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India's Atypical Structural Transformation

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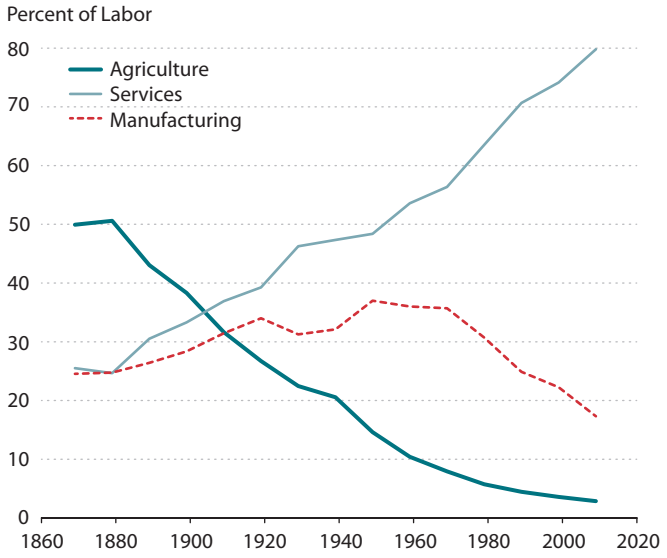
As countries develop, they undergo a structural transformation. Structural transformation is the reallocation of economic activity across the broad sectors of agriculture, manufacturing, and services that accompanies the process of modern economic growth.

Long-term evidence from developed countries indicates two stages of structural transformation: labor moves (i) out of agriculture into manufacturing and services and then (ii) out of both agriculture and manufacturing into services. Figure 1 shows the behavior of labor shares during the U.S. structural transformation over 1869 to 2008. The break from the first stage to the second stage occurred around 1970. This behavior is accompanied by changes in the shares of GDP: The agriculture share steadily declined over the period. The manufacturing and services shares stayed relatively constant until the 1960s, but then manufacturing began to decline, while services continued to increase.

India is a developing country currently undergoing a structural transformation. However, its path is somewhat different from that of a benchmark developed country.

Figure 1
Labor Shares in the United States



SOURCE: 1869-1957: Kendrick (1961); 1929-2008: the Bureau of Economic Analysis and Bureau of Labor Statistics.

> Does India have a stagnant manufacturing sector or an exceptionally productive services sector?

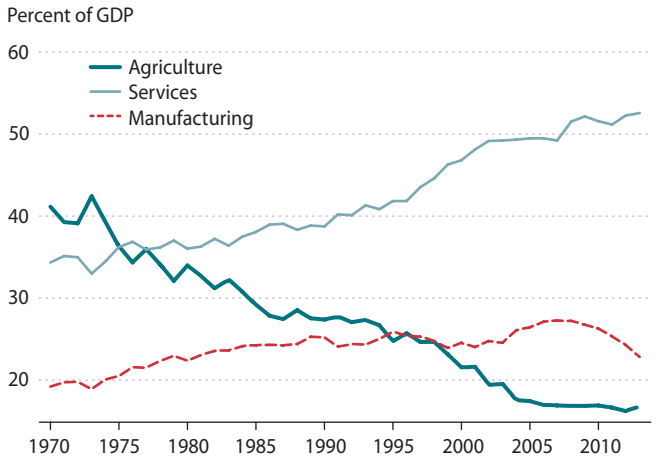
Figure 2 shows the GDP shares of the three sectors over the past four decades for India. The services share has increased dramatically and currently stands at 53 percent. In comparison, the manufacturing share has remained stagnant, growing only from 19 percent in 1970 to 23 percent in 2012. These changing shares of GDP suggest India might now be going through the second stage of its structural transformation. As shown in Figure 3, however, the manufacturing labor share has increased faster than the services labor share, which is unexpected. These findings imply that productivity in the services sector is remarkably higher than in the manufacturing sector and has sharply increased over the years.

This pattern of structural transformation in India is puzzling for two reasons. First, in principle, India's manufacturing and services sectors both operate in similar economic and regulatory environments. Second, compared with both developed and developing countries, the productivity of India's services sector relative to its manufacturing sector is an outlier. Its services sector is four times more productive than its manufacturing sector, whereas in most other countries the services sector is at most twice as productive (see Chari, Goel, and Restrepo-Echavarria, 2015).

Why is India's structural transformation following such an unusual path? Is the cause a stagnant manufacturing sector or an exceptionally productive services sector?

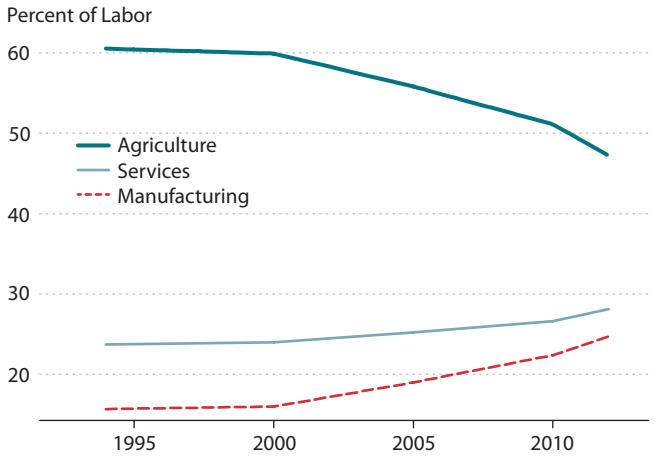
It is possible that labor laws, lack of credit availability, and poor infrastructure more severely impede manufacturing firms than services firms. It has been argued that, because manufacturing is more dependent on intermediate

Figure 2
GDP Shares in India



SOURCE: World Bank World Development Indicators.

Figure 3
Labor Shares in India



SOURCE: World Bank World Development Indicators.

inputs, pro-labor laws combined with regulation of input quotas have reduced productivity growth considerably more in the manufacturing sector than the services sector (see Gupta, 2009). These laws combined with lack of credit availability lead to non-optimal factor combinations in manufacturing firms but influence services firms far less.

On the other hand, it has also been argued that the spectacular growth in the services sector can be attributed to input demand from a growing, albeit not as fast, manufacturing sector (see Dehejia and Panagariya, 2010 and 2014).

Thus, while some studies attribute stagnant manufacturing in India to rigid labor laws and input quotas, others argue that rapid services growth is caused by increasing demand from manufacturing. We still do not have a comprehensive understanding, however, of why labor keeps moving into the manufacturing sector despite the already large and still widening productivity gap between the manufacturing and services sectors. ■

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