

Success beyond software and services

India dominates the world market in motorcycles. What will it take to replicate this success in other industries?

Examples abound in software and services of how Indians can work systematically to solve challenges, build teams, institutional structures, and scale. But what of other areas? This is a take on aspects of manufacturing, and consideration of a change in approach.

Consider the example of a software unicorn such as Postman, a Bangalore-based Application Programming Interface platform that eases interoperability for apps. The founders are engineer managers with experience at Yahoo and other MNCs. Started in 2009, in six years it was valued at \$2 billion. This is a high-value Software-as-a-Service enterprise. It is an area where India has deep skills, there is limited need for capital, and ready access to local and offshore markets in verticals such as banking and finance, and oil and gas. The team has thought through the customer-centric product rationally and deeply to design and deliver solutions, blessed with good timing, marketing with sound strategy, and executing with skill.

By contrast, manufacturing enterprises face many more problems. These include large capital requirements, an extended payback period, high costs for capital, infrastructure, and inputs, and a bias for soft-collar jobs. Inadequate logistics cause delays and high inventories, increasing costs. Small, fragmented suppliers do not have adequate scale to function efficiently, although they have access to natural resources such as iron ore, bauxite, cotton, and abundant sunshine, together with low-cost labour. There is potential to exploit these in skill-intensive value chains such as pharmaceuticals, capital goods and automotive components, because of large, proximate domestic mar-

kets. To realise this potential, these manufacturing value chains need considerable effort and investment to become global champions. An assessment of their status follows, with some possible ways forward, and instances of success despite the constraints.

Present state of manufacturing

A McKinsey publication in October 2020 on manufacturing in India observed that while companies elsewhere had begun to reconfigure sourcing and manufacturing for better reliability after Covid, India was

not moving to exploit these opportunities¹. The report cites that manufacturing sector GDP from 2006 to 2012 grew by 9.5 per cent, but declined over the next six years to 7.4 per cent. Also, nearly 700 of the top 1,000 manufacturers showed returns below their cost of capital in 2018, whereas sectors with better returns showed increased investment from 2016 to 2020. The authors suggest India has the potential to become a manufacturing powerhouse if it can develop globally competitive manufacturing hubs. They

outline the steps required in 11 sectors with strong potential, premised on India's strengths in raw materials, manufacturing skills, and entrepreneurship, by obtaining and applying the requisite know-how and technology, increasing productivity, and attracting capital. They estimate that appropriate changes in industrial policy together with responsive manufacturers could more than double the value chains in seven years, with significantly increased employment.

Manufacturing value chains

The report classifies India's high-potential manufacturing value chains into "mature", "established but



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