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First, that manufacturing is the only sector capable of sustainably achieving scale in the world market (downplaying the role of natural resources and other sectors); and

Second, that it is also the main sector capable of achieving sustained high productivity growth.

So, the argument goes, the rest of the economy, stodgy, unreliable, or confined to the home market, cannot grow unless pulled by the manufacturing sector. But neither of the critical assumptions holds up nowadays, if they ever did. Countries have shown that they can find many avenues to achieve scale on world markets, of which manufacturing is one, and, with the exception of some services that must still be provided face-to-face, rapid productivity improvements are being achieved in all sectors of the economy, often faster than in manufacturing. As I argue in Dadush (2015), this is cause for hope, not despair.

ICT (Information and Communications Technology) has created large new growth and high-productivity sectors in 'modern' services – such as finance, telecommunications, software, and business process outsourcing – and also made many services, previously provided face-to-face, such as retailing and banking, storable, divisible and tradable, boosting productivity. Exports of modern services have outpaced those of manufactures by a wide margin since 2000.

Globalisation, ICT, and the associated phenomenon of rapid catch-up growth of developing countries, have opened up many new avenues for earning foreign exchange, boosted the demand and supply of natural resources, and created opportunities in finer combinations of resources, services, and manufactures ('tasks') along the international value chain. Many economies that are poor in natural resources and too small or distant to be competitive in manufacturing have found that they can rely on migrant remittances, tourism, and investment links with their diaspora for foreign exchange and growth.

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Deindustrialisation

As many have shown, the process of deindustrialisation (intended as the relative and not necessarily the absolute decline of manufacturing) is occurring earlier and earlier in the development process, while, correspondingly, services are rising in importance sooner

Employment in manufacturing is also falling as a share of total employment, and this is happening especially rapidly in several high-income countries. The declining share of manufacturing in the GDP of advanced countries is attributed to low income elasticity of manufactures at high levels of income, as well as higher productivity growth than in services, which leads the relative price of manufactures, but not necessarily its volume, to decline. However, the prevalence of the latter feature has recently been challenged based on data from across the world suggesting that, helped by ICT, productivity is also rising rapidly in large parts of the service sector.

Some part of the rising share of services may also be the result of a statistical artefact, as manufacturers outsource service activities previously carried out in-house. However, as indicated in a recent OECD report, this effect is likely to be small. Moreover, this phenomenon flags the fact that fabrication (production of physical goods) is often a small and declining part of value added of companies classified under manufacturing, which invariably house very extensive service activities – such as marketing, distribution, finance, and R&D.

The decline of the manufacturing share in the GDP of developing countries is puzzling, since one would expect the income elasticity of demand for manufactures to be high at lower levels of income, and developing countries to specialise in labour-intensive manufactures. Possible explanations point to good rather than bad news. These include:

The surge in primary commodity prices since 2000 (note that deindustrialisation preceded this);

Increased life expectancy and demand for healthcare;

Vastly expanded education;

International tourism;

Increased foreign direct investment in services; and

New sectors and production/distribution techniques built on ICT.

These shifts in technology, global integration, and government policies caution against the presumption that the transformation of poor countries must retrace that of their richer cousins.

In the eyes of many, manufactures are special because of their capacity to earn foreign exchange. However, even though they are growing much faster than advanced countries, manufactures play a relatively small role in the exports of developing countries.

In 2012, manufactures represented 54.6% of world exports of goods and services measured on a gross basis, but much less than half, and smaller than services, on a value-added basis.¹ Moreover, as shown by Baldwin et al. (2015), the value-added share of services in manufactured exports has surged over the last two decades. While most advanced countries have a comparative advantage in manufacturing, few developing countries do. Of the countries for which the World Bank provides data, only 25 developing countries – mainly based in Asia – have a revealed comparative advantage in manufacturing, while 131 developing countries have a revealed comparative advantage in natural resources or services, or both – all measured on a gross basis.

In 2012 commodities loomed much larger in the exports of developing countries than manufactures (49% commodities as compared to 32% of manufactures). However, excluding China, commodity exports of developing countries are three times larger than manufacturing, and larger still if measured on a value-added basis. Services exports of developing countries have grown almost twice as fast as those of advanced countries since 2000. Still, in only a few developing economies, such as Morocco, are gross exports of services as large as exports of manufactures, though they are larger measured on a value-added basis.

According to the World Bank, as a share of GDP (2013), many countries – all relatively small economies – receive remittances comparable to or greater than the average contribution of manufactures to GDP across the developing country sample. For example, the top recipients of remittances in 2013 were Tajikistan (42% of GDP), Kyrgyz Republic (32%), Nepal (29%), and Moldova (25%), while dozens of developing countries receive remittances in the range of 5–10% of their GDP.

Growth patterns

Manufacturing is a small and relatively slow-growing sector in most developing countries. As measured over the last quarter-century, the remainder of the economy

accounts, on average across the developing countries, for 8 to 9 times more growth than manufactures, and even in countries that have grown rapidly, manufacturing accounts for a relatively small share of growth.

The World Bank-sponsored Growth Commission examined closely the drivers of growth in 13 ‘growth champions’, where GDP grew at a rate faster than 7% over 30 years.² A case-by-case review of the composition of growth in these countries by the author suggests that manufacturing was most clearly a key driver of growth in countries in China, South Korea, and other countries in East Asia, which practiced import substitution and financial repression early in their growth period. However, manufacturing never accounted for most of the growth even in these countries. Services nearly always accounted for the largest share of growth, and non-manufacturing industry (construction, utilities) also often accounted – by itself – for a higher share of growth than manufactures.

Moreover, manufacturing was not always the lead sector. Natural resources led the growth process in Oman and Botswana, and in Malta a combination of services, non-manufacturing industry, and manufactures operated together, with transportation and tourism services probably the most important. Natural resources also played a key role in the early phases in Indonesia, Malaysia and Brazil. In all instances, agriculture was a minor contributor except in Brazil and China in the early phases of their fast growth period. Services soon became the leading sector of growth in economies where manufacturing played the key role at the start, such as Singapore and Hong Kong, and which achieved high-income status very rapidly. It is evident from these experiences that while manufacturing played a key role in some countries, sustained high growth without relying primarily on manufacturing is possible, and a process of learning, productivity improvement, and investment that touches all sectors characterises the most successful economies.

I also examined the composition of growth in a much larger group of developing and advanced countries that achieved ‘transformational’ growth – which I define as doubling per capita income over a generation, exhibiting per capita growth in the range of 2.5% to 3.5% a year over the last 20–30 years. Using the latest available year, 2012, as the end period, of the 39 countries that experienced ‘transformational’ growth, only 11 exhibit a revealed comparative advantage in manufacturing, and even among these countries, manufacturing accounted for only 20% of the growth over the period. At the same time, 18 countries showed a revealed comparative advantage in services, and services accounted for 64% of growth across the sample of 39 countries. Strikingly, the often-overlooked non-manufacturing industry sector, which includes construction and public utilities, accounted for more growth than manufacturing. The contribution from primary commodities and agriculture was just a little shy of that of manufacturing.

In a regression, I find that the manufacturing share of value added in 2000 is significant and positive in accounting for GDP per capita growth in developing countries over 2000–2012, controlling for the terms of trade and initial income, though it is not significant in advanced countries. However, for developing countries, a 1% increase in the

manufacturing share of value added raises the growth rate by about 0.015%. In other words, to add 0.1-0.2% to their growth rate, the manufacturing share of GDP would have to increase from 15% to 25% – a tall order nowadays when the share tends to decline.

Policy implications

Policies that artificially favour manufacturing should instead give way to maximising learning from the frontier in all sectors of the economy. Such an approach attributes a central role to openness through trade, FDI and migration, and to investments in connectivity and competence/education. It also underscores the importance of a more flexible exchange rate, which alleviates worries about the balance of payments and allows policy to focus on the underlying drivers of growth.