

Modal Composition of Cargo Transportation and Income Inequality in Brazil

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Abstract

A Leontief-Miyazawa model was estimated to measure the income distribution effects of changes in the modal composition of cargo transportation in Brazil. It was calibrated for year of 2004, and considers 31 sectors (4 of which are related to cargo transportation: road, rail, water, and air), and 10 income brackets. A transfer of 10% of road transportation to rail or water was simulated. The results show that the relative impacts are small, considering the size of the Brazilian economy and the small importance of the transportation sector. Increases in the share of rail or water transportation will increase GDP and personal income, but will decrease employment. Increases in the share of rail transportation will have more positive effects on personal income and income distribution than increases in the share of water transportation. A change to water will result in a larger GDP change and a smaller number of jobs lost in comparison to a change to rail. Although rail and water present larger shares of intermediate purchases from pro-poor sectors than road transportation, the latter distributes directly more income to the low income brackets. On balance, the result is a very modest change in the Gini coefficient.

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