Do long-distance value chains imply lower unit labor costs?

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Due to, among other things, geopolitical frictions and a stronger notion by multinational firms that spreading activities over the world imply risks, "deglobalization" is currently a buzzword in the press and among policymakers. The same goes for terms like "nearshoring" and "friendshoring". In discussions about these phenomena, the previously attained gains associated with the international fragmentation of production processes (in Global Value Chains, GVCs) often appear as of secondary interest at best. The fact that GVCs emerged suggests that it was profitable for firms to relocate many of their activities. Cheap labor in e.g. Asian countries has often been viewed as the main reason for these relocations.

In this paper, we quantify the relationship between unit labor costs of the output of GVCs and the distance covered by value added within such a GVC. Given that long distances imply high transportation costs (and often risks), we hypothesize that a negative relationship exists. We use a panel data approach. All data are taken from the WIOD-2016 release. Unit labor costs in a GVC are computed using variables related to labor compensation, using standard assumptions in input-output analysis. For the distance variable, we develop a variant of the "supply chain fragmentation" measure introduced by Timmer et al. (2021, IMF Econ Rev), combining this measure with data on geographic distances from CEPII's gravity database (Conte et al., 2022). This variable does not only cover the number of times products cross borders within a GVC, but also how far these products travel. The average distance traveled by a dollar of value added vary considerably over types of GVCs. Preliminary results show that (averaged over 2000-2014 and over countries-of-completion, i.e. the countries in which the last stage of production takes place) this distance was about 1800 km in GVCs for electronics and less than half of this in GVCs for food products.

Preliminary results also show that the unit labor costs of GVCs tended to decrease with increases in the distance variable, which would lend empirical support to our hypothesis. Importantly, the preliminary results show that this effect is much stronger for GVCs producing electronics, transport equipment and machinery than for GVCs producing textiles and clothing. It should be stressed, though, that these are preliminary results and that several additional specifications of both the main explanatory variable and the regression equation have to be tested.