

INDUSTRIAL DEVELOPMENT REPORT 2018

BRIEF NO 4

Foreign demand: injecting new fuel in the virtuous circle of manufacturing consumption

Executive summary

Foreign demand for domestically produced goods is a key driver of industrial development. Tapping into demand abroad generates new incomes for producers at home, fuelling the virtuous circle.¹ Critically, it also provides the foreign exchange necessary to escape balance-of-payments problems. The extent to which these opportunities materialize depends on how countries adjust their manufacturing terms of trade. Countries that increase the value of their manufacturing exports relative to the price of imports—their ‘purchasing power’ on international markets—are better placed to benefit from global demand. Countries can improve their international purchasing power of manufacturing exports in several ways, ranging from investing in innovation to diversifying their destination markets, and strengthening adherence to international standards.

Key findings

- » Increases in the international purchasing power of manufacturing exports are associated with faster economic growth. Between 2003 and 2014, country groups that experienced greater improvements in their manufacturing terms of trade also experienced faster per capita GDP growth.
- » The purchasing power of manufacturing exports matters for industrial development in an indirect sense too. By providing a steady inflow of foreign exchange, manufacturing exports help avoiding balance-of-payments problems.
- » Sustaining improvements in the purchasing power of exports requires innovation. Between 2003 and 2014, country groups which improved their manufacturing terms of trade the most also experienced greater technological upgrading in their export portfolios.
- » What countries export matters, but so does where they export to. Tapping into larger and more sophisticated markets can stimulate learning, innovation, as well as greater compliance with international standards.



¹ See Industrial Development Report 2018 Research Brief No. 2.

Do manufacturing exports improve economic performance?

Tapping into global demand for domestically produced goods has been, and remains, an important development objective. By catering to new markets, exports generate incomes for domestic workers and entrepreneurs. Exports also provide the foreign exchange necessary to access components and machinery to sustain industrial development over time.

Successful examples abound, from the East Asian miracle to China's ascent as a global economic powerhouse. Yet the reverse can apply, too. Countries that fail to upgrade their exports risk seeing their terms of trade deteriorate (see Box 1). Industrialization can come to a halt and balance-of-payment crises arise, as experienced by Latin American economies in the build-up to the 'lost decade'.

Box 1. Economic thought and the terms of trade

The Prebisch-Singer hypothesis postulates that if the exports of a country are either inferior or basic products—that is, the quantity demanded of these products when global incomes grow does not increase—then exporters will be forced to lower their prices in order to continue selling abroad.

In its classical formulation, the hypothesis focuses on primary commodities. Manufacturing products are, by contrast, considered to be superior goods. Yet in recent years manufacturing exports from emerging economies have displayed some of the features of primary products, leading to the observation that they too can become 'commodified'. This is because manufacturing exports that are not technology-, but labour-intensive are easily imitated by other market entrants, dampening global prices. Modern industrial strategies should therefore focus on targeting high-value segments in global markets in order to avoid commodification.

The purchasing power of manufacturing exports: the static view

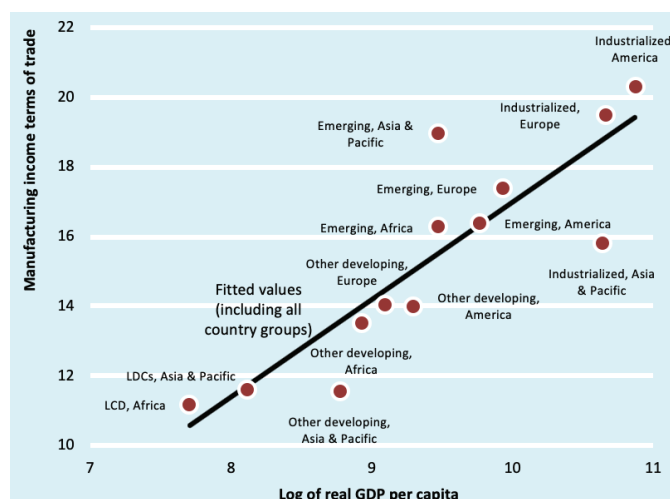
As suggested by the examples above, whether a country benefits from global demand largely depends on how it adjusts its terms of trade over time. Analytically, this relationship is best studied by focusing on the manufacturing income terms of trade (MITT). The MITT provides an indication of the 'purchasing power' of manufacturing exports in terms of 'how much' countries can afford to import (see Box 2).

Box 2. Calculating the 'purchasing power' of manufacturing exports

When discussing the effects of international trade, one should distinguish between those related to changes in trading volumes—or the 'quantity' of traded goods at any point in time—and those deriving from changes in prices, or the 'value' of a country's export basket. The manufacturing income terms of trade (MITT) captures both dimensions in a synthetic measure. The MITT is an indicator defined as the export volume of a country (an index-based measure) multiplied by its barter terms of trade (a measure indicating the pure ratio between export and import prices).

The higher one's purchasing power is on international markets, the larger the basket of imported intermediate and final goods one can afford. It is hardly surprising, then, that there should be a close association between countries' wealth and the purchasing power of their manufacturing exports (see Figure 1).

Figure 1 – Richer countries have stronger purchasing power of manufacturing exports

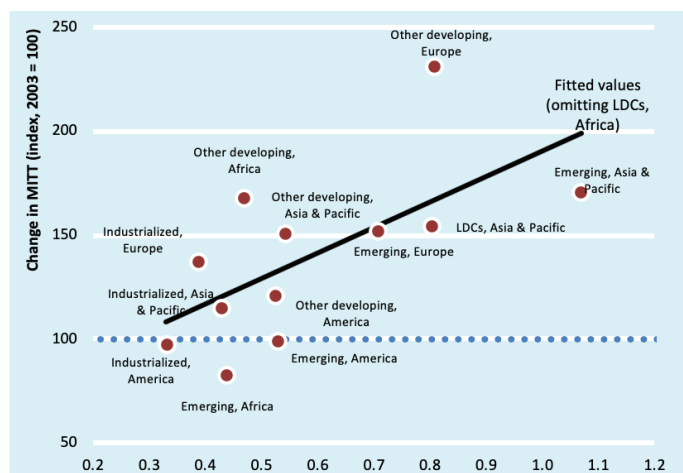


Source: UNIDO IDR 2018, Figure 4.3, page 94.

The purchasing power of manufacturing exports: the dynamic view

There is more, however. There also appears to be a strong correlation between changes in the international purchasing power of exports and economic growth. Country groups that achieved the greatest improvements in their international purchasing power between 2003 and 2015 also experienced faster economic growth (see Figure 2).

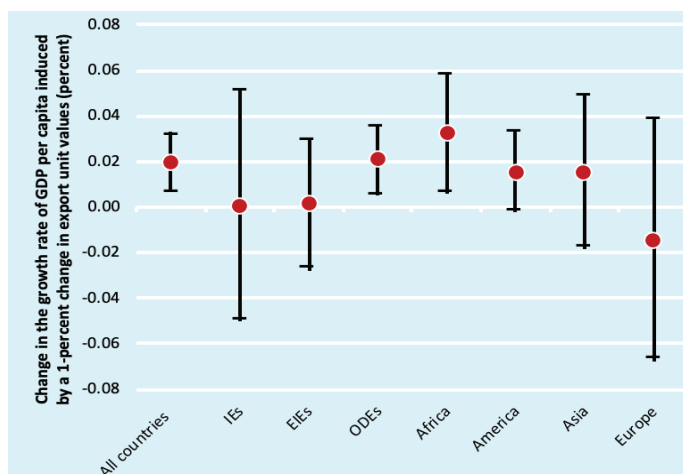
Figure 2 – Across country groups, increases in the purchasing power of manufacturing are associated with higher growth rates in per capita GDP



Source: UNIDO IDR 2018, Figure 4.5, page 95.

Econometric estimates lend support to this finding. Over the long run, improvements in the unit values of exports—that is, the ‘price’ component of the MITT—have a positive impact on economic growth. Across country groups, a one percentage point increase in unit values induces an acceleration in the growth of GDP per capita of approximately 0.02 percentage points (see Figure 3).

Figure 3 – Across country groups, increases in the unit values of manufacturing exports boost long-run economic growth



Note: The figure presents the elasticity of the growth rate of GDP per capita induced by changes in manufacturing unit values. Dots represent point estimates, and the lines the 95 percent confidence interval of the respective estimate.

Source: UNIDO IDR 2018, Figure 4.13 panel (a), page 103.

What drives the purchasing power of exports?

The role of technology...

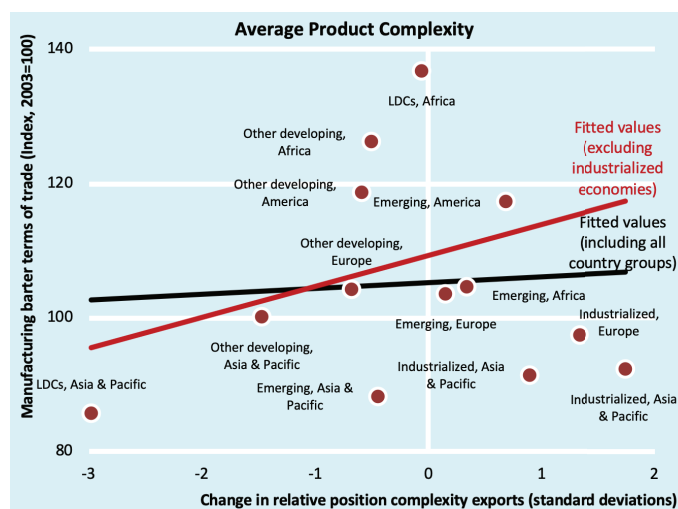
One way to improve a country’s international purchasing power consists in increasing the technological content of its exports. There are at least two, interrelated trajectories along which technical upgrading can be achieved.

One entails a horizontal movement towards greater diversification in the composition of the export basket, relative to all other exporting countries. It is

associated with the notion of product complexity². The intuition is simple. Producing more complex goods—such as machinery, computers or optical equipment—requires that stronger technological capabilities be in place. These, in turn, reflect the development of a deeper and more widely distributed knowledge base.

Across country groups, increases in the average complexity of exports correlate closely with improvements in purchasing power between 2003 and 2014. This is particularly evident for emerging industrial economies and least developed countries (see Figure 4). By contrast, industrialized economies appear to have experienced a peculiar pattern, with improvements in complexity being accompanied by a moderate decline in the terms of trade.

Figure 4 – Increases in the product complexity of exports boost international purchasing power across country groups



Source: UNIDO IDR 2018, Figure 4.8, panel (a), page 98.

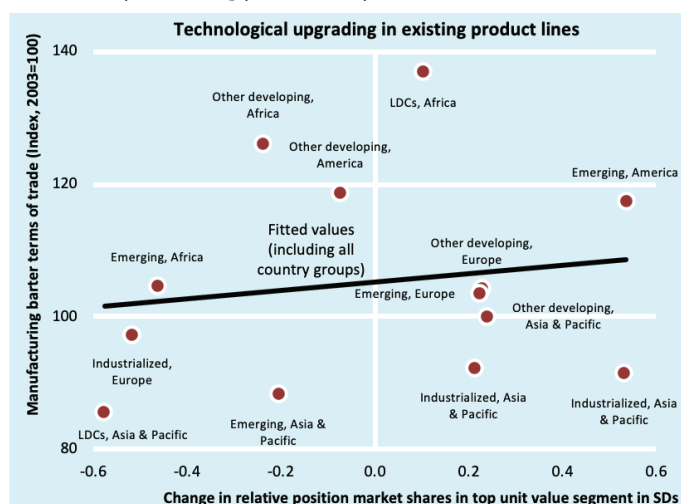
Technological upgrading can also be captured by looking at changes in countries’ export shares in the ‘top’ unit-value segments in which they are active, relative to other countries—the notion of vertical differentiation. Similarly to export complexity, improvements in active product lines also correlate positively with increases in the purchasing power of manufacturing exports (see Figure 5). However, this relationship displays greater heterogeneity across country groups.

...and that of end-market diversification

The characteristics of destination markets can also play an important role in shaping the evolution of a country’s international purchasing power. Larger destination markets, for instance, trigger scale effects for exporting firms that can benefit from them. By the same token, exporting to richer markets—characterized, in principle, by highly sophisticated consumer preferences—can push domestic exporters to increase product quality.

² The indicator for export complexity used in Figure 4 is derived from Hidalgo and Hausmann (2009).

Figure 5 – Technological upgrading in active product lines also boosts the purchasing power of exports



Source: UNIDO IDR 2018, Figure 4.8, panel (b), page 98.

Catering to high-income markets may also incentivize domestic firms to strengthen adherence to international standards for products, labour and the environment. In a trade environment that is increasingly driven by technical regulations and quality standards, compliance—in quality, certification, and labelling—is increasingly important not only to ensure or retain market access, but also to increase a country’s competitiveness.

Conclusions

- » Across different country groups, increases in a country’s international purchasing power of manufacturing exports are associated with faster economic growth.
- » Increasing the purchasing power of manufacturing exports is also important for the balance of payments. Otherwise, satisfying consumption through imports can lead to foreign exchange shortages and cause growth to come to a halt.
- » Successful export-oriented industrialization strategies require a continuous process of structural change combined with active participation in dynamic, technology-intensive markets.

References and suggestions for further reading

Hidalgo, C.A. and Hausmann, R., 2009. The Building Blocks of Economic Complexity. Proceedings of the National Academy of Sciences of the United States of America, 106(26), pp. 10570–10575.

Mayer, J., 2003. The Fallacy of Composition: A Review of the Literature. UNCTAD Discussion Papers, 166. Geneva: United Nations Conference on Trade and Development (UNCTAD).

Prebisch, R., 1950. The Economic Development of Latin America and Its Principal Problems. Lake Success, NY: United Nations Department of Economic Affairs.

UNIDO, 2017. Industrial Development Report 2018. Demand for Manufacturing: Driving Inclusive and Sustainable Industrial Development. United Nations Industrial Development Organization (UNIDO). Vienna.

Contacts

For further information, contact IDR2018@unido.org or a.lavopa@unido.org.