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Why doesn't export quality convergence promote growth?

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Previous studies suggest that export quality converges across countries. This would favor low-income countries and possibly promote their development perspectives. But those studies have neglected an important aspect of export quality dynamics. Our research shows that the distribution of export quality across countries is remarkably stable and explains why this is the case.

Richer countries usually export higher-quality goods across a broad range of industries. Germany, for example, exports very different products such as cars or textiles – both at high quality standards. Its role in car making is of high renown but it is also one of the world's largest textile exporters, hosting high-end brands like Boss, Puma, or Joop. Other "industrialized" countries such as France, The Netherlands, or Switzerland export many non-industrial, agrarian products of high-quality, such as wine, dairy products, or chocolate. The positive relationship between countries' income levels and the quality of their exports is well-documented in the literature.

Further research shows strong unconditional convergence in export quality: countries exporting products at low quality see fast catch-up within quality ladders (e.g., Hallak and Schott, 2011; Henn et al., 2020). This raises the question if low-income countries can benefit from such convergence. Moreover, how can quality convergence and the positive relationship between export quality and development levels be reconciled with a relatively stable world income distribution. Is the literature missing something? In a research paper, we show that this is indeed the case (Trenczek and Wacker, 2021).

Measuring export quality

To quantify export quality, we follow the seminal literature that considers the price of a product as a starting point for quality and then correct for common demand factors. In other words, if the same consumer is willing to pay a higher price for car A than for car B, car A must be of higher quality.

Based on a framework for this rationale, we construct bilateral export quality measures for 122 countries and 2,700 manufacturing products between 1995 and 2007.

Convergence is only one aspect of quality dynamics

In our analysis, we confirm that export quality convergence is indeed present – but that it explains only 40% of export quality dynamics.

Something else is going on in export quality and we interpret this residual dynamic as an 'innovation residual'. The left panel of Figure 1 highlights that this innovation residual is positively correlated with exporting countries' income levels. More precisely, our estimates imply that a doubling of the income level is associated with a 1.7 percentage point p.a. faster increase in aggregate export quality

due to the innovation residual. This outweighs the advantages that lower-income countries experience from unconditional quality convergence: the relationship depicted in the right panel of Figure 1 is less steep (in absolute terms).

The macro framework we develop in our paper and our empirical estimates explain how both effects operate against each other and why low-income countries hence do not benefit from export quality dynamics. On an aggregated level, the global distribution of export quality is remarkably stable over time.

The joint presence of catch-up and innovation in quality seems intuitive: lower-income countries imitate, and high-income countries innovate at the quality frontier. In a dynamic equilibrium with growth, imitation effects should not dim the incentives for innovation and both aspects are hence expected to be present (see Acemoglu et al., 2012).

What drives innovation in export quality?

Given the importance of our innovation residual for overall export quality dynamics, it is a natural next step to ask about its potential drivers.

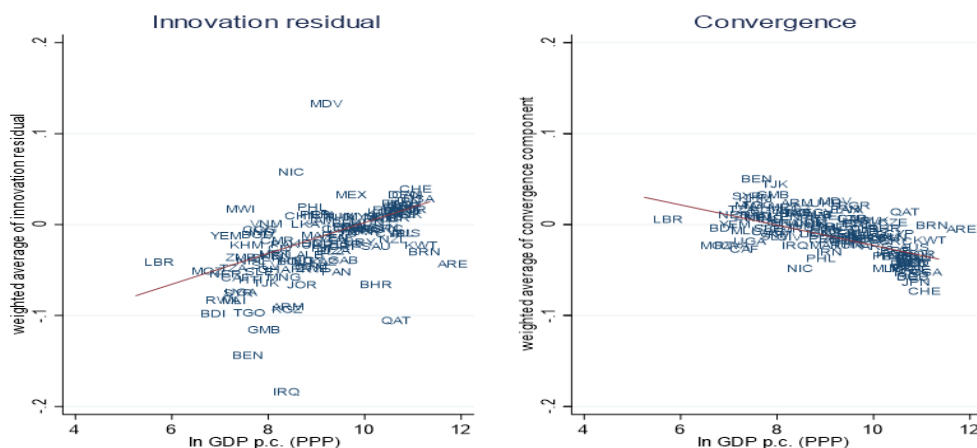


Figure 1: Aggregate quality components vs. development levels

In a first pass through the data, we find that the most relevant correlates are exporting countries' capital endowment and financial development, as well as skill appropriateness. Financial development is well-known to promote export quality and its innovation (Crinò and Ogliari, 2017; Krishna et al., 2023) and innovation, more broadly, is usually capital intensive.

Skill appropriateness captures how much the human capital endowment of an exporting country and the human capital requirement of its export basket are aligned. If this human capital requirement is too high given a country's endowment structure, the country experiences less quality innovation. In other

words, if a low-skill country aims to export highly complex products, it is unlikely to experience favourable quality dynamics.

These potential drivers of quality innovation explain why advantages through quality catch-up are nullified for lower-income countries: they are less capital abundant and less financially developed than high-income countries and they export products that are less appropriate to their skill endowments. Our calculations show that those factors quantitatively outweigh the positive quality convergence effect low-income countries experience.

Policy implications

Our study highlights that the aggregate dynamics of export quality are unrelated to exporting countries' income level. From a policy perspective, this implies that lower-income countries cannot merely rely on 'automatic escalators' of convergence but require additional policies to promote export quality. Specifically, we found that countries that experience favorable quality developments are usually more capital abundant and financially developed and export products that are well-aligned with their skill endowments. This calls for a wise combination of broad (horizontal) factor market policies that promote, for example, skills and financial development, and targeted (vertical) policies that promote sectors that are in line with factor endowments.

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