A Decomposition of U.S. Business Sector TFP Growth into Technical Progress and Cost Efficiency Components

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Paper Abstract:

One of the problems with index number methods for computing TFP growth is that during recessions, these methods show declines in TFP and this seems to imply that technical progress is negative during these periods. This is rather implausible since it implies technological regress; i.e., that that the production frontier has contracted. The paper works out a nonparametric method where one can decompose TFP growth into two components: a technical progress component (i.e., a shift in the production frontier over time) and an inefficiency component that is due to the fixity of capital and labour in the short run. The new decomposition is illustrated using the new Bureau of Economic Analysis (BEA) Integrated Macroeconomic Accounts which facilitated the construction of a set of productivity accounts for two key sectors of the US private business sector: the Corporate Nonfinancial Sector and the Noncorporate Nonfinancial Sector. The analysis sheds light on productivity growth slowdowns over the period 1960 to 2014.