

A Study of India's Role and Importance in Future Global Supply Chains

Cheryl Jean*

Received: August 13, 2022 / Revised: September 1, 2022 / Accepted: September 18, 2022

Abstract

This study discusses the role and importance India will play in the future global supply chain. Since the Sino-US trade war, the global political and economic situation has changed a lot. As the most populous country in the world, India plays a pivotal role in both production and consumption. The subsequent COVID-19 outbreak has brought about a big change in global economic thinking. What part India will play in the future role of the global economy deserves our attention. Therefore, this paper mainly studies the following questions. 1) Current status of India's role in the global supply chain 2) After the Sino-US trade war, the division of work that India may play in the global supply chain 3) As a new supply chain role, what is missing in India's political and economic situation at this stage? 4) The role India can play in future global supply chains. Use hermeneutics to conduct research, and make in-depth interpretations of the significance of recent major events from public information. The conclusions of this study show that India will become an important player in the global supply chain. While there are many issues to overcome, the external environment will provide it with a role as a major global supply chain player. Although it is currently mainly focused on the software industry, India is bound to enter the field of manufacturing in the future.

Keywords: Made in India, post-pandemic industrial chain, global industrial division of labor, political economy, industrial division of labor

Corresponding*, Jindal University, India, Email: chdech7@gmail.com

Advantages of labor cost

The labor cost refers to the cost equivalent to the human in the production process. Salary comes directly to mind, but labor costs are more than that. Labor cost refers to the sum of all direct and indirect expenses paid by an enterprise for the use of laborers in the production, operation and provision of labor services within a certain period of time. If the company pays 1,000 yuan of wages to employees, then the labor cost will never be the direct 1,000 yuan, and there are other indirect costs.

In addition to the monthly salary, labor costs also include the costs invested by the company in the hiring process, including: recruitment costs, selection costs, hiring costs, and placement costs. In addition, the cost of human learning includes: the cost of pre-job education and the cost of on-the-job training. If the employee leaves, there are also the cost of leaving, including: separation compensation cost, separation management fee, vacancy cost, etc.

Because the manufacturing industry is highly dependent on labor costs, when labor costs increase, they will respond immediately, and the most obvious way is to relocate factories. In the past, manufacturing from Japan to Taiwan, from Taiwan to mainland China, and now from mainland China to Southeast Asia, are all obvious examples.

Advantages of technology cost

Technology is an important factor in industrial competition. Only by mastering good technology can we take a place in the fiercely competitive market. For India to become an important element in the world's supply chain, it must be irreplaceable in technology. In addition, the cost of acquiring the technology must also be sufficiently competitive.

However, technology is not pleasing in financial statements. When we discuss technology from a financial perspective, it will be difficult for technology to set KPIs (key performance indicators of enterprises), and it is difficult for work data to be clearly quantified. Moreover, technology is an expenditure, and it cannot actually help the company to achieve value up (the value up is usually the performance of the business side). "Good technical managers can help technical workers to play a greater role in their work. For finance, that is to reduce costs. But for product operators (or CEOs), technology is something that must be done, so the contradiction that often occurs within the company is, should we spend money to make the product function more complete?"

If India wants to attract foreign investment, it must technically meet the requirements of the above two ends, that is, for the financial department, the technical cost of setting up a factory here is the least, and for the operating department, setting up a factory here. Get the most technical support.

Advantages of the policy

In economics, in order to promote industrial development, policy tools, such as financial subsidies or tax incentives, are often used. To measure its benefits, policy tools have certain benefits, and often very obvious. If India wants to occupy a place in the future world supply chain, it is necessary to make good use of the power of policy tools. Taiwan's tax incentives have been implemented since 1960 when the Regulation on Incentive Investment was promulgated, and since 1991, it has been continued by the Regulation on Promoting Industrial Upgrade.

Although tax incentives can help stabilize the economy, stimulate investment, and promote industrial upgrading, the long-term or wide-ranging tax incentives have negative effects. Therefore, in order to implement this policy, there must be appropriate support. Tax incentives are a part of the government's industrial policy and are often part of various industrial development plans. They are of considerable importance. However, since the use of tax incentives has significant costs, it is still necessary to consider the cost-effectiveness of its use. In order to promote the benefits of tax incentives and achieve the expected industrial development goals, it is still necessary to be cautious.

Supply chain in the post-pandemic era

In the post-pandemic period, the industry has begun to think whether it is a good idea to concentrate all the technology and production in one area. Therefore, there is thinking about decentralizing production points.

However, changing production agglomeration is easier said than done. It involves the joint actions of a large number of manufacturers, households, and upstream and downstream players. The previous industrial settlement has been in operation for many years, and it is not easy to change it all at once.

The sustainable management of the supply chain is also a matter of concern to the experts. The Sachin and Rajesh (2022) study builds empirical models using data from twenty-five Indian companies. The main implication of this study is to observe whether companies and their supply chains implement environmental, social and governance (ESG) practices, and whether can help them achieve financial benefits, as well as other competitive advantages.

Research Methods

The scope of this study is wider, so we must interpret it from a broader perspective, so we use the hermeneutic method to carry out this study. According to the explanation of "Concise Oxford Dictionary", the so-called interpretation is "To evaluate or bring out the meaning", or "explain or understand behavior". Therefore, we can collect relevant information from public information, to explain these phenomena.

The role that India can play in the future global supply chain can be discussed in terms of politics, economy, culture, as well as labor costs, technology costs, and policy preferences. to provide a rationale for our research question.

Results and Discussion

Results

Status of India's Role in Global Supply Chains

India is the most important supplier to the software industry today, because the unique way of thinking of Indians makes them take a lot of advantage in software design. And the advantage of language also makes India occupy a very important position in the country of computer network, Indians can communicate with the academia and industry all over the world without any obstacles. Many software design companies in Silicon Valley in the United States have been acquired by Indian capital. So up to now, India has already achieved a leading position in the field of software design.

Reduce dependence on China and develop manufacturing independently. India, a pharmaceutical powerhouse, has embarked on an ambitious plan to reduce its reliance on China for key raw materials in order to become self-sufficient and become the "pharmacy of the world". India is already the world's third-largest pharmaceutical manufacturer by volume and one of the lowest manufacturing costs in the world.

About a third of pills in the US and a quarter in the UK are made in India. However, India's \$42 billion pharmaceutical industry relies heavily on China for key active pharmaceutical ingredients, or APIs, the chemicals responsible for the therapeutic effects of drugs. According to a government report, India imports about 68 percent of its APIs from China because it is cheaper than producing them domestically.

For the pharmaceutical industry, the Indian government has set aside more than \$2 billion worth of incentives to encourage private Indian companies and foreign companies to start producing 53 APIs for which India relies heavily on Chinese production. 32 factories across India started producing 35 APIs in March this year. This is expected to reduce India's reliance on China by as much as 35%, according to estimates by Moody's Indian subsidiary rating firm ICRA Limited.

The pandemic has forced India to build a logistics powerhouse. On May 26, 2022, global logistics leader UPS and Indian group Inter Globe Enterprises announced a joint venture to launch new logistics brand MOVIN to meet the demands of the fast-paced Indian market

After the Sino-US trade war, India may play a role in the division of labor in the global supply chain

Although many industries left China to Southeast Asia after the Sino-US trade war, due to the rapid economic growth in China in recent years and the high labor costs, many companies have already left China to set up factories or invest all over the world. Although they leave China, they do not necessarily see India as the first choice for investment transfer. In fact, many of these companies leaving China are in Southeast Asia, such as Vietnam, Thailand, or the African continent.

However, in the high-tech industry, India has a place, which can be attributed to India's own foundation in the information software industry and basic manufacturing. As India's economy is expected to accelerate, and with the active promotion of the "Made in India" policy, India has become the hottest investment hotspot for domestic mobile phone brands and foundries recently. Therefore, the leaders of the technology industry, Apple and Samsung, have already deployed in India. India and Vietnam are the main positions to undertake

Apple's production capacity, but India has mostly Taiwanese assembly plants, while Vietnam is a mainland fruit chain supplier to invest in and set up factories.

Currently in India, Taiwan's Hon Hai, Pegatron and Wistron have three fruit chain foundries to set up factories; mainland Apple supply chain companies have invested and set up factories in Vietnam include Luxshare Precision, Goertek, Yutong Technology, Lens Technology, Lingyizhi, Meiyingsen, Bourne Optical.

From an objective point of view, on the one hand, labor costs in mainland China have risen, and Southeast Asia still has a large number of cheap labor. Apple can obtain higher profits by setting up production lines in Southeast Asia. On the other hand, India and Vietnam are emerging markets with huge potential. In addition to these factors, Apple also wants to diversify its supply chain to reduce potential supply chain risks caused by various factors.

Table 1 Overview of Apple's supply chain vendors in India

No.	Name	Major product	Note
1	Quanta	Macbook	
2	Pengding Holdings	printed circuit board	
3	BYD Electronics	ipad	
4	Hong Hai	Iphone 13	Set up a factory in Chennai, India, with 17,000 employees.
5	Wistron	One of Apple's top three Taiwanese suppliers	
6	Pegatron	Production Iphone	Set up factory in Chennai, India, with an estimated 17,000 employees
7	Zheng Wei	Cables and Connectors	

The three companies of Apple's three major Taiwanese suppliers have a total investment of 65 billion rupees (NT\$24.866 billion). India is the 11th largest economy in the world today, with an average GDP growth rate of around 8% over the past decade. Studying Indian supply chain management (SCM) practices has become more urgent, as Japanese SCM practices have in the past received a lot of scrutiny from researchers and practitioners. Few theories can explain the cross-cultural differences between Japanese and Indian SCM practices. Japanese companies are increasingly looking for ways to leverage India's IT and manufacturing prowess and manage global cooperation strategies (strategic alliances and supply networks) with Indian partners. Park et al. (2012) researched Japanese supply chain management practices as a standard and attempted to better understand the differences between Indian and Japanese supply chain management practices and their implications for practitioners.

on a survey of executives of 200 Indian and foreign companies in six sectors: aerospace and defense; automotive and auto parts; capital goods; electronic systems design and manufacturing (ESDM); new energy and renewable energy. renewable energy; and pharmaceuticals and medical devices. The report presents the main conclusions for India's entry into the future global supply chain, as follows.

- 1) India is a good opportunity to replace another supply chain in China.
- 2) Geopolitical developments provide good opportunities and information for investment decisions in India.
- 3) India's attractiveness depends on investment in human capital development and infrastructure
- 4) The industry is highly dependent on imports and exports. Therefore, due attention should be paid to imports.
- 5) Companies agree that India must reassess its trade policies. Trade policy is critical for successful integration into global value chains.
- 6) The most difficult barriers to expanding production in India include complex tax policies and procedures, the quality of infrastructure, and trade policy uncertainty.
- 7) The biggest limitation of companies participating in global value chains is that they must meet quality standards. Governments have a clear role to play in supporting businesses in these areas.
- 8) In the medium term, India should focus on strengthening its digital and physical infrastructure, strengthening financial and investment regulation, and ensuring clarity and certainty on trade policies and tariff rules.

2. How India can be part of global supply chain.

Adhikary et al. (2016) conducted an empirical study on supply chains in India. The study states that LSCM spending in India is around 13% of GDP and is therefore considered a growing sector in the country. And a vibrant, active and intelligent LSCM makes a meaningful contribution to improving business vision in the economy. The need of low-cost labors has pushed the industrial chain closer to India. Affected by the pandemic, low-cost manufacturing countries such as Vietnam and India have emerged around the world. According to statistics, the labor cost of general skilled workers in Vietnam is only 1/3 of China's, and India is even lower, maybe 1/5.

Digitization and smart supply chains are transforming food chains to help eliminate waste, improve food safety, and reduce the likelihood of a global food catastrophe. Abideen et al. (2021)'s research was designed to conduct in the systematic literature (2010-2021), and presented in a systematic review with the help of a bibliometric analysis of the aforementioned research agenda. The findings suggest that technological Industry 4.0 (IR 4.0) tools face specific barriers to application due to their scope and goals, while it has received more attention than any other tools.

Before the COVID-19 pandemic, Indian companies had been focusing on connected and lean supply chains, bridging the gap by improving supply chain efficiency. However, the pandemic has left most Indian companies facing severe supply chain disruption (SCD) due to undiscovered supply chain vulnerabilities. Sudan and Taggar (2021) study revealed that many Indian companies experienced significant disruptions in

Parts & Accessories of Monitors and Projectors/Printers	0	4	14	3	22.12
Multifunctional devices and plotters					
Routers and Modems	0	4	14	3	22.12
Set-top boxes	0	4	14	3	22.12
Color data graphic display tube	0	4	14	3	22.12
MP3/Mpeg 4 players	5	4	8	3	22.47
Digital Camera (including still image video)	0	4	14	3	22.12
Cellular (Mobil) phones	0	4	0	3	7.12
Parts and Accessories of mobile phones	0	0	0	3	3
Packaged softwires	0	0	12	3	15.36

Safeguards with regard to supply chain workers are also important. : SAARC Business Association of Home-Based Workers (SABAH) Nepal, CLASS Nepal, Self Employed Women's Association (SEWA) BHARAT (in Delhi), Social Awareness and Voluntary Association (SAVE), three agencies working together on women in India and Nepal A survey was conducted They concluded that the details of work for domestic workers, the working environment, the nature and remuneration of agreements, access to social security and basic services, and supply chain transparency are important issues in supply chain management today.

Nimawat and Namdev (2012) conducted research specifically on green supply chain management in India. Green Supply Chain Management (GSCM) is an effective way to differentiate a company from its competitors, and it can greatly influence the success of a program. and Green Supply Chain Management includes four major activities; namely Green Procurement, Green Manufacturing, Green Marketing and Reverse Logistics With the increasing awareness of corporate responsibility and meeting the requirements of environmental policy provisions, Green Supply Chain Management (GSCM) is very important for Indian manufacturers. become more and more important. Because India's Environmental Performance Index ranking is not good and now wants to enter the global supply chain, it is bound to increase its strength in this regard.

Conclusion

This paper discusses the various difficulties faced by the viability of India as a global supply chain and how to overcome them. To achieve this goal, a national vision statement is necessary, which can unite the entire country to work towards this goal. And this goal - to make India part of the world's major supply chain is very possible.

Every country needs a vision statement that sparks the imagination and inspires greater efforts at all levels of society. This is an important step towards reaching a political consensus on a national development strategy that includes, inter alia, the roles and responsibilities of different actors in the economy, including central, state and local governments, and the private sector.

For India to become a part of the global supply chain, small and micro industries and mass organizations must also become part of all participating members. Identify potential risks and bottlenecks, identify possible solutions, and focus on achieving your goals.

