

## Using labor footprints to investigate the self-sufficiency of labor in autarky

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We use the World Input-Output Database and the “labor footprint”™ concept to gain new insights into the implications of trade for employment. Using the United States as an example, but also examining 39 more countries, we determine that production for US consumption depended more and more on contributions of foreign workers between 1995 and 2008. We then compare labor footprints with labor endowments to evaluate the capacity of countries to be self-sufficient in labor in a situation of autarky. Labor footprints allow us to identify the amount of labor worldwide necessary to sustain the consumption pattern and standard of a particular country. Labor endowments reflect that country’s™ workforce plus unemployed workers.

The counterfactual exercises, which account for differences in production technologies and worker productivities across countries, reveal that most countries are able to produce all output for consumption themselves. This means that these countries are able to produce at least as much output in autarky as the output each country consumed in actually observed trade structures. This suggests that gains from trade may not be apparent in labor use. Once the assumption of zero unemployment and perfect labor mobility is dropped, self-sufficiency prospects were lower. Furthermore, the ability of countries to be self-sufficient declined over time.