

Trade costs are central to international economic analysis. In particular, they are known to be a major obstacle to international economic integration and international trade flows. Defined as the costs associated with the exchange of goods across national borders, trade costs are usually split between transaction costs (information costs, contract enforcement costs, costs associated with the use of different currencies, etc.), policy costs (tariffs and non-tariff costs), time costs (time to ship goods) and transport costs *per se*. Many argue that the latter have substantially decreased with technological advance in transportation, infrastructure development and new communication technologies. However, several empirical evidence suggest that transport costs remain large and deserve attention,¹ with distance as an incompressible cost still a very important determinant of trade flows.² In addition, progress in transportation techniques (which reduces the constant-dollar cost of transport) should be compared with technical progress in production (which reduces the constant-dollar cost of production) to get a clear picture of the evolution of the transport costs burden. The latter also depends on the pattern of transport costs, whether the cost lies in proportion of the value of goods traded (hence does not distort relative prices) or as a cost per unit traded (the additive form conversely affecting relative prices). If a complex task, having a clear view of the international transport cost burden is of key importance, since the answers to several important (both academic and policy) economic questions depend in large part on how much distance-based costs affects trade, such as, among others, the dynamics of agglomeration, the profitability of outsourcing or the gains from regional liberalization. The main contribution of the paper is to bring valuable results on this issue.

International transport costs accordingly stand at the heart of the paper. We provide a thorough empirical investigation of the pattern of international transport costs over time based on US imports flows from 1974 to 2013. Using a similar dataset ending in 2004, ? finds that total transport costs have decreased in both air and maritime shipment, but less so than “pure” transport costs (i.e. *ceteris paribus* for given goods, mode, and trade routes) because trade composition effects (i.e. changes over time in the baskets of imported goods and/or the origin countries) have partly offset the pure transport costs decrease, thereby attenuating the overall downward trend in transport costs.³ In this paper, we dig deeper into this issue. As a major contribution, and in contrast to ?, we find that trade composition effects

¹? find that around 30% of international trade costs are attributable to transport costs. Equivalently, international transportation costs represent a 21% markup over production costs. Further, the sizable elasticity of trade with respect to freight costs obtained by ? (around -3) testifies to the impact of transport costs on trade flows.

²See ?.

³Throughout the paper, we refer to “pure” or “*per se*” transport costs changes as the changes over time in the transport costs for a given product/country partner, ie excluding trade composition effects.

play a minor role in accounting for the trend patterns of transport costs. Rather, the evolution of transport costs *per se* constitutes the main driving force behind the overall transport costs decrease, in particular for air transport. In maritime shipment, trade composition effects matter more, but they amplify (rather than offset) the reduction in pure transport costs. In this respect, we find that pure transport costs declined even less since the 1970s than argued by ?.