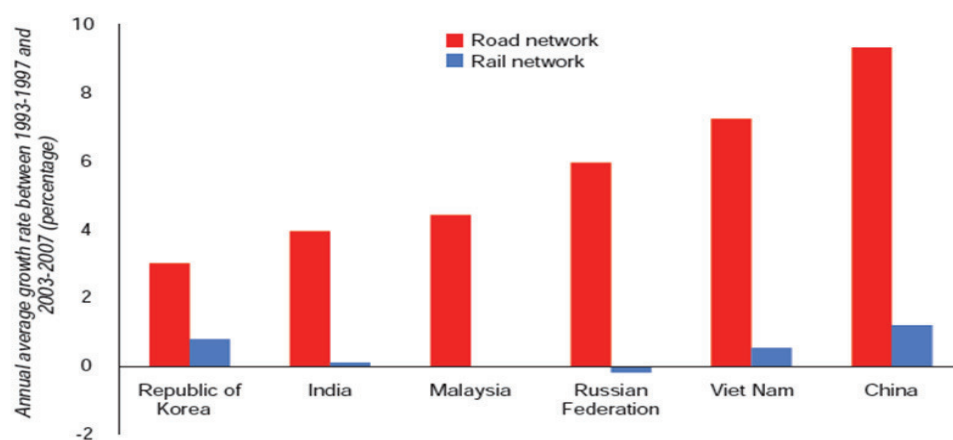
is air transport. Between 1993–97 and 2003–07, there was a significant increase in the number of air passengers and the volume of air freight in Asia. It is interesting to see that the more export-oriented a country is, the use of air transport for freight in that country is more significant. Countries like Japan, South Korea and China have been using air freight significantly for their exports. However, the annual rate of growth of the number of air passengers in India was relatively low compared to China, Russia or Indonesia (other populous countries). Similarly, the growth of the volume of air freight was also not as high as in other countries, such as China and Russia.

The challenge of physical infrastructure in the region is immense. Figure 8 shows the infrastructure composite score for selected countries in the region that are covered by ESCAP (United Nations Economic and Social Commission for Asia and the Pacific). This composite score measures the weighted average of eight physical infrastructure indicators among the forty ESCAP member countries. It can be seen that most developing countries have a relatively low score in terms of this indicator. India's score is better than Indonesia's, which reflects India's better infrastructure compared to Indonesia. However, India's infrastructure is not better than that of Vietnam and it lags far behind China and Russia. Some ASEAN member

countries; for instance, Cambodia, Laos and Myanmar, need particular attention because of their very large infrastructure shortcomings.

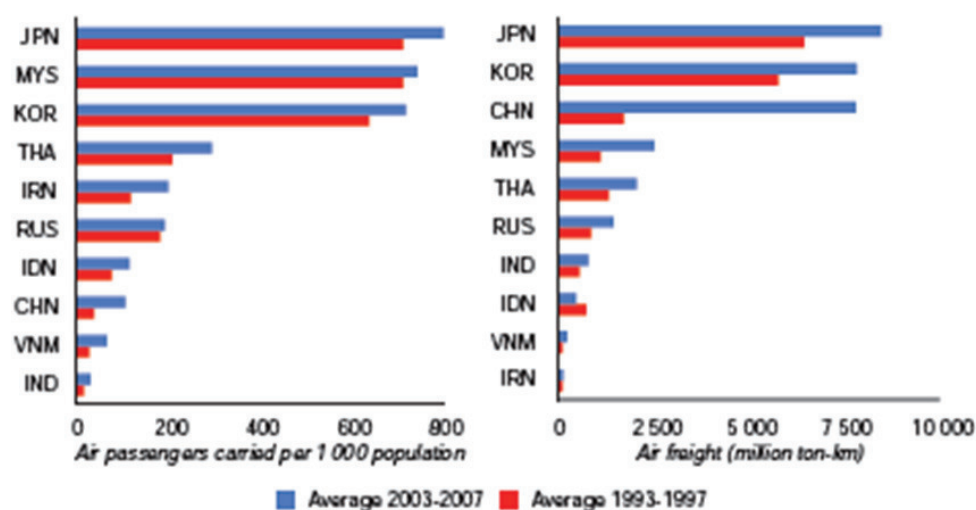
Given the huge infrastructure deficiencies in Asia, the ESCAP study (2011) highlights the need for the region to develop its regional financial architecture, which could provide the much needed development finance. The region's wide infrastructure gaps clearly need huge investments (see Figure 9). The ADB (2009a) estimated that about USD8 trillion is needed for infrastructure investment over the next ten years. Of the USD8 trillion, about USD4.1 trillion will be allocated for energy infrastructure and USD2.5 trillion for transport infrastructure. Tahilyani, Tamhane and Tan (2011) estimate that about USD1 trillion of USD8 trillion for the infrastructure projects will be open to private investors under public–private partnership arrangements.

To finance its infrastructure development, ASEAN member countries and India need to allocate more public resources, improve efficiency of public funding and increase private enterprise participation in this sector. Selectivity is important for optimum use of limited public resources. ASEAN and India need to build appropriate mechanisms to mobilise their huge savings and to channel them into priority infrastructure investment. Several options can be considered, including improving institutional intermediation



Source: ESCAP, 2011: 123.

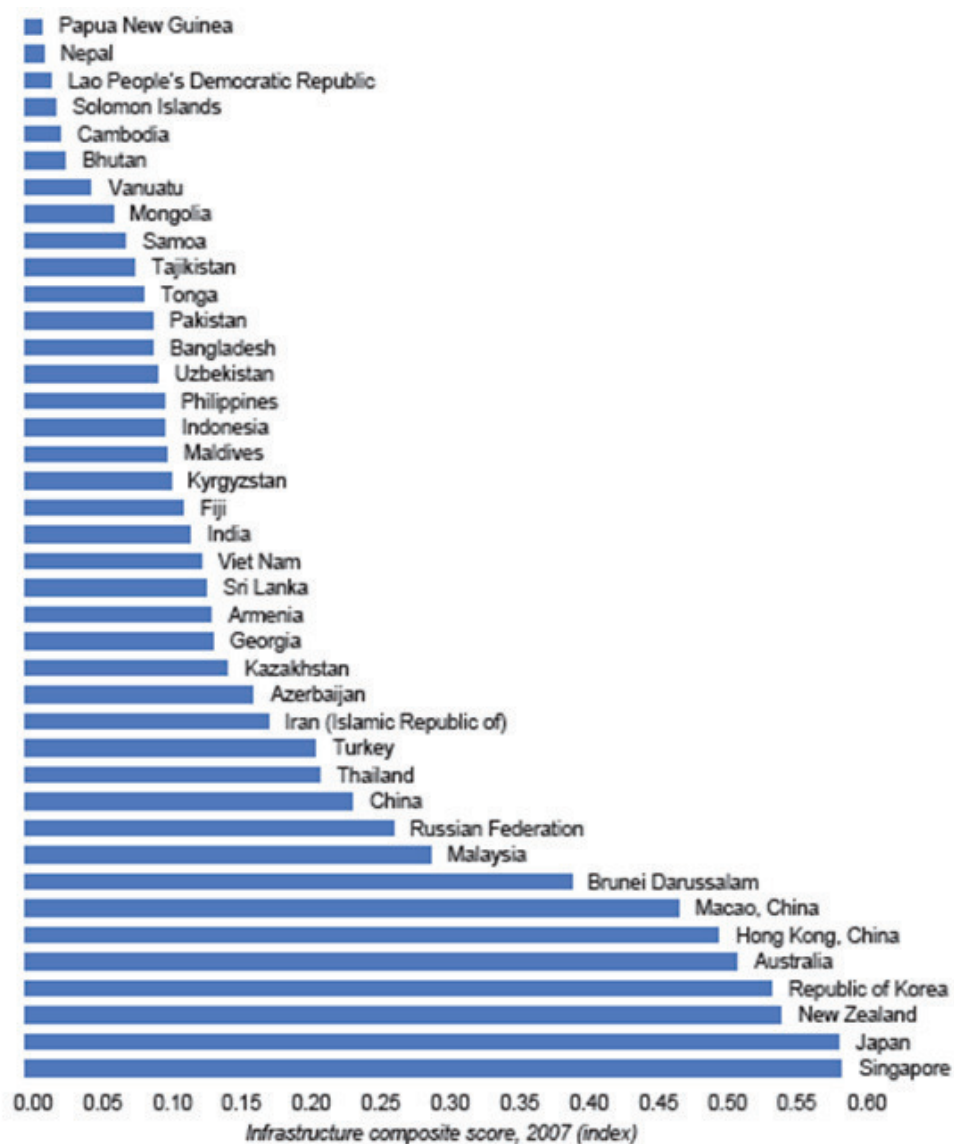
Figure 7. Growth of road and rail, 1993-97 to 2003-07



Source: ESCAP, 2011: 126

Note: IDN = Indonesia; IND = India

Figure 8. Air transport indicators, 1993-97 to 2003-07



Source: ESCAP, 2011: 147

Figure 9. Gaps in infrastructure development

or public–private partnerships. The role of governments in the region will be critical to provide direction and incentives for private-sector participation. It is important to note that, even though the use of public–private partnership seems promising, in reality this mechanism is very complex and costly. Risk allocations are challenging because of the public nature of infrastructure services provision and the inherent long-term uncertainties. Governments are often unable to gain a better bargaining position without good performance and a good track record. In addition, many governments have vague public–private partnership policies, which inhibit private participation (Nishizawa, 2012). Foreign investors also worry about investing in infrastructure because some countries frequently impose capital controls or have a weak regulatory or legal system.

IV. STRATEGIES TO PROMOTE CONNECTIVITY

To promote connectivity between ASEAN and India, the leaders in the region should focus on removing the infrastructure bottlenecks. They need to set priorities across the region and to decide which transport modes to develop that take into account the diversity of geographical conditions in their respective areas. Kimura and Umezaki (2010) point out that ASEAN–India connectivity should be based on a multi-modal, multi-functional and multi-tier approach

in which all modes of transport; land, maritime and air, need to be considered. This approach can mitigate the burden of dependence on a single-mode transport system and can cope with the diversity of geographical conditions.

According to the *Master Plan on ASEAN Connectivity* (ASEAN, 2011), there is a priority agenda for building a multi-modal transport system. This includes developing the India–Myanmar–Thailand trilateral highway and extensions to Laos and Cambodia; promoting private-sector participation in highway projects, in port and coastal shipping projects in India, and in the development of roads and railways in the member countries of ASEAN; strengthening cooperation in shipping through, among other ways, the formation of an ASEAN–India maritime association to provide an institutional basis to coordinate and improve ASEAN–India cooperation in marine transport; and to strengthen ASEAN–India air connectivity by working towards greater liberalisation of air services between ASEAN countries and India.

ASEAN and India can promote the connectivity further by establishing closer links along industrial corridors with the regional connectivity master plan. In this sense, the development of ASEAN–India connectivity should be linked with the production base. By doing this, the region can transform its transport corridors into economic

corridors. For example, one can see the importance of establishing a strong link between the Indian national connectivity master plan and the development of the Delhi–Mumbai industrial corridor. The two should be planned holistically. In addition to this, the Indian national connectivity plan should be synergised with the subsets of the master plan for ASEAN connectivity, such as the Mekong–India Economic Corridor (MIEC) and the trilateral highway that is to link India, Myanmar and Thailand.

Despite the emphasis on road connectivity in the region, Kimura and Umezaki (2010) point out that ASEAN should develop maritime connectivity because it will have larger positive effects on economic growth and narrow the development gaps in the region. Better maritime connectivity will improve the connectivity among various economic corridors. This in turn will promote deeper economic integration within ASEAN and between ASEAN and India.

To build maritime connectivity between ASEAN and India, there is a need to speed up the establishment of the Mekong–India Economic Corridor (MIEC). The MIEC will expand trade between ASEAN and India through a direct sea link. In this corridor, Chennai (in India) and Dawei (in Myanmar) are foreseen to become the connecting nodes between ASEAN and India. In this framework, Chennai and Dawei will function as core nodes

that link various economic corridors in India and in ASEAN countries and promote regional economic growth.

Chennai is one of the major commercial cities in India and one of the major ports. It is the second largest exporter of information technology and business process outsourcing services. Chennai hosts a major portion of India's automobile manufacturing industry. Meanwhile, Dawei is a small, relatively underdeveloped port city, thirty kilometres from the Andaman Sea. Dawei needs a deep sea port to accommodate the operations of container shipping. Considering the critical role of maritime connectivity between ASEAN and India, there is a need to focus on the development of port infrastructure in Dawei so that it can keep up with the development of Chennai port.

Rapid growth of Chennai and surrounding areas should be complemented with significant development in Dawei to enable it to be the gateway connecting ASEAN and India. The development of a deep sea port in Dawei will be a key element for establishing the essential sea link between ASEAN and India. Subsequently, to speed up the development of a deep sea port in Dawei, there is a need for coordinated policies on investments and industrial development in this area. To improve manufacturing activities in Dawei, the government of Myanmar should offer incentives to induce foreign investment to this

area. ASEAN and India could help by mobilising resources to attract more investment to Dawei and they could also encourage more TNCs, which would boost trade and investment, and help develop an ASEAN–India international production network. In short, connectivity should be linked to the production base.

Kimura and Umezaki (2011) also emphasise the strategic role of development in Dawei, Myanmar and Guwahati (in Northeast India) to be the core of the regional strategy to facilitate ASEAN–India connectivity. The two cities are perceived to be the key components for this strategy. Dawei will be the maritime link to India through Chennai. Meanwhile, Guwahati, considered the most important trade hub in Northeast India, will be vital for the connection between mainland India and Southeast Asia. The city is a major wholesale distribution centre, a marketing hub, and also a retail hub for the northeastern region. Guwahati is also expected to join the regional production network as a new connecting node for regional production networks.

The challenge is that there are large infrastructure gaps in Dawei and Guwahati. The physical infrastructure in these two cities needs to be improved so that they can expand their economies and increase their participation in the regional production networks. To join the regional production network as a new connect-

ing node, Guwahati should improve its transport and logistics efficiency and its connectivity to other regions in India and also to ASEAN.

Finally, the full effect of regional economic integration can only be achieved by improving physical and institutional connectivity. As Kimura and Umezaki (2010) point out, roads and ports infrastructure are often not sufficient to improve regional connectivity without complementary institutional arrangements. In this case, ASEAN and India should improve the institutional arrangements to facilitate the movement of goods and services across borders. India would need to lower its protectionist trade barriers, which, in general, are higher than those of ASEAN countries. Thee (2012: 73) provides an example of the opacity of India's domestic regulations relating to foreign trade and foreign investment. Several sectors, including agriculture, textiles, garments, and automotive, are still protected by high tariffs. If restrictions on the tradable goods remain, there will be no significant benefits from ASEAN–India connectivity.

V. THE WAY FORWARD

Despite their great potential, current economic relations between India and ASEAN are still limited. There are several constraints to further economic cooperation between the two economies. One might be that Indian investors are still largely focused on their

large, rapidly growing, domestic market. In this sense, the Indian economy is relatively more inward looking than those of ASEAN countries. By lowering its tariff and other barriers, India would be able to have greater access to ASEAN markets. Another constraint is inadequate infrastructure, national and regional, which hinders connectivity between ASEAN and India, especially physical connectivity.

ESCAP (2011) points out that enabling regional connectivity requires strong regional institutions for planning, managing and funding major international initiatives (including physical infrastructure, trade, transport and harmonisation of rules and regulations). There is also a need to provide specific support to the least developed member countries and states to enable them to take full advantage of better regional connectivity.

There are considerable physical and institutional challenges to building a competitive ASEAN–India production network. Investing more in hard infrastructure, such as roads and ports, is not sufficient without complementary institutional improvements. The latter should take the form of improved policies and regulations to facilitate efficient international movement of goods, services and people.

In addition, there is also a significant challenge to build more efficient shipping network services in the region, given the varying standards of port infrastructure development.

In this area, India and some ASEAN member countries need to improve shipping connectivity to be as competitive as China's, Hong Kong's and Singapore's shipping liners.

There is also a need to improve the capacity of all the gateway ports. As competition among ports to attract shipping lines and handle more cargos increases, regional ports in ASEAN member countries and India must strive to build on their strengths and continue to improve their productivity and efficiency. Several ASEAN member countries and India need to improve port services and improve their institutional efficiency, including operational efficiency, in such a way to be on par with globally competitive ports, such as those of Singapore, China and Hong Kong.

It is critical that ASEAN and India form stronger regional cooperation programs to address infrastructure needs in the region, including institutions and policies that support such programs. India and ASEAN have significant socio-economic and geographical diversity. In view of this, there is a need to build an integrated regional transport network between India and ASEAN member countries. The plan to develop Asian connectivity should be complemented with the development of cross-border transport projects and institutional frameworks to facilitate movements of goods, services, capital and people.

There is a need to synergise various types of cross border infrastructure development to maximise the benefit from regional connectivity measures. ASEAN and India need to deal with the missing links and fulfil investment needs from a region-wide perspective. Myanmar and the northeastern region of India need significant investment to address their significant infrastructure needs (railways, roads, ports). Infrastructure investment in these strategic locations should be made without delay because the lack of investment is constraining the connectivity between ASEAN and India.

Funding is always a challenge. Clearly, there is a need for allocating more public resources in all ASEAN member countries and in India. Allocation of public resources needs to be very selective so that it will improve efficiency in the use of public funding for priority infrastructure. Considering that public resources are not even enough to fill the funding gap, there must be a clear strategy on how to encourage more private-sector participation. Public-private partnerships have been increasingly used to finance infrastructure development (Nishizawa, 2011). Despite their potential, however, such partnerships are very complex and likely to be costly. Risk allocation is always the key challenge. Uncertainty about the equitable allocation of risk is a big constraint for public-private partnerships and it would encourage investment if the

uncertainty were to be reduced or removed. There is a negative perception that public-private partnerships benefit the private sector to yield profit at public expense. Such partnerships often have very commercial contractual arrangements and operational modes and are often very politically oriented. To be successful, governments must set clear directions and incentives for the private sector to participate. Government and private sectors need to negotiate the uncertainties and risks involved because of the long-term nature of the infrastructure projects and the public nature of infrastructure services provision. Despite these challenges, the use of public-private partnership for infrastructure investment should be embraced. But one needs to be aware that it is not a panacea: public-private partnership will only work if the inherent conflict between public and private sector interests, most notably in price setting, could be effectively negotiated.

Going forward, ASEAN and India need to develop a mechanism for financing their large investment needs for infrastructure development. There is a need to create a regional infrastructure development fund to use its large saving and foreign exchange reserves for infrastructure investments. Given stiffening global competition and the increased requirement for regional cooperation, ASEAN and India need to develop more effective tools to improve connectivity with each other.

The success will be dependent on the creation of stronger mechanisms for cooperation. In addition, there is a need to improve India's trade and transport institutions to complement the physical connectivity. There is a need for synergising regional infrastructure initiatives with the develop-

ment plans of India and the ASEAN member countries (De, 2010). This will need a common shared vision among the ASEAN member countries and India. Both ASEAN and India need to have strong political commitments to improve trade and transport facilitation with each other.

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