

February 12, 2015

Premature deindustrialization in the developing world

Mention “deindustrialization,” and the image that comes to mind is that of advanced economies making their way into the post-industrial phase of development. In a new paper,[1] I show that the more dramatic trend is one of deindustrialization in the developing countries. This is a trend that is appropriately called premature deindustrialization, since it means that many (if not most) developing nations are becoming service economies without having had a proper experience of industrialization.

Latin America appears to be the worst hit region. But worryingly similar trends are very much in evidence in Sub-Saharan Africa too, where few countries had much industrialization to begin with. The only countries that seem to have escaped the curse of premature industrialization are a relatively small group of Asian countries and manufactures exporters. The advanced countries themselves have experienced significant employment de-industrialization. But manufactures output at constant prices has held its own comparatively well in the advanced world, something that is typically overlooked since so much of the discussion on deindustrialization focuses on nominal rather than real values.

These conclusions are based on data from two sources. My baseline results use data from the Groningen Growth and Development Center (GGDC),[2] which cover 42 countries and span the period between the late 1940s/early 1950s through the early 2010s. The major economies in Latin America, Asia, and sub-Saharan Africa are included alongside advanced economies. For robustness checks and further analysis, I supplement these with a new database put together by researchers at the Asian Development Bank (ADB) using World Bank, ILO and U.N. sources.[3] The ADB data cover a much larger group of countries, but start only from the early 1970s.

The core results of the paper can be illustrated using two sets of figures, one for employment and one for output.

Look at employment first. The figures below display the coefficients for period dummies (along with their confidence intervals) from an estimation that regresses the employment share of manufactures on log population, log population squared, log per capita income, log per capita income squared, a full set of country dummies, and period dummies (with the pre-1960 years excluded). They show the unexplained components of the manufacturing employment share for each period, relative to the pre-1960 period. The left-hand panel of Figure 1 is for non-manufactures exporters, while the right-hand panel is for manufactures exporters. To divide the sample into these two groups, I used the threshold of a minimum 75 percent share for manufactures exports.

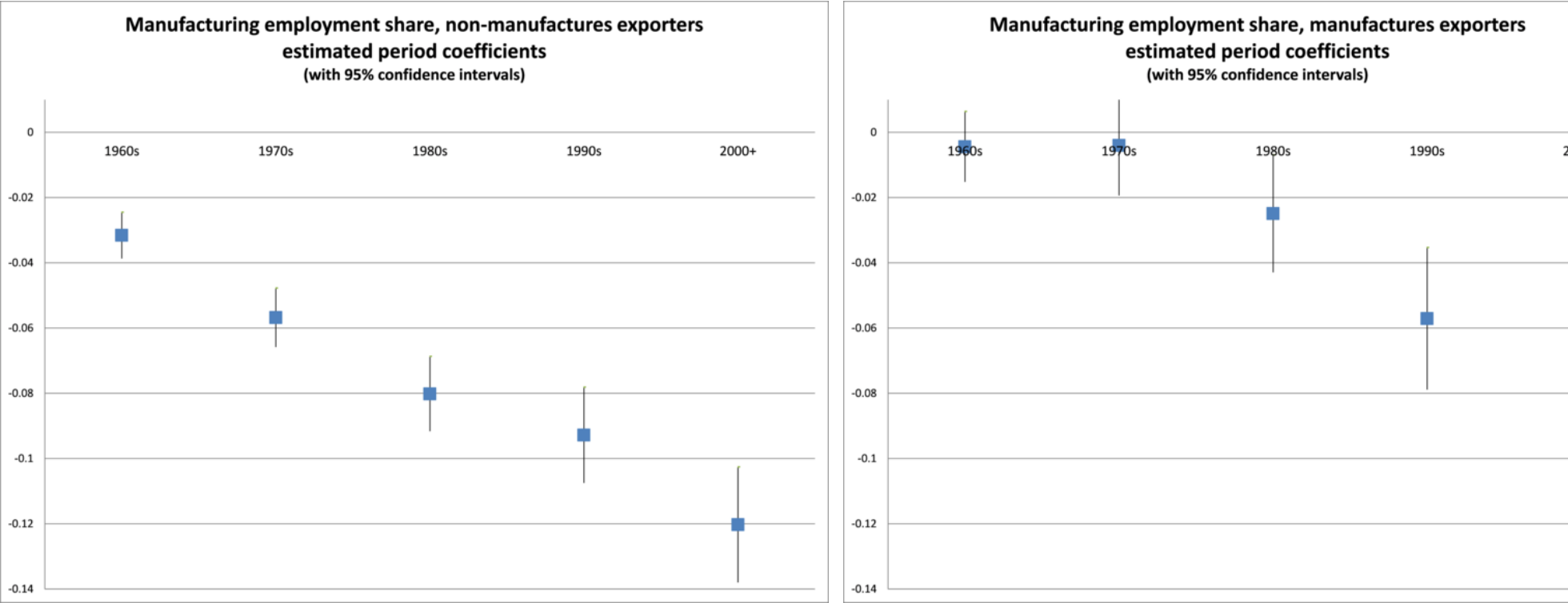


Figure 1

The results show that both groups of countries experienced significant employment loss in manufacturing, but the declines are much larger for countries with a smaller manufactures footprint on world markets. For the post-2000 period, the difference is a relatively large 3 percentage points (of the labor force).

The differences are even more striking for manufacturing output. The analogous charts for manufacturing value added (MVA) shares in GDP (at constant 2005 prices) are shown in Figure 2 below. For the non-manufactures exporters, the unexplained decline in MVA shares in recent years is commensurate with the fall in employment shares. For the manufactured exporters, on the other hand, there is no statistically perceptible downward trend in MVA shares at constant prices (once demographic and income trends are controlled for).

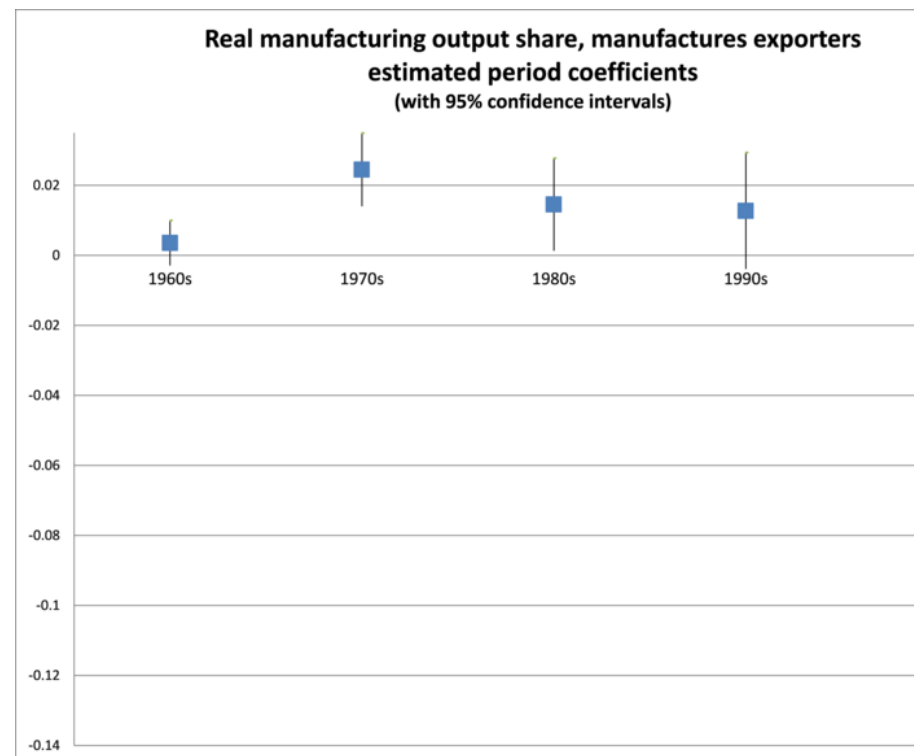
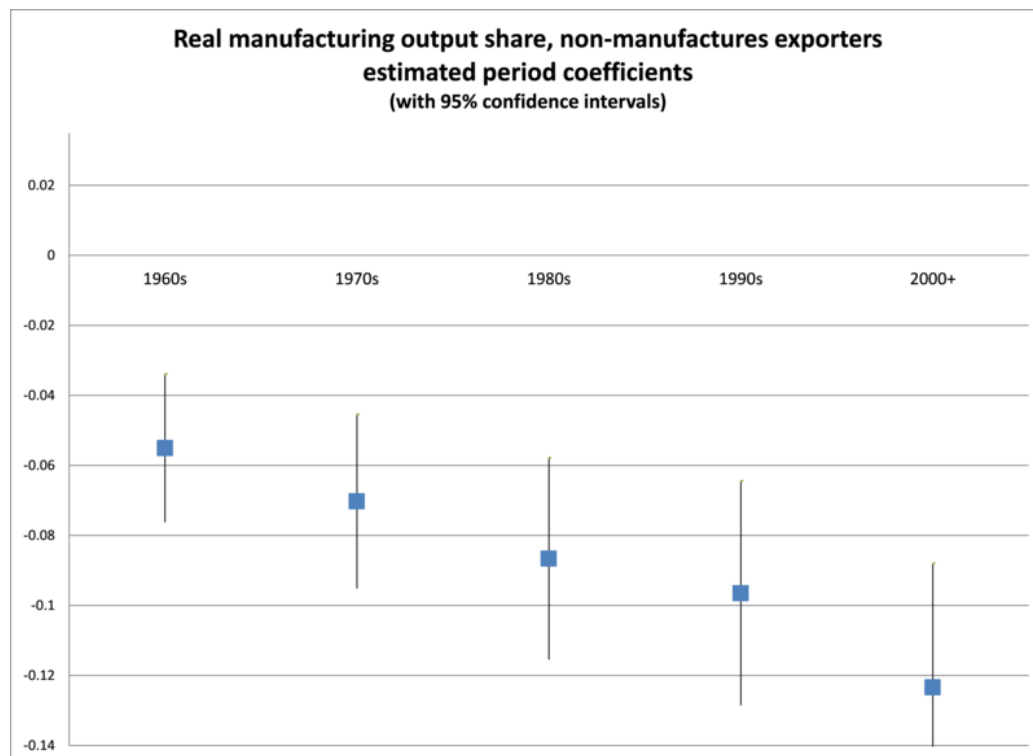


Figure 2

The conventional explanation for employment deindustrialization is based on differential rates of technological progress.[4] Typically, manufacturing experiences more rapid productivity growth than the rest of the economy. This results in a reduction in the share of the economy's labor employed by manufacturing when the elasticity of substitution between manufacturing and other sectors is less than unity. This explanation cannot account for the decline in the output share of manufacturing at constant prices, however, as differential technical progress in manufacturing would increase the MVA share. Moreover, developing countries tend to be small in world markets for manufactures, where they are essentially price takers. The above mechanism, which operates through relative price changes, does not work for small open economies. In the limit, when relative prices are fixed, more rapid productivity growth in domestic manufacturing actually produces industrialization, not deindustrialization (in terms of both employment and output). (The math is worked out in section VII of my paper.) So the culprit for deindustrialization in developing countries must be found elsewhere.

The obvious alternative is trade and globalization. A plausible story would be the following. As developing countries opened up to trade, their manufacturing sectors were hit by a double whammy. Those without a strong comparative advantage in manufacturing became net importers of manufacturing, reversing a long process of import-substitution. In addition, developing countries "imported" deindustrialization from the advanced countries, because they became exposed to the relative price trends produced in the advanced economies. The decline in the relative price of manufacturing in the advanced countries put a squeeze on manufacturing everywhere, including the countries that may not have experienced much technological progress. This account is consistent with the strong reduction in both employment and output shares in developing countries (especially those that do not specialize in manufactures).

In sum, while technological progress is no doubt a large part of the story behind employment deindustrialization in the advanced countries, in the developing countries trade and globalization likely played a comparatively bigger role.

Deindustrialization has been long been a concern in rich nations, where it is associated with the loss of good jobs, rising inequality, and decline in innovation capacity. For all these and many other reasons, it should be a much bigger problem for developing countries. Premature deindustrialization has serious consequences, both economic and political.

On the economic front, it reduces the economic growth potential and the possibilities for convergence with income levels of the advanced economies. Formal manufacturing tends to be technologically the most dynamic sector, exhibiting unconditional convergence.[5] Deindustrialization removes the main channel through which rapid growth has taken place in the past.

The political consequences of premature deindustrialization are more subtle, but could be even more significant. Mass political parties have traditionally been a by-product of industrialization. Politics looks very different when urban production is organized largely around informality, a diffuse set of small enterprises and petty services. Common interests among the non-elite are harder to define, political organization faces greater obstacles, and personalistic or ethnic identities dominate over class solidarity. Elites do not face political actors that can claim to represent the non-elites and make binding commitments on their behalf. Moreover, elites may prefer – and have the ability – to divide and rule, pursuing populism and patronage politics, and playing one set of non-elites against another. Without the discipline and coordination that an organized labor force provides, the bargains between the elite and non-elite needed for democratic transitions and consolidation are less likely to take place. So premature deindustrialization may make democratization less likely and more fragile.

[1] "Premature Deindustrialization," NBER Working Paper No. 20935, February 2015.

[2] Timmer, Marcel P., G.J. de Vries, and K. de Vries, "Patterns of Structural Change in Developing Countries," Groningen Growth and Development Center Research Memorandum 149, 2014.

[3] Felipe, Jesus, Aashish Mehta, and Changyong Rhee, "Manufacturing Matters... but It's the Jobs That Count," Asian Development Bank Economics Working Paper Series, No. 420, November 2014.