Abstract for "Cross-regional Variations of Assets Lifetimes: Evidence from Russia"

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An important challenge in the measurement of capital input for productivity analysis is to obtain appropriate measure of depreciation. Most studies on cross-country differences of economic growth and productivity, using growth accounting approach assume a common economic depreciation rates across countries. However, there has been empirical evidence that asset lifetimes are endogenous and therefore, depreciation could vary across firms, industries, and countries. Even though existing evidence on the determinants of lifetime hints to the possible role of innovation among other factors (e.g. Erumban and Timmer, 2012), the literature on what factors influence assets lifetimes is still very weak. This lack of understanding is explained by difficulties of obtaining depreciation data across countries, suitable for comparisons.

The present study exploits a new micro dataset, which is based on a survey of assets lifetimes carried by the Russian statistical office (Rosstat) in 2008 to understand cross-region variation of asset lifetime and its determinants. The survey covered 242.5 thousand assets of around 11 thousand large and medium firms and 4.5 thousand non-profit organizations. The asset composition consists of 2.3 per cent of residential buildings, 13.6 percent non-residential buildings, 16.3 per cent construction, 43.2 percent of machinery and equipment, and 24.6 per cent was of transport. For each asset the survey includes data on vintage years, expected (for assets in operation) and actual (for assets, discarded in 2008) service lives, exact specification of an asset (nine digit classification code), as well as the industry and region codes. Using simple OLS regressions we try to explain differences in asset lifetimes with various characteristics of an industry and a region.

Apart from many economic and innovation variables, which are highlighted in the literature, there have been a number of other variables that may have a significant role in influencing asset life time, particularly in the developing countries. For instance Bu (2004) stresses the role of corruption, government investment incentives and incompatible repair facilities, in bringing down the average lifetime of capital assets in developing countries. Pritchett (2000) speculates about differences in depreciation of public and private capital.

Our dataset allows a deeper examination of all these assets, and to test all these hypothesis as it includes both firms and non-profit organizations. Moreover, it can also be linked to various characteristics of Russian regions as well. The present paper attempts to analyze the differences in asset lifetimes across various regions in Russia. In particular, it examines the role of government policies and the presence of public sector in determining asset life time.

References

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