

Servicification of Manufacturing

India's Potential and Policy Priorities

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The manufacturing sector is crucial for the economic development of developing countries. Its significance for growth and development is also evident in employment generation, both directly and indirectly through linkage effects. However, according to data from India's National Statistical Office (NSO), the share of manufacturing value added in India's gross value added (GVA) declined from 17.4% in 2011–2012 to 14.7% in 2022–2023 (including construction, the corresponding shares are 27.0% and 22.9%, respectively). This decline places India among the countries experiencing premature deindustrialisation, defined as a fall in manufacturing share in employment and value added at constant prices at lower levels of per capita income compared with high-income early industrialisers. This slowdown in manufacturing has also adversely affected the sector's potential for job creation.

Several reasons have been proposed to explain the lack of manufacturing jobs in India. These include the role of the unorganised or informal sector, the proliferation of small and old firms, and the misalignment between public policies and incentives and the employment intensity of sectors within manufacturing. However, the role of the services sector, and the complementarities between goods and services, has been absent from the narrative on jobless manufacturing growth in India, despite the well-established phenomenon of the “servicification” of economic activity in the country.

Servicification, defined as the use of services as intermediate inputs and add-ons to enhance the competitive advantage of manufactured products, is increasing across countries and over time. While existing research has examined the impact of servicification on exports, productivity and participation in global value chains (GVCs) in the Indian context, its potential impact on employment in the country's manufacturing sector has not been considered.

This paper addresses this gap in research and policy in the context of India. The manufacturing sector benefits from servicification in various ways. As GVC enablers, services are used to participate in, connect with and benefit from the global economy. For example, overseas manufacturing firms embedded in GVCs benefit from low-cost services provided by call centres in India and the Philippines. Network services—such as information and communication



technology (ICT), transportation and logistics—facilitate the global production of manufacturing products. Servicification also enables manufacturing firms to upgrade from low-end fabrication tasks to high-end service jobs, thereby enhancing their positions in GVCs and strengthening the competitiveness of manufacturing products with tailored services. It has also been found to improve the performance of manufacturing firms through higher productivity, more diversified export varieties, better access to foreign markets and GVC upgrading. However, existing research has not explored the impact of servicification on employment in the manufacturing sector, which is where this paper adds value.

According to Organisation for Economic Co-operation and Development (OECD) Trade in Value Added (TiVA) data, the share of domestic services value added in manufacturing exports—a measure of servicification—was 17.7% on average for the manufacturing sector as a whole in 2020. In several individual sectors, however, this share exceeded the manufacturing average. These sectors include computers and electronics (25.2%), metals (24.0%), textiles and footwear (21.8%), electrical equipment (21.1%), machinery and equipment (20.5%), rubber and plastics (19.9%), fabricated metals (19.9%), food, beverage and tobacco (19.8%), paper products (19.1%), motor vehicles and trailers (18.3%) and other non-metallic mineral products (18.3%). These are the sectors where potential servicification–employment linkages are expected to be strongest.

To decompose servicification measures across individual services sectors, the paper constructs backward and forward GVC-participation measures based on multi-region input–output databases. Backward participation, which denotes a country's reliance on imported intermediate inputs, is computed as the share of foreign and domestic value in imported inputs that is re-exported in gross exports. Forward participation, which measures the extent to which a country's exports serve as inputs in production in its partner country, is computed as the share of the value of domestic production re-exported by bilateral partners in gross exports. These measures show that India's forward participation is highest in financial intermediation and business services; maintenance and repair; post and telecoms; and distribution services (both retail and wholesale trade). Among services sectors, backward participation is relatively high in construction and transport services. These are the individual services sectors likely to provide the strongest servicification–employment linkages in the Indian context.

To assess the domestic employment potential of complementary services, the paper identifies services sectors contributing to high domestic value added (DVA) using data from the Asian Development Bank's (ADB) national input–output table for India in 2022. These data show that services as a whole contribute more than 20% of DVA in most manufacturing sectors except metals; coke and petroleum; and food, beverage and tobacco. Moreover, several low-skill services sectors contribute significantly to DVA in Indian manufacturing, including retail trade, construction and wholesale trade. In 2022, the combined share of low-skill services in India's manufacturing output was 15% or more in the following sectors: textiles, rubber and plastics, paper, leather, electrical equipment, wood and machinery. Thus, the servicification and employment narrative is not just about export-led sectors (though that is the focus of the analysis in the paper) but also about domestic-demand-driven sectors. Moreover, this narrative includes not only skill-intensive sectors but also low-skill services activities where it is easier to absorb surplus labour from the agricultural sector.

Finally, the paper undertakes empirical analysis to show a positive association between servicification and manufacturing employment in India, including in less-skill-intensive activities, via backward GVC linkages (the extent to which production in an industry relies on imported intermediate inputs) and upstreamness (a measure of position in GVCs, i.e. whether a sector or country is selling to the final consumer or supplying intermediate inputs).

Stylised facts indicate that backward GVC linkages are most pronounced in construction, transport and accommodation services, while courier and distribution services are among the most upstream sectors in India. However, OECD data suggest that India has a more restrictive services trade regime than the average OECD and non-OECD economy in several sectors, including rail freight transport, storage and warehousing, courier and distribution services. From a policy perspective, removing unnecessary regulatory restrictions in these sectors will not only promote manufacturing activity and exports but also create more jobs, including for low-skilled workers transitioning from the country's agricultural sector.

The analysis undertaken also supports the case for the joint liberalisation of goods and services—whether unilateral or within the framework of preferential trade agreements. This necessitates that policymakers consider the complementarities between goods and services and examine the joint restrictiveness in goods and services sectors when negotiating trade agreements.

About the author



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