

Measuring Total Factor Productivity: A Comparison of Mexico and Brazil, 1995-2011

Topic: Productivity Analysis I

Author: Claudia Minerva Cárdenova Martínez

Co-Authors: Alejandra ESTRADA, José Manuel Márquez

The aim of this paper is to make a comparison of the sectoral rates of Total Factor Productivity (TFP) growth for Mexico and Brazil by 1980-2013 and to estimate the technical change, inter industry structure and output shares effects on it, in order to discuss the causality between the economic growth and the TFP growth. To do this, we used an input-output framework. To measure the involvement of the total factor productivity in the economic growth, the change in the sectoral total production was separated into two effects: the effect generated by the changes in the technical coefficients of the intermediate and primary inputs, and the effect caused by changes in the composition of the production. Inversely, with the purpose of knowing the impact of the economic dynamic in the total factor productivity, the sectoral participation of labor, capital and technology in the sectoral total factor productivity growth rate is considered, and then it is possible to obtain the effects of technological change, industrial structure and the composition of the product in the added total factor productivity. The results show that, in the case of Mexico, the sectors that sell to the external market are those that show high rates of economic growth and high rates of total factor productivity; meanwhile the TFP in Brazilian economy shows an increase in its agricultural sectors.

Key words: Factor productivity, economic growth, technical change, inter-industry structure, output share