Does income inequality affect import demand in the US?

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I. Abstract

In this paper, I estimate a time-series import demand model for the United States over the years 1970-2019. The dependent variable is real imports of goods and services. The explanatory variables are real GDP, the relative price of imports, and income inequality as measured by the Gini coefficient. I find no statistical evidence that income inequality affects U.S. import demand.

II. Empirical Model and Variables

$$IM = f(Y,RP,IN)$$

- IM is the real imports of goods and services in the US.
- Y is US real GDP in billions of chained 2012 dollars.
- RP is the import price index from the Bureau of Economic Analysis divided by the GDP deflator taken from the same table.
- IN is the GINI coefficient from the US Census Bureau. It summarizes the dispersion of income across the entire income distribution in the US. The Gini coefficient ranges from 0, indicating perfect equality, to 1, perfect inequality. It is based on the difference between the Lorenz curve (the observed cumulative income distribution) and a perfectly equal income distribution.

III. Theory and Hypothesis

- Y is hypothesized to have a positive relationship with IM. As GDP increases, so does consumption which includes the consumption of imports.
- RP is hypothesized to have a negative relationship with IM. As the price of imports increases relative to the price of domestic goods, more people will switch to domestic substitutes and people will buy less imported goods.
- IN may have a positive or negative relationship with IM. There is theory that supports both positive and negative arguments.

IV. Data

- Data for United States real imports of goods and services and real GDP were collected from Federal Reserve Economic Data (FRED).
- Data measuring relative prices of imports taken from the Bureau of Economic Analysis Table 1.1.4.
- Inequality and the GINI coefficient data taken from the United States Census Bureau Table A-5.

V. Empirical Results

Variable	**Coefficient**
Constant	-11.1138 (-6.56)*
Y	1.9514 (14.76)*
RP	-0.3405 (-5.58)*
IN	-0.1211 (-0.22)
R^2 (Adjusted)	0.9964

T-statistics shown in parenthesis. * indicates significance at the 1% level. Estimated with Newey-West.

VI. Conclusion

- No statistical evidence supports that income inequality affects US import demand.
- Real GDP (Y) and relative price of imports (RP) had significant impact on import demand.
  - Y– Positive
  - RP- Negative