

The Way Forward for Manufacturing in India: Institutions, Relative Factor Prices, and Innovation

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There are two important characteristics of the situation in which the Indian economy is placed. The first is that of an open economy, with competition not only in the foreign but also in the domestic market. The second is that of relatively mobile capital, a mobility that applies to both foreign and Indian capital. Particularly for large capital, but even to an extent for medium capital, decisions on the location of the next manufacturing unit are based on an assessment of possible locations in many parts of the world. For instance, Biocon, the Indian bio-tech pharmaceutical company, carries out its R&D in India but has decided to set up a manufacturing plant in Malaysia. Such decisions on the location of manufacturing investment have resulted in outward FDI that, over the last few years, has been more than or equal to inward FDI.

The growing trade deficit in manufacturing is testimony to the fact that Indian manufacturing has been losing competitiveness across the range of technologies, from low- to medium- and high-tech technologies. Manufactures across these technologies accounted for only 30% of Indian export earnings in 2010 as against 85% for China (UNCTAD, 2013). Of course, China's 30% of export earnings from high-tech sectors, masks the fact that a lot of these exports are of low-skill segments, such as assembly, of high-tech products. A lot of Chinese high-tech exports are a result of Chinese participation in global production networks (GPNs), even at the low end of labour-intensive tasks. But, there is also a range of high-tech Chinese products, such as in telecom equipment and PCs, that compete in the world market.

In outlining a strategy to carry forward manufacturing in India it is necessary to address both general issues that relate to all of manufacturing and to specific issues that may relate to different technological levels. Immediate problems, such as poor roads and grossly insufficient electricity supply, increase costs. But they do not spoil the business climate. What are of importance here are the institutional failures that perpetuate high costs. Governance issues, such as delays in decision-making at the level of large projects, delays in environmental and other clearances that take into account the rights of the displaced, and the continuing inspector-raj at the level of smaller projects, all together result in delays that reduce the returns to investment and increase the range of uncertainty. Most damaging to the business climate are retrospective changes in laws, whether tax or other laws.

Given institutional reform to take care of governance issues and adequate investment to improve infrastructure, is anything specific needed to promote low-tech and low-skill products or task segments? India's failure in labour-intensive manufacturing is now so prolonged that it is almost taken for granted. The recent devaluation of the Indian rupee will surely be a fillip to such labour-intensive manufacturing. But a more sustained stimulus is needed. Here it is not

just absolute but relative factor prices that matter. While wages have been rising the cost of capital by one estimate (ILO, 2009) the cost of capital has been falling. Added to the relative cheapness of capital is the high price of land. Together, these relative prices bias investment towards high return investments. It is no wonder that small-scale manufacturing units, whether in automobile components or electronics, are being replaced by high return IT software and business process units.

How can one deal with the relatively high cost of labour vis-à-vis capital? The market fundamentalist way is to reduce wages, through some form or the other of flexible labour. A more inclusive way would be to provide wage subsidies. They could be through the provision of cheap housing for workers, as is now being proposed for the Delhi Mumbai Industrial Corridor (DMIC). This would result in cheapening the cost of employing labour without reducing, but in fact raising real wages. A similar approach of providing a subsidy for women's employment as skilled workers can be adopted. The extra cost of women's employment, namely the cost of maternity and child-care benefits, can be shifted from the firm to the exchequer.

A shift in the relative price of labour vis-à-vis capital would promote investment in labour-intensive products as also in labour-intensive segments of GPNs. The latter, however, would also require the adoption of some form of industrial policy. In automobiles India has long had a policy of escalating tariffs – higher for assembled vehicles than for components. But for crucial sector of electronics India has had an inverted tariff structure. The result has been that India has not become a centre for electronics assembly, in the manner that it is for automobile assembly. Within WTO rules some forms of escalating tariffs can be adopted. Even a couple of percentage points difference in component and final product tariffs can be an attraction for investments in labour-intensive segments of GPNs.

The above is a manner of utilizing existing resource endowments. But resource endowments, better described as capabilities, are the result of policy and other endogenous factors.

But what about the large Indian manufacturing sectors in mid-tech industries that are stagnating as a result of competitiveness problems? A look at how India developed a competitive, high-tech pharmaceuticals industry will enable us to see what is needed. India was able to become a major player in pharmaceuticals by first reverse engineering and then carrying out process innovations to develop the generic pharmaceuticals industry. The support provided by India's then patent regime, which allowed only process and not product patents, is no longer available. But the route of reverse engineering, which results in technological deepening, and innovation, even if they are minor innovations, shows the route for building and sustaining competitiveness.

What are the market failures that inhibit Indian manufacturing from following the path of reverse engineering and innovation? Reverse engineering does not yield any immediate increase in productivity. Thus, firms would not carry it out. But reverse engineering builds the technological deepening since it enables a

firm to move from know-how to know-why, which is a pre-requisite for innovation.

Another factor leading to market failure in technological deepening is the dominant labour policy of Indian business. Most Indian businesses compete on price through using forms of flexible labour that reduce wage costs. With flexible labour there is considerable attrition, which means that in-house training of labour is less than socially desirable.

Some studies of Indian business show that firms that compete on quality and product niche, have a stable work force; while those that compete on price utilize a flexible work force. Can a shift to a stable work force be an enabler in moving from price to quality and product competition? Theory would tell us that a stable work force is a pre-requisite for building technological capacity in a firm, and there are examples of such enabling shifts in work force policy.

Some manner of government-supported skills training, as being attempted in the Skills Mission, along with a stable work force policy are then first steps in Indian businesses deepening technological capacity. But there still remains the question of promoting innovation. Besides competition it is also necessary to shift the tax system in favour of R&D expenditure instead of buying capital equipment. The present high depreciation allowance promotes the latter, while a multiple tax rebate for R&D would promote the former. R&D spending by Indian firms is very low, just about 0.5% of GDP as against more than 1% in China.

Start-ups are key to innovation, but they require not just ease in setting up business, but also ease in shutting down one that is not profitable. The latter is notoriously even more difficult in India than the former.

Indian manufacturing can build an advantage in the development of products for the low-price but high-volume markets of developing economies. Indian firms and lead consumers are more familiar with these markets in comparison with firms from developed economies. The low cost smart phones, low cost polymers, generic drugs, small-holder drip irrigation, the Acer pick-up are all examples of frugally engineered products that can meet the needs of developing economy markets better than extravagantly engineered products from developed economies.

In addition to firm-centric R&D there is also need for strategic R&D for new technologies. This is for developing technologies in areas such as solar and other renewable energy source or nano technology. These require public support and it is a manner of industrial policy (support to R&D) that is allowed under WTO rules.

The central requirement, however, is to recognize that for Indian manufacturing to have a future it must promote technological deepening and build an innovation system. Rather than attempt to compete with Chinese manufacturing on price, the promotion of innovation is key to the future of Indian manufacturing.