Income Share Dynamics as a Measure of Income Inequality

Yosuke Sasaki[1]

[1] *Graduate School of Economics, Kobe University, Ph.D student*
yohsukesasaki@gmail.com

ABSTRACT

Many empirical studies suggest that trade openness worsens income inequality. They also use the Gini coefficient (also called the Gini index) as inequality measure to analyze the relationship between inequality and other economic variables. However, data on the Gini index are in time-series, such as five year data, are sparse. So, we cannot observe dynamic effects in the panel with such data. This paper utilizes income shares as an inequality measure to overcome the Gini index flaw because income share in an individual country exists mostly in the form of annual time-series data. The panel data are also composed of cross-country facts as a cross-section dimension. No paper indicates that trade openness has an inverted U-shaped relationship with the income inequity index and "dynamic effects." This paper defines a model with several lags of the independent variable as "dynamic effects", checks the effects of the squared term and finds an inverted U-shaped relationship between trade openness and the top income share. The estimation method is the dynamic panel generalized method of moment (GMM) ([Arellano and Bond1991]) and determines the multi-term structure of trade openness; this presents the main finding in this paper. The panel vector autoregression model (PVAR) ([Sigmund and Ferstl2019]) is also estimated. The model forecasts the trade openness effect on the top 1% income share by the impulse response function. Furthermore, this approach succeeds in uncovering the dynamic effects and the impact on the entire income distribution of trade openness.

References

[Arellano and Bond1991] Arellano, Manuel, and Stephen Bond. 1991. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The review of economic studies* 58 (2): 277–297.

[Sigmund and Ferstl2019] Sigmund, Michael, and Robert Ferstl. 2019. Panel vector autoregression in R with the package panelvar. *The Quarterly Review of Economics and Finance.*