



The economic complexity of African countries and opportunity costs of exporting unprocessed products using the ICP data

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This paper attempts to measure the level of complexity of African economies by adopting the approach recently introduced by Hidalgo et al. (2007) and Hidalgo and Hausmann (2009). We used the method of reflection to compute countries economic complexity (ECI) and product economic complexity (PCI). A new dataset is generated and includes detailed information related to technology intensiveness of African countries exports, their revealed comparative advantages, indicators related to their diversity, and ubiquity.

Countries are classified according to their economic complexity. About 217 countries are taken into account in the computation but a focus is given in particular to African countries. Hausmann, Hidalgo et al. (2007-2011) analyzed a few African countries but this study accounts for almost all African countries for which data are available. We found that not only are African economies not complex, but their exports are weakly diversified and weakly sophisticated.

We also measure product complexity index and classified export products according to their level of sophistication. For livestock products for instance like other types of products, we found that African countries do not export complex products compared to the rest of the world. Countries are specialized in the export of raw materials. On the other side, countries spend a large share of their budget to import sophisticated or processed goods from the rest of the world. Yet, there is an opportunity cost of imported transformed goods which could have been produced domestically. To assess this opportunity cost, the international comparison program (ICP) data (2011) on prices are used in order to evaluate how much African countries loose when exporting unprocessed goods and imported transformed products. We try to assess the direct (or explicit) opportunity costs as well as the indirect or implicit costs.

Keywords: Country economic complexity index; Product economic complexity index, Opportunity cost, Purchasing power parities.