

Section 6

CHALLENGES AND PROSPECTS FOR A COOPERATING SOCIETY WITH ASIAN HUMAN RESOURCES

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1. Introduction

This section introduces the challenges and prospects for Japan and Japanese companies from the perspective of “cooperating” with Asian human resources based on research that was conducted over a year by the Cooperating with Asian Human Resources Study Group of the Asia Pacific Institute of Research in FY 2021.

First, we will analyze and introduce the characteristics of human resource development in Asia with a focus on India. The reasons for focusing on India include analyzing from a comparative perspective with China and from the perspective of the Quadrilateral Security Dialogue (the Quad), and the security framework formed by Japan, the US, Australia, and India. Then in the following section, we will explain how and why Japan and Japanese companies should work together with Asian human resources, particularly Indian firms, based on previous research reports and the questionnaire survey and interview survey originally conducted by the Cooperating with Asian Human Resources Study Group.

2. Characteristics of Human Resource Development in Asia

(1) Developing human resources adaptable to the Fourth Industrial Revolution in Singapore, Vietnam, and India

Asian countries have been actively developing highly adapted human resources and promoting the digital industry since the IT revolution occurred at the beginning of the 21st century. The purpose of this section is to introduce the development of human resources with digital capabilities and the prosperity of the digital industry adapted to the Fourth Industrial Revolution in Singapore, Vietnam, and in particular, India as case studies.

Singapore, which has a national policy to be a brainpower nation, has been gathering the world’s best scientists, particularly in the area of pharmaceuticals, since the 21st century, thereby building an education and research system adapted to the Fourth Industrial Revolution and promoting the digital industry.

Vietnam has attracted much attention as a destination for production bases

and has established itself as a production base in Asia in place of China where labor costs have already soared. Vietnam has also been proactively educating human resources well versed in digital technologies and developing the digital industry.

Similarly, in India, the current Modi Administration has been promoting Digital India and has attempted to transition to become a digitally empowered society and knowledge economy. Digital India's vision is to provide all citizens with digital infrastructure (e.g., high-speed internet) to digitize identification and bank accounts, to make administrative services on-demand, to enhance digital literacy, and to use cloud storage for administrative documents.

Each of these countries in Asia of Singapore, Vietnam, and India have developed education adapted to the Fourth Industrial Revolution and are providing practical education such as internships with companies.

It is a critical challenge for Japan and Japanese companies to ensure “cooperation” with human resources from the Asian countries adapted to the Fourth Industrial Revolution and various Asian companies such as those in the digital industry. In particular, the partnership with India is a major challenge for the future in terms of the aspects to be discussed below. The reasons why India was chosen are the following points: India is a country nurturing excellent science and math human resources, the characteristics of India's distinctive industrial structure and digital industry, and the need to build cooperative relations in the new Cold War era between Japan, the US, Australia, and India in the future.

(2) Distinctive science university education and digital industry policy in India

In the digital industry, India's greatest strengths are its capability to produce IT engineers each year and the use of English as a common language.

Tertiary education in India is characterized by the increasing popularity of science and engineering, especially IT majors, which offer good remuneration prospects after graduation. Highly qualified graduates from prestigious tertiary education institutions such as the Indian Institutes of Technology (IITs), the Indian Institutes of Science (IISc), the Indian Institutes of Management (IIMs) and the University Institute of Chemical Technology (UICET), are particularly attracting attention worldwide.

The famous Indian Institutes of Technology are not a single university and each campus is independent, while there is a common system among the Indian Institutes of Technology. These institutes are similar to the University of California in the USA, with 23 institutes and 13,000 students. Each institute has 500 to 600 students per academic year. The backgrounds to entrance

examinations in India differ from Japan, as a student passes the entrance examination in India if he or she has excellent ability in one subject, such as mathematics and physics. Computer science and electrical engineering are the two most popular disciplines.

3. Contrasting Industrial Liberalization Policies in India and China

(1) India's digital industry liberalization and China's industrial liberalization

China's industrial liberalization policy has opened up the industrial sector to foreign-invested enterprises and actively attracted them, whereas its digital industry sector has been monopolized by and restricted to Chinese firms. In addition, China has adopted a policy of digital isolation to Chinese digital companies listed in the US, delisting them in some cases, and instead limiting listings only to the Hong Kong market.

India has long had a protectionist policy in the industrial sector, partly because of its history as a British colony. In contrast, India's digital industry sector has been open and welcoming to American companies in the US digital industry.

Table 1-6-1

Contrasting industrial liberalization policies in India and China

	Manufacturing Industry	Digital Industry
China	Liberalized	Closed
India	Closed	Liberalized

Source: Prepared by the author

It is generally accepted that the major development of India's IT industry began in response to the Year 2000 problem when US IT companies needed many IT engineers to carry out simultaneous software modifications and because there was a large demand for human resources in India. As Indian IT engineers responded successfully to that problem, the Indian IT industry grew rapidly, starting from being subcontractors for the US ICT industry. Various US IT giants such as Google, Yahoo, Amazon, Microsoft, and IBM have since

expanded and set up R&D centers in Bengaluru (Bangalore), India¹).

Indian companies are strong in IT consulting, which promotes operational efficiency through the use of information technology. Specifically, by looking at the leading Indian IT consulting firms in terms of sales size, first is Tata Consultancy Services (TCS), the second is Infosys Limited, and the third is Mphasis. India has also allowed Indian IT companies to list on the US stock market since 2019. Sales for FY 03/2021 showed that Infosys' customers are mainly from developed regions, with the USA accounting for 61.5%, Europe 24.1% and India 2.6% of sales by region. The company offers high levels of customer satisfaction to customers in developed countries in Europe and the US, using its state-of-the-art IT technology standards as a weapon. It also has achieved stable growth, with many of its operations being managed by cost-competitive engineers and staff residing in India. Its average annual growth rates between FY 03/2009 and FY 03/2021 were high, at 13.6% for sales and 10.2% for profit after tax.

(2) Differences in industrial policy between India and China and future projections

India did not follow the path of development from primary to secondary to tertiary industries as in Japan, but instead it shifted from the primary to the tertiary ICT industry as a result of natural evolution. In addition, India has moved in the opposite direction vis-a-vis China that has opened up its manufacturing industry to the rest of the world and protected its ICT industry. It has been pointed out that China has pursued an “open industrialization, closed digitalization strategy,” whereas India has followed a “closed industrialization, open digitalization strategy”².

The comparison between India and China based on World Bank data for 2018 showed that China's manufacturing sector accounted for 29.4% of its GDP, whereas India's manufacturing sector accounted for 15% of its GDP, which was significantly lower than that of China. World Bank data for 2018 showed that the share of agriculture in GDP was significantly higher in India at 14% compared to 7% in China.

In addition, if we look at the industrial structure of India in 2020 based on the Gross Value Added (GVA) of India from the statistics of the Indian

1) Hayashi, Yukihide (ed.), Higuchi, Takehito and Nishikawa, Yuji (2016), *The Science and Technology Situation in India: Can a Human Resources Superpower Take Off?*, Maruzen Publishing, p. 27, Reference

2) Ito, Asei (2020), *Digitalizing Emerging Countries: Beyond the Developed Countries or the Coming of Surveillance Society*, Chuokoron-sha, p. 108. Reference

government, agriculture, which is the primary industry, accounted for 20% and was the main industry, whereas manufacturing and construction in the secondary industry were stagnant at 15% and 7.3%, respectively, due to the closed type of industrialization.

India's open digitalization strategy has inevitably deepened its relationship with its partners of US corporate behemoths, and at the same time as this, India and the US began sharing information technology and a range of information. Therefore, India and the US are expected to reinforce their mutual collaboration in the future by accelerating the highly sophisticated international division of

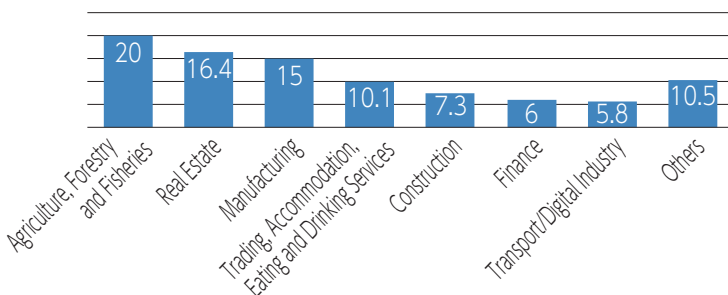


Figure 1-6-1

The industrial structure of India

Note: Industry categories are representative and values are percentages.

Source: Percentage of gross value added (GVA) in FY2020 from Ministry of Statistics and Program Implementation (Ministry of Statistics, Government of India) data

labor through the information industry, including research and development.

In contrast, China is intensifying trade friction relating to exports to the US in the industrial sector, while at the same time adopting a policy of separation and closure in the digital industrial sector. Therefore, the conflict between the US and China is expected to deepen in the future.

India's emerging digital companies are expected to go public in financial securities markets as their Chinese counterparts did in the past and to use this as leverage to acquire share of global markets and massive amounts of capital and to grow rapidly. At the same time, it is considered that the US and US companies and India's emerging digital companies will likely build even closer relationships. In 2021, India will have the third largest number of unicorns in the world (26 companies) after China (122 companies), and the number of unicorns is expected to increase year by year as Indian digital start-ups will replace Chinese digital companies and be listed on US Stock Exchanges.

On the other hand and in stark contrast, China's emerging digital companies

have not only been forced to delist from the US stock markets in some cases, but they also are subject to making huge donations to the Chinese government, regulations such as antitrust laws, and penalties, all of which are imposed in the name of “common prosperity.”

In light of this situation and future predictions, it is important for Japan and Japanese companies to give careful thought to building future relationships with the governments and companies of Asia’s two largest economies, China, and India.

4. The Role of India in the New Cold War Era and the Importance of Economic Co-operation between India and Japan

(1) Reasons for focusing on India: building cooperative relationships between Japan, the US, Australia, and India in the New Cold War Era

Japan, the US, Australia, and India form the Quad as a cooperative partnership of liberal countries that share fundamental liberal principles and values. The Quad is a framework for a relationship of security and economic cooperation between Japan, the US, Australia, and India, with the combined military expenditure of the four countries surpassing that of China. The Quad was started as a result of a four-party strategic dialogue initiated by former Prime Minister Shinzo Abe in 2006. Although it is not a military alliance like NATO, it already conducts joint military exercises.

The foreign ministers of the Quad’s four member states issued a statement criticizing Russia’s invasion of Ukraine.

Russia’s invasion of Ukraine has thrown into sharp relief the dichotomy in a new Cold War era between liberal states on the one hand that share basic liberal principles and values and controlling and surveillance nations on the other, such as Russia and China.

The progress of the Quad is shown in [Table 1-6-2](#).

Within this Quad, India maintains a non-aligned and neutral position, and for Japan, the US and Australia, building close relations with India is a major political, economic and security challenge for the future. Therefore, Japan, the US and Australia have been actively trying to attract India’s initiative-taking participation and co-operation in the Quad through economic bilateral cooperation and partnerships.

Also, in the Asia-Pacific region, Japan, China, and other countries have a noticeably ageing population with a declining birthrate and are expected to

Table 1-6-2 Progress of the Quad

Progress in cooperation between Japan, the US, Australia, and India	
2006	Then-Prime Minister Shinzo Abe proposed a framework for dialogue
November 2011	Director-General-level meeting in the Philippines
September 2019	Foreign Ministers' meeting in New York, US
October 2020	Foreign Ministers' meeting in Tokyo. Confirmation of regular holding of meetings
November 2020	Joint exercises by SDF and US-India-Australia

Source: Compiled from the Nihon Keizai Shimbun, March 13, 2021.

experience a population decline in the future, whereas India has a large youth population and is extremely attractive for its potential future economic growth.

Japanese companies are faced with the management challenge of the absolute shortage of IT, engineering, and other science-based human resources due to the declining birthrate and ageing population. As such, it is a critical issue for Japan and Japanese companies to tap into the sophisticated human resources and corporate vitality in India's growing IT sector through collaborations with Japanese companies and employment in Japanese companies and Japanese companies overseas.

(2) The importance of economic agreements and economic cooperation between Japan and India—using the example of Japan's Manufacturing Skills Transfer Promotion Program in India

In November 2016 at the Japan-India summit meeting, Japan's Minister of Economy, Trade and Industry Hiroshige Seko and India's Ambassador to Japan Sujan R. Chinoy signed a Memorandum of Cooperation on the Manufacturing Skills Transfer Promotion Program in order to develop the high-quality human resources required by Japanese companies in India and to meet India's demand for the development of its stagnant secondary industry. In this Manufacturing Skills Transfer Promotion Program, the plan is to develop 30,000 manufacturing personnel in 10 years.

Two important parts of the program are (1) the Japan-India Institute for Manufacturing (JIM) and (2) the Japanese Endowed Courses (JEC). This program is in line with Prime Minister Modi's Make in India and Skill India programs.

The content of the Japanese-style manufacturing school in this program includes discipline (preparedness for factory work), manufacturing spirit (kaizen), the 5S (Seiri (Sorting), Seiton (Setting-in-Order), Seiso (Shining), Seiketsu (Standardizing), and Shitsuke (Sustaining the Discipline)), skills (practical techniques), thinking ability (problem analysis and solution proposals), and

practical factory training, namely practical on-site education (parts, assembly, etc., at the factory). The duration of training ranges from one to three years. Specifically, Suzuki and Toyota have opened schools as Japanese-style manufacturing schools.

In addition, the Japanese Endowed Courses (JEC) aim to provide the practical, specialized education practiced in Japanese companies to groups of excellent Indian students who have the potential to become managers and engineers in India in the future. In doing so, the JEC aims to develop Indian industrial human resources for future employment by Japanese companies, and also to develop industrial human resources in the IT sector, not limited to manufacturing.

The development of the Manufacturing Skills Transfer Promotion Program has helped Japanese manufacturing and IT companies in India to cultivate excellent Indian human resources who are adapted to Japanese manufacturing, which has been a bottleneck for the development of Japanese companies in the country.

It is also significant for India to cooperate with Japan and Japanese companies that excel in manufacturing because India's development of the secondary industry has been stagnant.

In particular, the current Modi Administration launched the Make in India program in September 2014, which aims to promote the development of the manufacturing sector. The building of relations between Japan and India through manufacturing is an important initiative to facilitate the development of political and military relations such as the Quad.

5. Nurturing Human Resources to Bridge the Indo-Japan Bilateral Relationship and its Challenges for Promoting Economic Cooperation between India and Japan

The last part of this section looks at nurturing human resources in Japan who can bridge the bilateral relationship in order to promote political and economic cooperation in Asia, particularly between Japan and India, from the perspective of “cooperating” with Indian human resources.

(1) Implications from the preceding research reports

JETRO's Survey Report on Indian Highly Skilled Human Resources in Japan (2020) pointed out two particular challenges in recruiting and utilizing Indian highly skilled human resources. The first is understanding the thinking and tendencies unique to Indian personnel and closing the gaps in terms of the recognition of length of service and performance indicators, and the second is the importance of designing, introducing and implementing internal communication

and appropriate evaluation systems to further increase retention rates after recruitment.

Furthermore, with regard to specific initiatives, this survey report pointed to the importance of company-wide agreements and the clarification of recruitment requirements, hiring as specialists, clarifying job descriptions, responsibilities and rules for salary increases and promotions, and raising the level of recognition of Indian personnel by Japanese companies. Highly qualified IT personnel in India are part of the global competition for talent, and the importance of acquiring Indian personnel through public-private partnerships with an awareness of such a competitive environment is emphasized. The survey report also points to the importance of convincing evaluation feedback, building trust, providing continuous growth opportunities, closing the information gap caused by language differences, explaining management policies regularly, and gaining their understanding of the company.

(2) Implications from the research conducted by the APIR Cooperating with Asian Human Resources Study Group

The Asia Pacific Institute of Research commissioned SUNWELL Corporation, which dispatches foreign engineers, to design, conduct and collect the questionnaire. Additional interviews were conducted with four Indian engineers and two Vietnamese engineers who responded to the survey.

The questionnaire was conducted in October 2021. The number of respondents was 105 Indian engineers and 55 Vietnamese engineers, and for the survey tool, Google Forms were used for the web-based questionnaire. Additional interviews were conducted with four Indian and two Vietnamese engineers in October and November 2021. Both interviews asked the respondents about their evaluations of the Japanese companies which they work for and about Japan in which they are residing.

The questionnaire and interviews showed that both Indian and Vietnamese engineers have a good impression of safety and security in Japan, whereas they have issues and problems that need to be improved for Japanese companies. Nonetheless, they also want Japan to improve issues concerning education for children and employment for spouses in full-time employment in the case of families.

Comparisons between Indian and Vietnamese engineers showed differences in working difficulties due to differences in the language environment. Given that Indian engineers have English and Japanese language options, and that English is the common language in India, a working environment in a Japanese company where English is available is easier than a workplace

where only Japanese is used. In contrast, Vietnamese engineers only work in Japanese, indicating the linguistic severity of the working environment. In particular, Indian engineers tend to have a more English-speaking working environment and satisfactory salary payments in IT engineering. Only 7.7% of the Vietnamese engineers surveyed were IT engineers, while the Vietnamese engineers employed were other mechanical and electrical engineers. IT engineers accounted for 50% of Indian engineers.

Many Indian engineers have a favorable impression of Japan, as shown in Figure 1-6-2. It is significant that the survey revealed that, compared to India, people are attracted to Japan for its high standard of medical care, friendly schools, and safe and equal society, and that they tend to stay in Japan with their families for longer periods of time.

In the future, Japanese companies will need to improve the aspects that Indian and Vietnamese engineers are commonly dissatisfied with. Specifically, the areas for improvement were the speed of company decision-making, clarification, and prior explanation of criteria for treatment and promotion, clarification of the company's vision, and strict hierarchical relationships. Other critical issues included improving the work-life balance, transparent decision-making processes and information disclosure, global management, improving education and training systems, approving extended leave for a temporary return to one's home country, improving education and training systems, education for Japanese employees to realize 'cooperation' with foreign employees, subsidies for children's education, and improving education and training systems.

In order to develop human resources in Japan who can act as bridges between the two countries to promote economic cooperation between Asia (in particular, Japan and India) and Japan, it is important to make good use of their

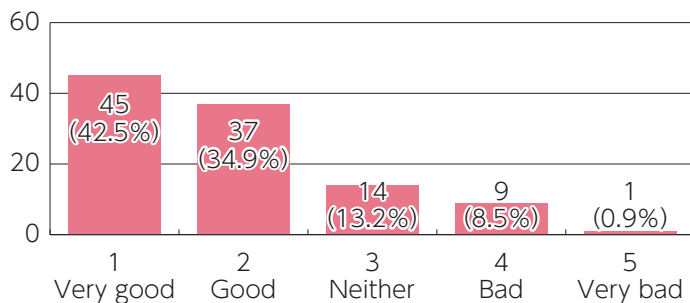


Figure 1-6-2 Indian engineers' impressions of Japan

Source: Compiled based on the results of the APIR questionnaire survey

positive impressions of Japan as a safe and secure country to attract competent Asian human resources to Japan and to develop them into human resources who can act as bridges between the two countries.

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