

Drivers of Fragmented Production Chains: Evidence from the 19th Century

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Abstract

Instantaneous communication via the Internet and efficient shipping of goods across the globe are widely believed to have caused today's global fragmentation of production processes. Introducing the concept of codifiability of product specifications, our model predicts reductions in communication times (shipping times) to increase imports of intermediate inputs by more (less) than final goods. We test this hypothesis by examining the global cotton textile industry during the 19th century. This allows us to exploit exogenous variation in the roll-out of the global telegraph network due to the ruggedness of the sea-bed and the opening of the Suez Canal in 1869 to estimate causal effects. Consistent with our model, improvements in communication time disproportionately increase imports of the more codifiable intermediate inputs, while improvements in shipping time disproportionately increase imports of the less codifiable final goods.