Indian Manufacturing Sector’s Reform

Under the Services-Oriented Industrial Structure Model

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Abstract

Since the 9th prime minister of India, Rao carried out the market-oriented economy reform in the early 1990s, the Indian economy has gone through a different development path from traditional industrialization with the emerging software, information technology and other service industries as the main source of growth. However, the long-term competitiveness and economic growth of India's manufacturing sector are less optimistic than the innovative potential of its services sector. As of 2012, about 90 per cent of India's workers were still working in the informal sector that can refer to production activities carried out by non-state labor and units arranged by the personal sector or smaller units with only a few individuals, represented by the garment industry. As evidenced by the 2013 Rana Plaza building collapse in Bangladesh, most garment workers are informal labor, and even basic labor rights cannot be guaranteed. This is not the only case and not only happening in Bangladesh, with a similar manufacturing industrial environment, India even has a longer history of informal labor. Cases such as Moti Nagar building collapse and Shahdara factory wall collapse has the same ending as Rana Plaza building collapse.
that basic labor rights for those dead or injured from the accidents cannot be guaranteed.

Between 2017 to 2018, around 50 thousand child workers at the age of 5 to 14-years-old been rescued, however, there are still 33 million child workers in the same year according to Census data. And for those children that been rescued, what are they going to do after that? While the services-oriented industrial structure has been set since 1990s, how can the manufacturing sector be reformed and integrated into the formal economy will be the key to solving the problems in India’s manufacturing industry. The significance of this research paper concerns the problems appears with the slow growth of India’s manufacturing sector within the services-oriented industrial structure since the Rao’s economic reforms in 1991, as India strive to fill the structural gap in manufacturing sector to achieve truly balanced, healthy and rapid growth.

Key words: Informal Economy, India’s Manufacturing sector, India’s Services sector, India’s Garment Industry, Economic Structure, etc.
Industrial structure is an important aspect of a country’s economic development. To a certain extent, it has a bearing on the rate of economic growth and sustainable economic development\(^1\) of the country, as well as on the employment of the country's labor force, poverty eradication and social development. Since India's economic reforms in the 1990s, the service sector has continued to account for a disproportionate share of the economy. As a developing country\(^2\) with a large population, India has formed a service-oriented industrial structure model without significant development of its manufacturing sector\(^3\). The rapid growth of the service sector slow down the development of the manufacturing sector\(^4\). At the same time, it also closely related to many problems existing in India's social and economic development. As of 2018, about 81 per cent of India's workers were still working in the informal sector, represented by

\(^1\) Sustainable Economic Development: Based on the modern concept that derived from the 1987 *Brundtland Report*, sustainable economic development refers to the coordinated development of economy, society, resources and environmental protection. Sustainable Development and environmental protection are not the same as each other. Environmental protection is an important aspect of sustainable development. The core of sustainable development is development, but it requires economic and social development on the premise of strict population control, improvement of population quality, protection of Environment and sustainable utilization of resources.

\(^2\) Developing Country: According to the economist Arthur O’ Sullivan’s book, *Economics: Principles in Action*, a developing country refers to a country where the economy, technology and people's living standards are relatively low.


the garment industry. As evidenced by the 2013 Rana Plaza building collapse (Image 3), because most garment workers are informal labor, and even basic labor rights cannot be guaranteed. This is not the only case and not only happening in Bangladesh, with a similar manufacturing industrial environment, India even has a longer history of informal labor. Cases such as Moti Nagar building collapse (Image 4) and Shahdara factory wall collapse has the same ending as Rana Plaza building collapse that basic labor rights for those dead or injured from the accidents cannot be guaranteed. Between 2017 to 2018, around 50 thousand child workers at the age of 5 to 14-years-old been rescued, however, there are still 33 million child workers in the same year according to Census data. And for those children that been rescued, what are they going to do after that? With such problems in the manufacturing sector, India needs to speed up the development of its manufacturing industries and adjust its industrial structure to make

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6 Source: Census database.
up for the drawbacks of the service-oriented industrial structure.


Image 1

I argue that solutions to many of the problems in India’s manufacturing sector today, including the informal economy\(^7\), mass poverty, inefficiency, and environmental pollution, etc., can be found by developing the formal economic structure of the manufacturing industry. It is important to emphasize that it is not enough for India, as one of the BRICS countries\(^8\), to explain its present and future economic development paths by only a few factors, which is not the purpose of this paper. Within the service-
oriented industrial structure model represented by the software outsourcing industry, this paper tries to find a way forward for Indian manufacturing industries.
The characteristics of the service industry itself determines that the service-oriented industrial structure has a lot of beneficial effects on the economic development of a country. For example, it can promote export trade of tech-services, the demand for resources and so on. For India, however, the service-oriented industrial structure poses more problems than benefits in today.

First, lack of development in the manufacturing sector limits the increase in employment of the labor force, as it is difficult to eliminate mass poverty as the poverty population in India remains 124 million in 2016⁶. The rapid development of the service

⁶ Source: World Poverty Clock
industry in India since 1990s is mainly due to the rapid development of software industries. However, those who are engaged in service industries such as software require well-educated and well-trained professional skills. The labor demand created by these service industries is not big enough for the Indian population. At present, the employment rate in such services industries is only about 30% while their contribution to GDP is about 70%\textsuperscript{10}. Therefore, the service-oriented industrial structure, especially the development of high-tech services, to a certain extent, is not conducive to the transfer of India's large number of rural surplus labor that still takes comprise 66.4% of India’s overall labor force population by 2017\textsuperscript{11}, but also cannot really help India to eradicate mass poverty.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image.jpg}
\caption{Finland information technology enterprise, Valmet., The MIDC Industrial Park in Mumbai, India.}
\end{figure}

\textsuperscript{10} Source: Labour Bureau Chandigarh, Ministry of Labour and Employment
\textsuperscript{11} Source: Worldbank
Second, the service industry does not have a solid foundation for sustainable development. After independence in 1947, India's manufacturing industries developed to a certain extent, but because of its large population and the great needs for manufactured products, the base of India's manufacturing sector that constructed in a short time remained fragile. Therefore, the service-oriented industrial structure is formed on the basis of no strong industry\textsuperscript{12}, and the foundation for development is not firm and it is difficult to develop continuously.

Third, the lack of incentives for infrastructure construction, affects the growth of the real economy. Since India deregulated its economy in the early 1980s and began formal economic reforms in 1991, one of the important factors for the rapid development of the software outsourcing industry in India is precisely because the demand for infrastructure in the service sector is low due to the software industry having lower requirements for other social sectors than mass manufacturing, which means its stimulus effect on infrastructure is small, too. From an infrastructure point of

view, the software industry is viable as long as it solves network and power supply problems. However, manufacturing industries, on the other hand, is a huge system. There are not only network and power requirements, but also roads, bridges, railways, freight terminals, container loading and a series of requirements. And all of this demand needs the government and private capitals to carry out continuous inspection, repair and improvement in order to achieve sustainable development\textsuperscript{13}. Thus, service-oriented industrial structure affects India's infrastructure construction and, to a certain extent, the development of the real economy\textsuperscript{14} such as manufacturing. As a result, it is difficult to drive India's economic growth in a high speed.

\textbf{Re-advanced of the Manufacturing Sector}

In September 2014, India’s prime minister Narendra Modi launched the "Make in India"\textsuperscript{15} initiative, announcing plans to turn India into a global manufacturing hub, focusing on promoting India's industrialization, improving its domestic industrial

\textsuperscript{13} Torvekar, Gaurang. "Interview with Gaurang Torvekar." Telephone interview by author. March 15, 2019.

\textsuperscript{14} Real Economy: Based on the \textit{Longman Business English Dictionary}. real economy can refers to the industry (including industry and agriculture) is the basic industry that directly produces food, clothing, housing and transportation, and the economy that directly produces food, clothing, housing, transportation and transportation is the real economy, which is the basis of the survival and development of human society.

structure and comprehensively raising its socio-economic development level. (Image 6 and 7) "Make in India" carries the key function of filling the gap in India's economic structure\textsuperscript{16}. Since the founding of India, the evolution of India's industrial structure has been different from that of conventional industrialization, and the ratio of secondary sector of the economy to GDP has not been high for a long time\textsuperscript{17}. Since the market-oriented reform began in the 1990s, the service industry, represented by computers, software services and other information technologies, has grown rapidly and accounted for a relatively high proportion of the total economic volume\textsuperscript{18}. In 2016, its output value accounted for 61.9 percent of GDP\textsuperscript{19}. In contrast, the manufacturing sector's share of GDP has been growing at 15% to 17% over the years and has been rising slowly\textsuperscript{20}. India needs to fill the structural gap in manufacturing to achieve truly balanced, healthy and rapid economic growth.


\textsuperscript{19} Source: Electronics and Information Technology, Annual Report: (2016-17), Ministry of Communications & IT.

In addition to boosting GDP growth, developing India's manufacturing sector has a key economic and social function -- creating jobs and absorbing surplus agricultural labor. India will overtake China as the world's most populous country by 2020,
according to the UN\textsuperscript{21}. In India, about 1 million people enter into the labor market every month; and the labor supply is abundant. However, the potential demographic dividend can be fully released or not depending on whether the economy can provide sufficient jobs for the labor force, thereby increasing the income of the people and stimulating further development of domestic demand. Otherwise, India's economy and society will face more problems once such a large youth population faces unemployment or employment difficulties.

However, the reality of India's employment isn't optimistic. First, India's employment rate is on a downward trend. By 2014, the employment rate had fallen from 58\% to 52\% in 2015\textsuperscript{22}. (Graph 1) India's unemployment rate between 2015 and 2016 was the highest in nearly five years\textsuperscript{23}. (Graph 1) Second, there is a clear dislocation distribution of India's labor force employment structure and industrial structure. As noted above, India's industrial structure has developed a post-industrial characteristic, with a high share of GDP in services, but its employment structure is still


\textsuperscript{22}Source: World Bank Database

\textsuperscript{23}Source: World Bank Database
under-developed: The contribution of primary industry to GDP fell to 15.4% in 2016 while nearly half of the working population still relies on traditional agriculture because the high costs of mechanized agriculture, the uncertainty natural conditions limits the production of agriculture and also raises unemployment ratios. The phenomenon of unemployment and those potential unemployment is serious. The proportion of the population entering the industrial sector in the total labor force from 2007 to 2017 only grew from 20.62% to 23.79%\textsuperscript{24}. (Graph 2) Nearly 70% of the working age population in India has only received primary education\textsuperscript{25}, while the tertiary sector of the economy, such as finance and software, have seen rapid growth in GDP but have limited jobs and high knowledge and ability requirements for the workforce. There is not enough space for these semi-literate and less skilled people to work, and employment in the service sector as a share of the workforce grew by only 7.78% between 2007 and 2017.

\textsuperscript{24} Source: Statista Database

Methodology: The author uses data of India employment to population ratio in percent (15+) from 1991 to 2018 collected from World Bank Database, represent the downward trend of India employment ratio by point chart.

Methodology: The author uses data of India distribution of the workforce across economic sectors from 2007 to 2017 collected from Statista Database, represent the slow growing trend of services and industry sector by point chart.
According to the traditional theory of development economics, the process of industrialization in developing countries will absorb a large number of rural surplus labor, realize the clearing of the rural labor market, push up the real wage, and complete the integration of urban and rural dual economic structure due to the developing needs of manufacturing sector\textsuperscript{26}. Industrialization and the development of the manufacturing sector also play a transitional and catalytic role in the process of labor transition from low-skilled jobs to high value-added jobs\textsuperscript{27}. At the same time, the developing needs of manufacturing sector, create jobs, and also reflected in its raising needs to effectively drive employment in the relevant sectors. According to the Singh Administration's National Strategy for manufacturing, every additional manufacturing job created in India is associated with two to three new jobs in the economy\textsuperscript{28}. For example, a T-shirt production will be divided into jobs of cutting, sewing for different parts, dying and packing after developed in order to achieve a more efficient progress. Therefore, to address the employment problem of the rural population, the government needs to


promote the rapid expansion of manufacturing and accelerate the transfer of labor from the agricultural sector.

Since the 9th prime minister of India Rao's economic reforms in the early 1990s, India has abandoned the 1st prime minister Nehru's "socialist economy" and embarked on a path of liberalization and marketization, a theme that has been embraced by successive governments since then. Prime Minister Modi’s "Make in India" deal inherited the policies and goals of the "National Manufacturing Plan" of the previous Singh administration, and both generations of Indian leaders realized that the traditional economic model of relying only on the tertiary sector of the economy had reached its limits. The services sector cannot support India to realize the rise of a real power. In contrast to the Singh era, a growing middle class and a domestic market, with low import costs, low fiscal deficits and low inflation from low priced international commodities, as well as the United States and Japan’s strong pull and supports on

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29 Goals of the “National Manufacturing Plan”: The development of labor-intensive manufacturing over the next two decades will allow millions of Indians to leave the low-growth agricultural sector and become beneficiaries of the country’s economic growth. (Based on India Transformed: Twenty-Five Years of Economic Reforms)


India for economic and geopolitical benefits, provides India an opportunity to rapidly developing their economy\textsuperscript{32}.

\textbf{Challenges to Developing India’s Manufacturing Sector}

Despite the above, India's manufacturing development also faces a lot of challenges. At the international level, the serious imbalance between supply and demand in the global economy hinder the expansion of Indian manufacturing industry in the international market. The mechanization and automation of the manufacturing industry will inevitably replace the manpower, and its ability to create jobs, especially the low-end jobs, will be reduced. Especially in industries such as garment and textile that has a big ratio of small enterprises constructed by mostly low-end jobs, and there are already machines been invented such as Sewbot for more efficient sewing, knitting, pattern making and packing, even transportation in the earlier 2000s. To achieve widespread adoption of automatic mechanization, it needs only few more decades. Therefore, it is urgent to develops the manufacturing sector for higher employment ratio.

"Make in India" is an economic reform plan and development program in a narrow sense, but it contains political, social and other important meanings. It is unrealistic to expect large-scale manufacturing growth in the short term. In the long run, taking “Make in India” as a starting point, whether the Modi administration can really boost domestic manufacturing expansion and inject sufficient momentum into India's economic rise depends on whether it can achieve unity from the central government to the local government and put the various plans into practice as soon as possible to form a coherent macro-economic reform picture. At the regional level, if India's manufacturing sector develops smoothly, Asia is expected to see the emergence of a large regional manufacturing cluster that will accommodate East Asia, South-East Asia (Association of Southeast Asian Nations, ASEAN) and South Asia, regardless of the orderly transfer of manufacturing capacity or regional comprehensive economic partnership (RCEP) and other multilateral institutional arrangements, will play a positive role in promoting.

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33 Regional Comprehensive Economic Partnership: According to ASEAN’s report in 2012, the Regional Comprehensive Economic Partnership (RCEP) was initiated by the ten ASEAN countries, inviting China, Japan, the Republic of Korea, Australia, New Zealand and India to join the RCEP (“10 + 6”) by cutting tariffs and non-tariff barriers to trade free trade agreement establishing a 16-nation single market.
While developing the formal economy, it is also essential to solve the existing informal economic problems in the manufacturing industries. The key to addressing the problem of informality lies in the voice of workers in the high informal economy and in strengthening norms to reduce vulnerability and provide access to key services for all, strengthen proper supervision, labor supervision and environmental supervision, approval and taxation. Considering the long-term negative impacts of informal economic activities on workers and their families, the environment and governance, the integration of the informal economy into the formal economy is required as soon as possible. The pursuit of formalization should be pursued in a manner that ensures that livelihood opportunities are not destroyed and that they are recognized and expanded.

The aim of formalization is to bring work, workers and enterprises into the framework of formal arrangements. Whether it is manufacturing-oriented or service-oriented industrial structures, to a certain extent, are both the product of institutional innovation. But in the post-take-off phase of sustainable development, achieving a pro-national industrial structure requires that government, the rule of law and democracy go hand in hand to ensure a balance between economic growth, social distribution and incentives
for innovation.
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