



A comprehensive economic partnership between India and Japan: Impact, prospects and challenges[☆]



Biswa Nath Bhattacharyay^{a,1,*}, Kakali Mukhopadhyay^b

^a Asian Development Bank (formerly), Manila, Philippines

^b McGill University, Montreal, Canada

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ABSTRACT

This paper examines the benefits and challenges of the 2011 Comprehensive Economic Partnership Agreement (CEPA) between India and Japan, specifically the ways to maximize gains from their complementary economies, trade and FDI relations. It also measures the partnership's economy-wide impact empirically, and its role in regional and global integration. An analysis of the trade intensity indices shows that the bilateral trade flow is small considering the other country's importance in world trade, suggesting the existence of great potential for improving trade relations. The computable general equilibrium (CGE) analysis of the economy wide impact of the CEPA suggests that tariff reductions will create a marginal increase in output growth for both India and Japan as compared to the business as usual scenario. In terms of the effect on exports, India's exports to Japan would increase more than those of Japan to India while positive net welfare gains are expected for both countries as a result of trade liberalization. This is in contrast to the study by Ahmed (2010), which finds welfare gains only for Japan, not for India. Furthermore, one of the striking results of the paper is that Japan will not reduce its heavy reliance on the Chinese market, though India will. In general, India, compared to Japan, will gain more, if CEPA materializes by 2020. Japan too will have welfare gains in spite of opening up the agriculture sector with 100% tariff reduction by 2020. Both countries need to accelerate structural reforms to remove the border barriers in addition to reducing tariffs, in order to reap maximum benefit of their economic partnership.

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1. Introduction

Bilateral trade between Japan and India has been expanding in the recent years. On one hand Japan intends to strengthen its economic partnerships with the Asian countries with which it has deep interdependent relations, not only through the expansion of trade, investment and services but also through the harmonization of rules and regulations in various fields and facilitation of the movement of people. On the other hand, India's growing economy in recent years has been adapting its

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* Corresponding author. Tel.: +91 8420450802.

E-mail addresses: dr-biswa@yahoo.com (B.N. Bhattacharyay), kakali.mukhopadhyay@mcgill.ca (K. Mukhopadhyay).

¹ The paper was prepared when the author was an Advisor with Asian Development Bank

foreign policy to increase its global influence and status and to meet the challenges of the 21st century (Rajamohan, Rahut, & Jacob, 2008).

India and Japan complement each other in many areas, and share common interests in trade and investment promotion, securing energy resources, environmental protection, climate change and fighting international terrorism among others. In view of this, there is a huge opportunity to enhance trade and investment between the two countries. A strategic relationship is beneficial not only for these two countries but also for the whole Asian region. After about four years of negotiations, the Comprehensive Economic Partnership Agreement (CEPA) between India and Japan was finally concluded in October 2010 and was finally signed on February 16, 2011. The agreement elevated the strategic and global partnership between Japan and India to a new level.

The India–Japan CEPA is expected to develop areas of potential mutual complementarities, strengthen the bilateral economic relationship and promote economic development by increasing the cross-border flows of goods, persons, investment and services. It is also expected to create new business opportunities, enhance competitiveness of the private sectors of both countries, and encourage closer partnership between the pair's private sectors, from small and medium enterprises (SMEs) to infrastructure-related enterprises. CEPA's implementation will strengthen the foundation for the economic development of Japan and India through closer cooperation between the two countries in various fields, and will make maximum use of respective competitive advantages to promote the development of both economies (Ministry of Foreign Affairs of Japan, 2010).

This paper examines the prospects and challenges of forging a deep and comprehensive India–Japan economic partnership and ways to maximize gains from their complementary economies, trade and investment relations. The paper also attempts to measure empirically the economy-wide impact of tariff reductions through a computable general equilibrium (CGE) model. Lastly, the paper looks into the role of the bilateral partnership in promoting India and Japan's regional and global integration.

The rest of the paper is organized as follows. Section 2 discusses the prospects of deepening economic, particularly trade, relations between India and Japan. It looks at the economic trends and characteristics of the two countries and demonstrates the complementarities of the economies. Section 3 presents the barriers, impediments and challenges to deeper trade and economic cooperation. Section 4 examines the India–Japan economic cooperation. It begins with a discussion of Japanese official development assistance (ODA) to India and moves on to analyze Japan's free trade agreement (FTA) policy, and India's Look East Policy and the development of the Japan–India CEPA. Section 5 evaluates the economy-wide impact of the tariff reductions in the proposed CEPA between India and Japan using a CGE analysis, finally, Section 6 discusses the dimensions of India–Japan cooperation in the major, common regional and global issues as well as way forward, including the actualization of future prospects and ways and means of meeting the challenges.

2. Prospects for deeper trade relations

For a long period, especially until the 1990s, India–Japan bilateral trade was stagnant without exceeding the US\$4 billion mark (Rajamohan et al., 2008). This may be due to the fact that India's trade was primary directed towards Europe and the US markets because of its cultural and colonial past. The stagnation in the economic relationship between India and Japan was finally broken when India embarked on major economic reforms by liberalizing the country's economy and adopting an open-door “Look-East” policy that led to a gradual acceleration of bilateral business relationships in 1991.

Despite robust growth in the overall trade of both India and Japan with the world in recent years, the bilateral trade between the two countries has remained quite low (Rajamohan et al., 2008). Table 1 shows the steady rise of bilateral trade between the two countries between Financial Year (FY) April 2005–March 2006 and 2012–13. Total bilateral trade exhibited significant increase as 2012–13 level registered around three-fold increase compared to 2005–06 level. India's export to Japan and its import to Japan witnessed about three-fold increase during the same period. The bilateral trade deficit of India with Japan has increased by four times during this period from \$1.58 billion in 2005–06 to \$6.31 billion in 2012–13.

While India's trade with Japan almost tripled in 2012–13 compared to 2005–06 level, it remains very small compared with that with other countries exhibiting significant potential for trade expansion. The share of India's export to Japan to

Table 1
Trends in bilateral trade between India and Japan (US \$ Billion).

Financial year	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13
India's export to Japan	2.48	2.87	3.86	3.02	3.63	5.09	6.33	6.10
India's total export	103.09	126.41	163.13	185.29	178.75	251.13	305.96	300.30
% Share export	2.41	2.27	2.37	1.63	2.03	2.07	2.07	2.10
India's import from Japan	4.06	4.59	6.32	7.89	6.73	8.63	12.10	12.41
India's total import	149.17	185.73	251.65	303.69	288.37	369.77	489.32	491.90
% Share of import	2.73	2.48	2.52	2.6	2.34	2.33	2.47	2.52
Total Trade	6.54	7.46	10.18	10.91	10.36	13.72	18.43	18.51

Source: Based on CEIC Database (2014).

India's total export has declined from 2.47% in 2005–06 to 2.10% in 2012–13 whereas share of import decreased from 2.73% to 2.52% (see Table 1).

In terms of the impact of the CEPA Signed between India and Japan in February 2011, Japan–India bilateral trade increased by 34.3% to reach \$18.43 billion in FY April 2011–March 2012 from \$13.72 billion in 2010–11. India's exports to Japan grew by 24.36% reaching \$6.33 billion from \$5.09 billion compared to the growth of 40.2% in its imports from Japan reaching \$12.10 billion from \$8.63 billion in 2011–12 compared to 2011–10 respectively. This shows that the impact was more beneficial to Japan as its export to India increased at a faster rate compared to India's export to Japan. However, the expansion of trade stagnated in 2012–13 reaching \$18.5 billion with \$6.10 billion of India's exports to Japan and \$12.41 billion of imports from Japan.

The reasons behind the above unexpected trends in the bilateral trade between India and Japan are as follows. India offers a large domestic market base for Japanese companies. Japan is a relatively labor-scarce, capital and technology abundant country that complements India's rich spectrum of human capital and natural resources. India's prowess in the software sector lends synergy to Japan's excellence in the hardware sector. India's abundance of raw-materials and minerals matches well with Japan's capabilities in technology and capital to produce knowledge intensive manufactured goods. The majority of investments of Japanese companies in India have been in traditional fields like automobiles, auto parts and electronics, although some companies have invested in pharmaceuticals, health drinks, pulp and rice processing. Japan's small and medium enterprises have also started to discover India as the new growth market. The mutual synergies between businesses in the two countries are the main driving initiatives (Mancheri, 2010).

2.1. Expanding Japan–India bilateral trade

Examining the trade intensity is another perspective in understanding trade relations between two countries. The trade intensity index (TII) is used to know whether the value of trade between two countries is greater or smaller than the expected on the basis of their importance in world trade. The World Bank (2008) defined it as the share of one country's exports going to a partner divided by the share of world's exports going to the partner, calculated as:

$$T_{ij} = \frac{(X_{ij}/X_{it})}{(X_{wj}/X_{wt})} \quad (1)$$

where, X_{ij} and X_{wj} are the values of country i 's exports and of world exports to country j and where X_{it} and X_{wt} are the total exports of country i and the world, respectively. An index of more (less) than one Eq. (1) indicates a bilateral trade flow that is larger (smaller) than expected, given the partner country's importance in world trade. Similar formula is applied on import to calculate import intensities.

Table 2 shows that the trade intensity between India and Japan as measured by TII has a decreasing trend. This confirms that the bilateral trade flow is getting smaller contrary to expectation. Given the increasing role of India to Japan and vice-versa, the results suggest the existence of great potential to further improve these two countries' trade relations through integrating India in the East Asian production network.

Japanese manufacturing industry has transformed significantly since the 1990s. Its impact is evident on its overall export performance. During 1990–2005, the share of intermediate goods export of Japan (including both processed inputs and parts and components) increased from 48% to about 67%, 47% of which went to emerging East Asian economies,¹ particularly People Republic of China (PRC); Republic of Korea; and Taipei, China. The share of India is insignificant in this surging volume of intra-industry trade. The reason is that India has not been able to fully join the East Asian production networks and supply chains, such as high-value added parts and components industry. As a result, India has not seen an expansion of vertical intra-industry trade. India–Japan trade cooperation is expected to facilitate India's integration into East Asia's regional production networks (Kalirajan & Bhattacharya, 2008). In the future, India is expected to have an increasing role in the East Asian production networks, particularly in providing intermediate goods in view of its increased competitive advantage.

Furthermore, India and Japan has the potential to increase trade in services. Japan boasts of relatively abundant capital, technological skills, and new product development. Japan is the world's second-biggest spender on technology after the United States. The total Information Communications Technology (ICT) outsourcing market in the country grew to US\$15 billion in 2005 and the market is forecast to grow 5.8% per year through 2010 to US\$19.8 billion (Jestin, 2006). On the other hand, India's strength lies in its knowledge-based services (that have gained international recognition in recent years), low cost of production, and competitive industries. At present, India is the leading destination for the outsourcing of ICT services, software development, call-center support, and other back-end business operations which include data entry and handling, payroll management, accounting and bookkeeping, and ticketing services. As its share in the global software market is still small, there is a strong potential for further growth. India's software industry has been diversifying into new areas which have good growth potential, and its hardware industry is also expanding (Sen, Asher, & Rajan, 2004).

India's cooperation with Japan which has technology and capabilities will create synergies for mutual benefits in this area. In terms of industry, India's world class excellence in the software industry can complement Japan's excellence in hardware.

¹ East Asian economies include Republic of Korea, Taipei, China, Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam, People's Republic of China (PRC), and Hong Kong, China.

Table 2
Trade intensity indices of India and Japan, 1990, 2000, 2009.

Year	Export intensity		Import intensity	
	T _{ij}	T _{ji}	TM _{ij}	TM _{ji}
	(India–Japan)	(Japan–India)	(India–Japan)	(Japan–India)
1990	1.30	0.84	0.88	1.63
2000	0.68	0.62	0.50	1.01
2009	0.53	0.65	0.65	0.63

Where i = India and j = Japan.

Source: Authors' calculation.

India enjoys huge surplus of raw materials and minerals compared to Japan's well-known capabilities in technology and capital in the high value-added manufactured goods (FICCI, 2007; Khanna, 2006; Ministry of Commerce and Industry, Government of India, MCNI, 2008).

3. Barriers and impediments to deep bilateral trade and economic cooperation and integration

In addition to high tariff which will be reduced through the implementation of CEPA, non-tariff barriers inhibit the achievement of full bilateral trade potential between India and Japan. This section examines major barriers and impediments to enhanced trade and economic cooperation and integration.

While deep bilateral economic cooperation can be beneficial for both India and Japan, there are differing levels of openness and market orientation of India compared with other countries, in particular to that of PRC. India has one of the highest average tariff rates and it ranks 139th on the ease of doing business (World Bank, 2007b). In addition to the tariff reduction through the CEPA, India and Japan need to undertake urgent reforms concerning trade facilitation and behind the border barriers to enhance trade and economic cooperation and integration.

3.1. Barriers faced by Japan in India

This section reviews some factors often considered by Japan as impediments for undertaking business activities involving India. Global investors have cited bureaucratic delays as one of the main reasons for not wanting to come to India. Other barriers include: (i) poor governance and red tape; (ii) weak infrastructure facilities; (iii) rigid labor law; and (iv) language and culture.

Regulatory frameworks. Surveys of Japanese companies operating in India have often revealed that they are making profits and are actually considering expanding operations. Most Japanese investors feel that ground-level issues like labor laws, taxes and legal and regulatory frameworks are high barriers in India. Procedural delays are considered as a major discouraging factor for potential investors.

Infrastructure. According to Japanese investors, overall infrastructure facilities are still lacking in India. Poor infrastructure has emerged as the most important constraint to India's growth. The infrastructure financing needs were estimated to be around US\$200 billion per year for energy, transport, telecommunications, water and sanitation during 2010–20 (Bhattacharyay, 2010). The public sector alone will not be able to meet India's huge infrastructure needs and therefore, requires substantial private capital to meet the financing gap and acquire new technology and management skills. In this area, Japanese companies as well as the Japan International Cooperation Agency (JICA) the bilateral development institution of Japan, and Japan Bank of International Cooperation (JBIC) can play an important role in developing and financing infrastructure and providing technology and know-how.

Labor disputes. Labor disputes have been a big concern for Japanese firms investing in India. It is imperative for India to take steps to improve the competitiveness and productivity of Indian firms through revision of the Labor Act (Economy Watch, 2008). India's Labor Ministry statistics show that the strikes are becoming more prolonged. Moreover, India's restrictive labor laws often force employers to use contract labor through third-party contractors, which often creates problems (Kitazume, 2008).

Language. Another major barrier that restricts easy and fluent interaction between business representatives of India and Japan is language (Ministry of Foreign Affairs, Japan, 2006). Unlike the traditionally popular foreign language among Indians, such as English, French and German, the growth of interest in the Japanese language took place only in the late 1990s. Indian IT industry is geared up to meet largely the needs of the English-knowing countries, but unless the industry develops language capacity; its export market will not expand.

3.2. Barriers faced by India in Japan

This section looks at some barriers Indians may face in doing business with Japan.

Demographic differences. Although these may not be impediments as such, the economic and demographic climate of the two countries is quite different, and this may have bearing on attitudes and opportunities to carry out business. In contrast to the young and growing Indian population and economy, Japan faces a number of challenges to sustained economic growth, such as deflation, rising public debt, widening disparities among different segments of the society, and the rapidly aging and shrinking population (OECD, 2008a,b).

Tariff and non-tariff barriers in agriculture. Agricultural goods, which India can be an efficient supplier of, are imported by Japan in large quantities (PIB, 2008). Several tariff as well as non-tariff barriers on agricultural items make it difficult to penetrate the Japanese market (Singh, 2008). Japan's tariffs on many agricultural commodities have remained high. The average applied MFN (most favored nation) tariff for agricultural products stands at 18.8% as compared to the overall mean tariff of 6.5%. Many of Japan's sanitary and phytosanitary requirements for export of agricultural products go beyond even international standards (Singh, 2008).

Rigid immigration policies. The rigid immigration process in Japan is another factor. Japan has highly restrictive labor migration policies, although some back-door entry through trainee programs is possible (ADB, 2008a,b). The Ministry of Justice published the Second Basic Plan for Immigration Control in 2000 that provided new guidelines for immigration control and acceptance of foreign workers into Japan.

Language and education. As a means of integrating the multi-ethnic population, Japanese language education is emphasized and foreigners often have problems integrating within the system. Education centers on the development of native Japanese personnel, and multiculturalism are not traditionally emphasized in the educational system. (Sakanaka & Johnston, 2007).

Business practices. Another issue that Indian businessman has to face is the difference in Japanese business and management practices and systems. Indians are more familiar to western business and management practices.

4. Characteristics of the India–Japan CEPA

This section presents the characteristics, schedule and depth of their CEPA. Table 3 shows the impact of the CEPA on various sectors and products.

The leaders of Japan and India declared the successful conclusion of negotiations for the Comprehensive Economic Partnership Agreement (CEPA or EPA) in October 25, 2010, and finally signed it in February 16, 2011. The agreement would eliminate tariffs on 90% of Japanese exports to India (e.g., auto parts and electric appliances) and 97% of imports from India, (e.g., agricultural and fisheries products) until 2021 (see Table 3). There will also be continuing talks on lifting employment restrictions to allow Indians to work in Japan as nurses and care givers (IANS, 2011). Further, Indian Ministry of Commerce proposed a revolving fund with Japan, amounting to US\$9 billion, to help finance the Delhi–Mumbai industrial corridor (ITCSD, 2011). The details about the coverage of the CEPA are available in Embassy of Japan in India (2010).

Moreover, India has links to regional/international markets through membership of regional integration frameworks such as the South Asian Association for Regional Cooperation (SAARC), Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and ongoing The Regional Comprehensive Economic Partnership (RCEP) under East Asian Summit (EAS). By diversifying their range of services and opening offices in other developing countries to reduce costs and meet customer demands, Indian firms are responding to increasing competition (ADB, 2008a,b). In addition, India itself has a huge domestic market of around 1.1 billion people with fast growing middle class consumers as well as large and highly-skilled, English-speaking labor force. Given this manpower, encouraging the penetration of more Indian companies into the global market for business process outsourcing and ICT would complement the needs of the Japanese companies.

Table 3
Schedule of liberalization of products by Japan and India.

Sector	Name of products	Schedule of elimination
Liberalization by Japan (Almost all industrial products will be eliminated on entering into force)		
Farm products	Durian (2.5%), Asparagus (3%), etc. Capsicum (red pepper) other than large bell type (3%), Sweet corn (6%), etc. Curry (3.6%), Black Tea (for beverage, exceeding 3kg) (2.5%)	Elimination on entering into force Elimination in 7 years Elimination in 10 years
Forest products	Lumbers (3.6%)	Elimination on entering into force
Marine products	Shrimps and prawns (1–2%) Octopus (frozen)(5%) Shrimps and prawns (prepared) (3.2–5.3%)	Elimination on entering into force Elimination in 7 years Elimination in 10 years
Liberalization by India (More liberalized than other Indian FTA/CEPAs)		
Industrial products	Car muffler (10%) Diesel engine (12.5%) Gear box (12.5%) Steel sheet, Steel plates, Alloy (5%) DVD players, Video cameras (10%)	Elimination in 10 years Reduction down to 5% in 6 years Reduction down to 6.25% in 8 years Elimination in 5 years Elimination in 10 years
Farm products	Chinese yam, Peach, Strawberry, Japanese persimmon (30%)	Elimination in 10 years

Source: Embassy of Japan in India (2010).

5. Impact of proposed India–Japan CEPA: A CGE analysis

In this section, the impact of the CEPA between India and Japan is evaluated using a CGE analysis. Though the CEPA deals with many aspects as discussed earlier, our exercise focuses only on trade. The implications of the sectoral tariff reduction have been estimated.

5.1. Previous studies

Though there have been some studies on the impact of proposed FTA between Bay of Bengal Initiative for Multisectoral Technical and Economic Cooperation (BIMSTEC) and Japan (Bhattacharya & Bhattacharyay, 2007; Strutt, 2008) and between South Asian and Southeast Asian economic integration (Wignaraja, Morgan, Plummer, & Zhal, 2014) specific studies focusing on India and Japan is rare in the literature.

A study by Kalirajan and Bhattacharya (2008) made an empirical estimation of trade potential by 10 sectors or commodity groups. In terms of indices of export efficiency² for major 10 commodity groups, India has achieved, on an average only 60% of its potential, while Japan has achieved 64%. The trade potential results show that India's competitive edge is often in raw materials while that of Japan consists of nuclear reactors, boilers and machines, transport-related vehicles, and electrical machinery and equipment. Moreover, the study suggests that a bilateral FTA, if only tariff-based, would probably not have a significant impact on India as Japan's average tariff is quite low compared to that of India. Better results can be expected if the FTA also involves non-tariff barriers (NTB) which include technical barriers such as various issues regarding standards, technical regulations and conformity assessment procedures as illustrated in sanitary and phytosanitary measures (SPS) to trade.

Recently a work has been done by Ahmed (2010) to investigate the potential economic impacts of prospective India–Japan FTA in goods using partial equilibrium (SMART) model and Global computable general equilibrium (GTAP) model. The results reveal that both India and Japan's consumer's surplus will be increasing as result of this FTA. However, the GTAP analysis shows that India–Japan FTA would result in welfare loss for India while positive welfare gains for Japan. This study also indicates the possibility of increase in bilateral exports. The simulation exercises are done on 2004 data of GTAP Version 7 without considering any future projection.

5.2. Framework of the CGE analysis

To estimate the impact of proposed trade agreement between India and Japan at 2020, the current paper has used a widely recognized model called global CGE known as GTAP.

In brief, the structure of the GTAP model (for details see Hertel, 1997; Mukhopadhyay & Thomassin, 2010a) includes industrial sectors, households, governments and global sectors (transport and banking) across countries. Countries and regions in the world economy are linked together through trade. Prices and quantities are simultaneously determined in both factor markets and commodity markets. Five factors of production are included in the model: labor—skilled and unskilled, capital, natural resource and land. In the model, firms minimize the cost of inputs given their level of output and fixed technology. The production functions used in the model are of a Leontief structure. This means that the relationship between fixed and intermediate inputs is fixed. Similarly, the relationship between the amount of intermediate inputs and outputs is also fixed. Firms can purchase intermediate inputs locally or import them from other countries.

Household behavior in the model is determined with an aggregate utility function. This utility function includes private consumption, Government consumption and savings. Current Government expenditures are covered by the regional household utility function as a proxy for Government provision of public goods and services.

Domestic support and trade policy (tariff and non-tariff barriers) are modeled as ad valorem equivalents. These policies have a direct impact on the production and consumption sectors in the model. Changes in these policies have an impact on the production and consumption decisions of sectors in the model.

There are two global sectors in the model: transport and banking. The transport sector takes into account the difference in the price of a commodity as a result of the transport of the good between countries. The global banking sector brings into equilibrium savings and investments in the model. In equilibrium, all firms have zero real profit, all household expenditures are within their budget, and global investments equal global savings. Changing the model's parameters allows one to estimate the impact from a country's or region's original equilibrium position to a new equilibrium position.

Closure plays a very important role in GTAP modeling. Closure is the classification of the variables in the model as either endogenous or exogenous variables. Endogenous variables are determined (solved for) by the model and exogenous variables are predetermined outside the model and can therefore be changed from the outside, or shocked. Closure can be used to capture policy regimes and structural rigidities. The closure elements of GTAP can include population growth; capital accumulation, including FDI; industrial capacity; technical change; and policy variables (taxes and subsidies). The number of endogenous variables has to equal the number of equations. This is a necessary but not sufficient condition for a solution. It

² The index indicates the effective negative influences of “behind the border” constraints (under the control of home country; other than tariffs and NTBs) for the existing levels of implicit “beyond the border” constraints (those under control of partner countries) on export flows between countries.

may be general equilibrium (GE) or partial equilibrium (PE) depending on the choice of the exogenous variables. The standard GTAP closure has the following characteristics: all markets are in equilibrium, all firms earn zero profits and regional household expenditures are on budget constraint.

5.2.1. Data and scenario development

Version 7 of the GTAP model and database based on 2004 are used in this study to undertake the analysis (Narayanan & Walmsley, 2008). This version of the model includes 57 commodities (sectors) and 113 regions. The 57 industrial sectors have been aggregated to 28 sectors in each country and region. The 113 regions have been aggregated into 7 regions, with an emphasis on the countries under current exercise. This aggregation includes two individual countries – India and Japan, and five other regions – Rest of OECD member countries, ASEAN member countries, PRC, Rest of Asia and Rest of the world. Data for 28 sectors were included for all regions in the model.

Two scenarios have been attempted: (a) Business as Usual (BAU), and, (b) Tariff Reduction scenario. The year 2004 is used as base year and macroeconomic shocks are applied—changes in the values of the macroeconomic variables (GDP, population, skilled and unskilled labor, and capital) to generate a new economy for 2010, and 2020. In this analysis the tariff structure for all regions and countries remained unchanged from 2004. The BAU remains the same throughout the analysis and is the base from which the other scenarios will be compared. The tariff reduction has been done for India and Japan, while rest of the regions is not under agreement.

The simulation exercise describes scenario reductions in import tariffs within India and Japan considering selected sectors. The sectors are identified on the basis of the coverage of the India and Japan CEPA and also the trade intensiveness as discussed earlier. The reduction rate for agriculture and industrial sectors is 100% applied within 2020. The above scenario description requires a change in the development of the GTAP model to undertake the analysis. In this case, the updating of the model to 2020 would require two discrete steps (2004–10, 2010–20). There are two general approaches to updating the model; a recursive process and the use of dynamic GTAP. For this work, recursive updating process was considered.

The recursive updating process is based on forecasting the economies of the countries and regions by exogenously shocking the baseline model with projections of selected macroeconomic variables. These projections of the macroeconomic variables are taken from various sources (for details see; Dimaranan, Ianchovichina, & Martin, 2007; Mukhopadhyay & Thomassin, 2010b; United Nations, 2006; World Bank, 2007a) to predict the future direction and strength of an economy. Total factor productivity is endogenously determined to accommodate the combination of these exogenous shocks. This approach allows one to predict the level and growth of GDP as well as trade flows, input use, welfare and the wide range of other variables. Instead of considering capital accumulation, the extra change in investment in the period resulting from trade liberalization shocks along with the baseline capital forecast for $t + 1$ was added.

The GTAP model simulates the impact of trade liberalization (reductions in import tariffs and export subsidies). It estimates how trade flows will change as import tariff restrictions and export subsidies are reduced. As the trade flow between countries changes as a result of trade liberalization, economic growth will be impacted, so will be sectoral output, trade and welfare.

5.3. Empirical results

Output growth. Table 4 records the baseline projection of the global economy and the simulated result of the tariff reduction between India and Japan during 2010–2020. An interesting feature is observed. The growth rate varies across regions in business as usual case. Rest of the world (ROW) has shown highest growth (70.58%) followed by ASEAN (61.78%) and PRC (55.24%) while moderate growth rate is observed for India (35.05%), Rest of Asia (34.53%), Rest of OECD (28.83%) and the lowest for Japan (9.07%) during 2010–20.

With import tariff reduction, there is no significant change in the output growth of the seven regions. A marginal increase in growth for India (0.15%) and Japan (0.68%) is observed in 2020 after tariff reduction compared to BAU. Though marginal, PRC will have a better performance compared to ASEAN and Rest of Asia. Rest of OECD will experience a negative growth.

As expected, countries and regions included in the bilateral trade agreement have increased their output, while regions not included in the regional trade agreement may lose or gain. The reason behind this impact is as follows. A reduction of tariff on import lowers the import price. Domestic users immediately substitute away from competing imports. The cheaper imports result in a substitution of imports for domestic product. The price of imports falls thereby increasing the aggregate demand for imports. It lowers the price of intermediate goods which causes excess profits. This, in turn, induces output to expand. This expansion effect would impact the demand for primary factors of production resulting in changes in their prices and transmitting the shocks to other sectors in the economies under trade reforms.

Export growth. The performance of total export reflects wide variations in the growth of the total export of the seven regions under BAU scenario (Table 5). India is expected to achieve highest growth (149.02%) followed by PRC (147.38%), ROW and ASEAN. On the other hand, Rest of Asia, Rest of OECD and Japan are in the range of 20–45% under BAU (2010–20). The tariff reduction scenario between India and Japan reveals 0.04% total export growth for the world. A marginal export growth is expected due to trade liberalization strategies taken by India and Japan compared to BAU 2020. For India and Japan, it is estimated as 0.28% and 0.33% respectively. Other regions of the world are expected a very insignificant export growth due to India and Japan trade liberalization case. However, PRC's export growth will be better (0.15%) compared to those of ASEAN and Rest of Asia (0.01%).

Table 4
Output growth of India and Japan and other regions of the world: BAU 2010–2020 vs. Tariff reduction scenario.

Country/Group	Baseline: BAU2010 to BAU2020 (% change)	Simulation: tariff reduction (% change)
Rest of OECD	28.83	–0.00034
Japan	9.067	0.681
ASEAN	61.78	0.0031
Rest of Asia	34.53	0.0061
PRC	55.24	0.0095
India	35.051	0.1464
ROW	70.58	0.0017
Total	34.014	0.0078

Source: Authors' calculation.

Note: ROW is Rest of the world.

Table 5
Export growth of India and Japan and other regions of the world: BAU 2010–20 vs. tariff reduction scenario.

Country/Group	Baseline: BAU2010 to BAU2020 (% change)	Simulation: tariff reduction (% change)
Rest of OECD	31.37	–0.005
Japan	23.7	0.28
ASEAN	71.5	0.01
Rest of Asia	44.87	0.01
PRC	147.38	0.15
India	149.02	0.33
ROW	84.824	0.019
Total	52.67	0.04

Source: Authors' calculation.

The direction of exports in India and Japan under tariff reduction compared to BAU shows more insight into the analysis (Tables 6 and 7). Normally in bilateral tariff reduction scenario both the economies will be benefited within themselves but the impact on other regions may be or may not be favorable (Mukhopadhyay & Thomassin, 2008).

A look at the trade diversion resulting from the tariff cut between India and Japan reveals that exports of India and Japan are diverted from other regions and increase within themselves. For example, exports from India and Japan have been withdrawn from all other regions of the world under study (except PRC in case of Japan's export). The creation of trade as such is marginal for both the countries. However, trade between these two countries is expected to expand significantly. As a result of the proposed agreement between the two countries, India is likely to increase its export to Japan by 18.21% (Table 7), while for Japan it will be only 4.65% (Table 6) by 2020. To get more access to the Japanese market, India would shift its market from other countries, and Japan will do the same for entering the Indian market. Moreover, it is also seen that Japan will not reduce its heavy reliance on the Chinese market, though India will. This is one of the important findings of the proposed agreement between India and Japan from this study, which the policymakers have to reckon with. On the whole, it reflects that compared to Japan, India is expected to gain more if the bilateral CEPA materializes by 2020.

The outcome is generally expected from the trade creation and trade diversion effects of trade reforms. The magnitude of impacts on the countries and regions differs, depending first on their size and comparative advantage (resource endowments) and also on other factors such as demand structure, distribution structure and so on.

In terms of sectoral output growth, the motors vehicles and parts industry will benefit most for Japan, while for India it will be the light manufacturing industry (Table 8).

The sectoral export performance due to liberalization of trade between the countries at 2020 will provide more insight in this respect (Table 9). The common key sectors between countries are chemical rubber and plastics, light manufacturing,

Table 6
Direction of trade between Japan and all regions: BAU 2010–20 vs. tariff reduction scenario.

Country/Group	Baseline: BAU2010 to BAU2020 (% change)	Simulation: tariff reduction (% change)
Rest of OECD	21.434	–0.32
ASEAN	19.614	–0.32
Rest of Asia	13.083	–0.27
PRC	8.69	0.013
India	134.85	4.65
ROW	80.098	–0.24
Total	23.7	0.28

Source: Authors' calculation.

Table 7
Direction of trade between India and all regions: BAU 2010–20 vs. tariff reduction scenario.

Country/Group	Baseline: BAU2010 to BAU2020 (% change)	Simulation: tariff reduction (% change)
Rest of OECD	150.22	−0.22
Japan	108.41	18.21
ASEAN	129.84	−0.2
Rest of Asia	110.85	−0.14
PRC	61.56	−0.11
ROW	194.15	−0.03
Total	149.02	0.33

Source: Authors' calculation.

Table 8
Percentage change in major sectoral output after tariff shock at 2020 compared to BAU 2020.

Japan		India	
Ferrous metals	1.11	Forestry	1.26
Metal products	0.24	Light manufacturing	1.84
Motor vehicles and parts	2.14	Chemical, rubber, plastic prods	0.12
Transport equipment nec	0.21	Mineral products	0.44
Electronic equipment	0.75	Ferrous metals	0.34
Machinery and equipment nec	0.54	Metal products	0.33
		Motor vehicles and parts	0.32

Source: Authors' calculation.

Table 9
Percentage change in sectoral export after tariff shock at 2020 compared to BAU 2020.

Exports from Japan to India		Exports from India to Japan	
Name of the sector	In percentage	Name of the sector	In percentage
Light manufacturing	15.99	Light manufacturing	7.68
Petroleum coal products	7.92	Forestry	7.06
Chemical, rubber and plastics	5.55	Chemical, rubber and plastics	3.04
Ferrous metals	1.98	Metals nec	0.34
Metals nec	21.12	Metal products	0.073
Motor vehicles and parts	2.21	Motor vehicles and parts	0.013
Transport equipment nec	0.84	Electronic Equipment	0.09
Electronic equipment	2.74	Manufacturing equipment	0.11
Manufacturing equipment	2.26	Manufactures nec	0.14

Source: Authors' calculation.

metals nec (non ferrous metals), electronic equipment, manufacturing equipment and motor vehicles and parts. The percentage share of export for these products from Japan is expected to be higher compared to India. The key sectors belong to both export and output for both the countries are chemical, rubber and plastics, electronic equipment and motor vehicles.

*Welfare effect*³ In the global CGE model, each region's representative agent aims at maximizing his/her welfare level. When trade policy is changed, the agent will calculate a change in his/her income level. The change in income level affects the scale of savings and consumption of each commodity so that the marginal utility of consumption is same across the commodities. In this case, price variables are used in the decision making process for clearing markets in the model. While the welfare level of representative agents in trade agreement member countries (here India and Japan) would improve, the welfare level of agents in other regions (here five regions) would most likely decline. Since each region's welfare function is different, the impact of trade reforms between India and Japan on welfare level of seven economies is likely to be different.

Table 10 summarizes the results of welfare effect across seven regions. Gains or losses are not spread evenly. It can be observed that in case of tariff reduction, the welfare of India and Japan responded differently. India's welfare gain is expected to be US\$120.27 million, while Japan's would be by US\$1198.67 million.

³ In GTAP framework, the sources of welfare gains can be examined by decomposing welfare gains into three components, namely, a) allocative efficiency, b) terms of trade (TOT) effects and c) investment-savings effect. Allocative efficiency refers to the efficient industry wise allocation of scarce resources to produce the optimal combination of outputs. The TOT effect refers to the relative movement in prices of countries' exports and imports. The TOT effect increases with a relative increase in the price of exports as compared to that of imports. TOT changes occur as producers and consumers adjust their purchasing and selling patterns in response to a policy change. Finally the investment-savings effect refers to impacts of changes in the price of investment (capital goods) and savings

Table 10
Welfare implications due to proposed trade agreement between India and Japan.

Country/Group	Allocative efficiency effect	Terms of trade effect	Investment–savings effect	Total
Rest of OECD	–241.71	–530.53	–306.36	–1078.61
Japan	281.13	1034.91	–117.38	1198.67
ASEAN	–31.59	–107.23	–14.12	–152.95
Rest of Asia	–3.28	–49.69	–14.65	–67.62
PRC	–24.51	–400.91	294.41	–131.01
India	–132.25	33.73	218.79	120.27
ROW	–41.91	19.08	–60.64	–83.47
Total	–194.12	–0.65	0.05	–194.72

Source: Authors' calculation.

The welfare effects are measured using the equivalent variations (EV). The welfare decomposition result provides further insight into the analysis. The welfare gains from a bilateral liberalization are fundamentally determined by two factors: (a) changes in efficiency with which any given economy utilizes its resources; and (b) changes in a country's terms of trade (TOT), which allow to calculate the regional equivalent variation or the amount of money that could be taken away from consumers at initial prices while leaving them at the same level of post-simulation utility. If a particular country experiences improvement in its TOT (i.e., export price rise relative to import price), then the equivalent variation gain will be larger than the efficiency gain. If the TOT deteriorates, then the opposite will happen. Table 10 shows that TOT improves significantly for Japan, its allocative efficiency is also positive. On the other hand, though the TOT is marginal for India, its allocative efficiency is negative. This bilateral agreement between India and Japan may also lead to an adverse impact on TOT and allocative efficiency for other regions of the world.

Overall welfare results indicate that trade liberalization lead to welfare level improvement in case of partner countries at the expense of non-agreement countries resulting in a net loss in global welfare. More specifically, the welfare gains in India and Japan under FTA are not sufficient to offset the losses in other countries, which results in a net global welfare loss. It shows that the non agreement countries are expected to have loss due to allocative efficiency after liberalization as the removal of distortion leads to a reallocation of resources from the efficient to the more inefficient sectors.

An important aspect of our finding is related to the agriculture sector in Japan. Although Japan is a large importer of agriculture products, the country has traditionally been very sensitive about its agriculture sector and continues to protect this sector with stringent tariff and nontariff barriers. Our analysis demonstrates that in spite of tariff liberalization in agriculture sector, Japan will witness considerable welfare gain. These results will justify the gradual opening up of Japanese agricultural sector.

This study is sharply contrasted with Ahmed (2010) in context of welfare implications between the India and Japan FTA. According to the results, the proposed FTA will improve the welfare of both the countries at 2020, while Ahmed (2010) finds welfare gains only for Japan, not for India. Moreover, the study finds that India's export to Japan would increase more than that of Japan to India, whereas Ahmed (2010) shows opposite. At the same time, the findings are striking for Japanese policy makers as the welfare gain for Japan will be significant in spite of opening up of its agricultural sector for some products which eliminates tariff by 2020 (See Table 2).

In this connection, similar findings of some studies attempting to examine the impact of bilateral FTA between Asian countries are presented below. An analysis of the economic effects of Japan–Republic of Korea FTA has been attempted by Nakajima (2002) to see the short run as well as long run impacts using GTAP model. Republic of Korea's real GDP would increase in the long run. On the other hand, gains for Japan would likely to be limited in terms of real GDP. However, both countries would gain from welfare. McKibbin, Lee, and Cheong (2004) estimated that gains for Korea and Japan from a bilateral FTA would also amount to 0.1–0.2% of GDP per year for both countries. The study by Cheong (2002) between Republic of Korea, Chile and Japan using GTAP shows that despite many obstacles, a Republic of Korea–Japan FTA would offer various economic benefits. However, the effects of Chile would be moderate. A study by Hartono, Priyarsono, Nguyen, and Ezaki (2007) found that most of FTAs between Indonesia and PRC, Indonesia and Japan will have positive impacts on GDP, welfare, investment, trade, with varying degree of benefits.

Lochindaratn (2008) performs the impact analysis of certain bilateral preferential trading agreements of Thailand with Japan, PRC, India, Australia, and New Zealand using GTAP. Result shows that Japan–Thailand Economic Partnership Agreement (EPA) is the most beneficial while Thailand–New Zealand–PRC EPA turns out to be the least beneficial FTA for Thailand. Real gains from bilateral FTAs are poor compared to the benefits from the groupings that include ASEAN as a whole. Strutt and Rae (2007) argue that multilateral trade negotiations have faced many hurdles and frustrations in recent years, giving increased impetus for some countries to negotiate regional and bilateral trade agreements. They explore how preferential trade agreements might impact on one another. They use the dynamic GTAP model to assess the anticipated impact of possible liberalization scenarios. Results reveal that PRC–New Zealand agreement is unlikely to have a large economic impact on PRC, significant gains may accrue to New Zealand, particularly if there is liberalization of the sensitive agricultural sector. However, if PRC also enters into preferential agreements with other countries, this is likely to have adverse impact on the gains accruing to New Zealand.

A very recent work by [Gumilang, Mukhopadhyay, and Thomassin \(2011\)](#) provides further insight in this area with a study on Indonesia and its trade agreements with Japan (IJEPA) and ASEAN (AFTA). A static global CGE model was used to project the Indonesian economy to the year 2022, with and without tariff reforms agreements. Results show that the agreements will have a marginal positive impact on Indonesia's output but with a noticeable increase in trade flows and signs of trade diversion. Overall AFTA has a greater impact on the Indonesian economy compared to IJEPA.

This analysis on Japan-India CEPA shows that an FTA focusing on tariff reductions alone will not produce significant results between member countries of WTO because parties to the FTA already had or in the process of having significant tariff reduction. A CEPA will be more effective than FTA by going beyond tariff reduction to removing non-tariff barriers. However, this importance cannot be measured by the traditional CGE modeling. In particular, the limitation of this CGE model is that it has only taken into account the impact of tariff reduction. The impact of investment, technology transfer, and opening of services sector like banking and financial services and tourism has not been estimated in this model. Moreover, it should be noted that because of the presence of FTA between ASEAN+ Japan and ASEAN+ India together with several bilateral FTAs with major Asian economies, an India-Japan CEPA can be a building block for Pan-Asian Integration.

6. Regional and global dimensions of India-Japan cooperation

Global and regional integration is an important tool for narrowing the development gap between poor and rich economies in Asia by bringing poorer countries into the regional and international supply chains and production networks and providing access to large markets. Japan has been successful in spreading its economic success to the Asian Newly Industrialized Economies (NIEs) in the 1980s by bringing them into the regional supply chain. This was followed by linking middle-income ASEAN countries – Malaysia, Thailand and Indonesia – in the late 1980s to 1990s. Subsequently, PRC, Viet Nam and to a certain extent India were linked.

In recent years, India has become an increasingly important player in Asia and the global economy, but is only beginning to join East Asia's production networks and supply chains. Japan can now enhance its supply chain linkage with India which in turn can bring other South Asian countries with large markets of middle-class consumers in the supply chain. The degree of intra-South Asian trade is still limited, although the smaller economies – such as Bangladesh, Bhutan, Nepal and Sri Lanka – rely heavily on India as their trade partner, particularly as a source of import. At the same time, India's investments are spilling over into its neighboring countries in various industries including chemical, air conditioning, and plastics as well as information services.

Within this context, the partnership between India and Japan is essential in the future architecture of the entire Asia by enhancing the integration between East Asia and South Asia. India sees this growing engagement with East Asian countries as a building block for a broader Asian grouping. It has articulated a vision of an Asian economic community as an “arc of advantage” for peace and shared prosperity. The community would bring together different sub-regions of Asia in a phased manner. The formation of an Asian economic community could be viewed as the culmination of India's “Look East” policy. Japan has also promoted the establishment of East Asia Summit consisting of ASEAN economies, Japan, Korea, PRC, India, Australia and New Zealand. Recently USA and Russia, the dialogue partners of ASEAN joined the summit.

Today, the world is facing many challenges, such as lack of further global trade liberalization under WTO, global economic and payments imbalances, high inflation, credit and debt crisis, high oil and food prices, environmental degradation and climate change, terrorism; and natural and man-made disasters. The collaboration between developed and emerging developing economies is essential for resolving many key global issues. Japan, as an OECD and G8 member, can play a key role in involving a major emerging economy like India, being a G20 member, to address these key global issues. A strong partnership between these two countries will facilitate speedy formulation and implementation of policies to meet the key global challenges in provision of public goods and raise the voice of Asia in global forums and global governance. Specifically, Japanese technologies can contribute to energy and water, agriculture, and food security, environmental protection and climate change.

7. Future prospects

Given the current pattern of India-Japan trade, investment and cultural linkages, the need for deeper economic cooperation between two countries becomes more apparent. The fact that bilateral trade is steadily growing and yet trade shares are rather small suggests that there is a huge potential for expansion of bilateral trade.

As discussed in Section 2, the CEPA had a strong positive impact on bilateral trade between India and Japan with Japanese exports to India increasing at a faster rate than India's exports to Japan. However, India's trade with Japan almost has been very small compared with that with other countries exhibiting significant potential for trade expansion.

India and Japan should maximize the benefit of economic complementarities of both countries. Until recently, Japan invested in hard core manufacturing (such as machinery, electronic goods and transport equipments) and infrastructure areas, but there are opportunities in many other areas, such as telecom, software, pharmaceutical, tourism, banking and financial services, health and environment. These are areas where India is seeking investment and where Japanese companies need to take proactive actions to their investments. And ultimately, great potential exists by promoting India's integration with East Asia through participation in East Asia's supply chains and production networks.

One reason behind low bilateral trade between these two countries is that unlike China and major Southeast Asian countries, India is not well integrated into Asia's manufacturing production network where Japan is highly integrated. Asian production network involves significant trade of intermediate goods among the participating countries. There is an urgent need to integrate India in the production network.

Both India and Japan with strong and deep rooted democratic system have strong common interests and vision for a peaceful and prosperous Asia. The leadership of Japan in climate change, energy conservation and energy efficiency and infrastructure development programs would help India ensure sustainable economic growth and strengthen its emerging economic power in Asia and in the world. On the other hand, India can lead the way of forging the one Asia concept by bridging the East with the South. A robust India–Japan partnership will support and promote India's increasingly assertive and strong role as well as Japan's leading position in the region.

At present, India and Japan face some tariff and several non-tariff barriers across the borders, affecting trade, investment and services. For instance, some FDI issues of Japan in India include legal and regulatory frameworks such as rigid labor laws, taxes and procedural delays as well as weak infrastructure facilities. On the other hand, the impediments that India faces in Japan include protected agricultural sector and certain requirements for export that even go beyond international standards such as those in agriculture and food products, as well as rigid immigration policies.

There are many areas of mutually beneficial cooperation between India and Japan. Work should proceed both to enhance areas of advantage and to remove barriers to cooperation and economic integration. Economic and strategic partnership between the two countries should proceed not only bilaterally, but also multilaterally, through opening of markets (such as agriculture, services and financial markets), integrating financial systems, encouraging free flow of capital and direct investments, and linking economies in a common production chain. While much work is needed to accomplish these goals, the benefits can be large.

The trade intensity indices suggest the presence of great potential to further improve trade relations. Results of the CGE analysis on the economy-wide impact of CEPA suggests that tariff reduction will create a marginal increase in output growth for both India and Japan as compared to business as usual (BAU) scenario. In terms of effect on exports, India's export to Japan would increase significantly, more than that of Japan to India. Tariff reduction will increase India's export to Japan by 18.21%, while for Japan it will be only 4.65%. As for the welfare aspect, simulation results suggest a positive net welfare gain for both countries with an expected gain of US\$1198.67 million and US\$120.27 million for India and Japan, respectively. This is in contrast to the study by [Ahmed \(2010\)](#), which finds welfare gains only for Japan, not for India. Moreover, one striking result suggests that Japan will not reduce its heavy reliance on the Chinese market, though India will. On the whole, India, compared to Japan, will gain more, if CEPA materializes by 2020. Japan too will have welfare gain in spite of opening up the agriculture sector with 100% tariff reduction by 2020. One of the lessons of the study is that an FTA involving only tariff reduction may not be significant for WTO members. On the other hand, a CEPA involving the liberalization of investment and service and removal of non-tariff barriers can create considerable benefits. Both Japanese and Indian policy makers should reckon with these striking findings.

The already-sluggish Japanese economy now faces the daunting task of recovering from triple disasters (Tsunami, earthquake and nuclear accident) of March 2011. Japan's economic growth is expected to drop into negative territory for a quarter or two but the long-run impacts are less dire as the Japanese economy will turn positive again through reconstruction efforts and return to productive activities ([ADB, 2011](#); [Nanto, Cooper, Donnelly, & Johnson, 2011](#)). ADB forecasts a 1.5% and 1.8% growth rate of the Japanese economy for the years 2011 and 2012 respectively ([ADB, 2011](#)). As for the India–Japan CEPA, the triple disasters in Japan can in fact lead towards enhancing economic cooperation between the two countries: (i) Japanese companies may expand their existing production capacities and establish new capacities to supplement production loss in Japan and to diversify risk; (ii) Japan can utilize India's production base to maintain its supply chain activities; (iii) Indian companies from ICT, pharmaceuticals and other hi-tech service sectors can invest in Japan to utilize technology, skill and capitals. The full realization of the impact of CEPA may be delayed.

In order to remove behind the border barriers, both countries need to accelerate structural reforms for reaping the maximum benefit of their economic partnership. In addition to reducing tariffs, India needs to strengthen its infrastructure, policies and regulations and labor laws whereas Japan can liberalize its immigration policies and agricultural trade. According to the Goldman Sachs BRIC report, India is expected to be among the top four economies of the world by 2050 alongside Japan ([Wilson & Purushothaman, 2003](#)). With a strong economic partnership between two nations, this goal can be achieved much earlier.

India needs a large investment in infrastructure for improving connectivity and providing basic services. According to a recent study by ADB and ADB Institute, India needs around US\$200 billion per year for energy, transport, telecommunications, water and sanitation during 2010–20 ([Bhattacharyay, 2010](#)). Enhancing private sector investment especially in the infrastructure sector by bringing infrastructure to international levels would help India fully realize its growth potential and connectivity with East Asia. Japanese companies with required technology, management expertise and finance can help India to build quality infrastructure along with Japanese bilateral development institutions like JICA and JBIC as well as, capacity building of Indian counterparts. In order to attract private investment from Japan, India has to undertake the behind-the-border reforms to improve business climates, regulatory framework, governance and labor laws.

Lastly, forging strong and long-term economic cooperation will require frequent exchange of business delegations from private and public sectors, policy makers, and regulatory bodies; trade and investment promotions, information exchange

through visits by academics, students, and professionals. At the same time, civil societies should be engaged and people-to-people contacts should be encouraged. In view of the economic complementarities (e.g., specialization, technology and demographics) between the two countries and their common goals and values, India–Japan partnership can produce a win-win situation with considerable benefits.

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