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Domestic Trade, Misallocation and Relative Prices

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Abstract : The objective of this paper is to analyze how transportation costs between regions within a country can affect not only domestic trade but also the allocation of resources in a given region, aggregate productivity, and relative domestic prices (tradable versus non-tradable). On the one hand, there is a vast literature that analyzes the transportation costs faced by countries when trading with the rest of the world. However, this paper focuses on the effect of transportation costs on domestic trade. Countries differ in their domestic road infrastructure and transport quality. There is also some literature that focuses on the effect of road infrastructure on the price difference between regions but not on relative prices at the aggregate level. On the other hand, this work is also related to the literature on resource misallocation. Finally, the paper is also related to the literature analyzing the effect of trade on the development of the manufacturing sector. Using the World Bank Enterprise Survey database, it is observed cross-country differences in the proportion of firms that consider transportation as an obstacle. From the International Comparison Program, we obtain a significant negative correlation between GDP per worker and relative prices (manufacturing sector prices relative to the service sector). Furthermore, there is a significant negative correlation between a country's transportation quality and the relative price of manufactured goods with respect to the price of services in that country. This is consistent with the empirical evidence of a negative correlation between transportation quality and GDP per worker, on the one hand, and the negative correlation between GDP per worker and domestic relative prices, on the other. It is also shown that in a country, the share of manufacturing firms whose main market is at the local (regional) level is negatively related to the quality of the transportation infrastructure within the country. Similarly, this index is positively related to the share of manufacturing firms whose main market is national or international. The data also shows that those countries with a higher proportion of manufacturing firms operating locally have higher relative prices. With this information in hand, the paper attempts to quantify the effects of the allocation of resources between and within sectors. The higher the trade barriers caused by transportation costs, the less efficient allocation, which causes lower aggregate productivity. Second, it is built a two-sector model where regions within a country trade with each other. On the one hand, it is found that with respect to the manufacturing sector, those countries with less trade between their regions will be characterized by a smaller variety of goods, less productive manufacturing firms on average, and higher relative prices for manufactured goods relative to service sector prices. Thus, the decline in the relative price of manufactured goods in more advanced countries could also be explained by the degree of trade between regions. This trade allows for efficient intra-industry allocation (traders are more productive, and resources are allocated more efficiently)).

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