

## **Abstract for “Misallocation and Manufacturing Productivity”**

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There is growing evidence that capital and labor are not efficiently allocated across firms, which substantially lowers aggregate productivity. In this paper, we will quantify differences in manufacturing productivity across a wide range of countries and determine how much of the productivity differences can be traced to resource misallocation. We do this by combining top-down macroeconomic figures on average productivity with bottom-up firm-level information on misallocation across plants.

This paper thus fits in the tradition of development accounting (Caselli, 2005; Hsieh and Klenow, 2010) and the rapidly growing literature on resource misallocation across plants (Hsieh and Klenow, 2009; Restuccia and Rogerson 2013; Bartelsman et al. 2013). The focus on manufacturing is important because the sector is generally held to be crucial in generating growth in low- and middle-income countries.

This analysis requires two sets of information. The first set is a traditional development accounting analysis applied to the manufacturing sector. This analysis shows how much of the differences in manufacturing value added can be traced to differences in the use of human and physical capital and how much is due to productivity differences. Here we build on the work by Herrendorf and Valentinyi (2012), who also estimate sectoral productivity differences, but we will use much improved data on output and factor inputs from the Penn World Table (Inklaar and Timmer, 2013). This development accounting analysis will already provide novel insights into the comparative level of manufacturing productivity across countries.

We combine this with the second set of information on misallocation across manufacturing plants using data from the World Bank Enterprise Survey (WBES). The WBES is implemented in a standardized format across more than 100 countries and provides detailed balance sheet data at the plant level. While previous studies in the misallocation literature use country-specific micro data (Hsieh and Klenow, 2009), the WBES dataset enables us to provide measures of misallocation for a broad range of countries. An additional advantage of using the WBES dataset is that it is collected in a procedure that is internationally comparable and seeks to provide a representation sample of firms.

Special attention will be paid to linking micro-level data to macro-level outcomes. As shown in Lagos (2006), measured TFP in a distorted economy is not simply a measure of technology differences. For measuring TFP and misallocation, we aim to use a framework that ensures consistency between micro and macro level outcomes.

### **References**

- Bartelsman, Eric, John Haltiwanger and Stefano Scarpetta (2013), “Cross-Country Differences in Productivity: The Role of Allocation and Selection” *American Economic Review* 103(1): 305-334.

- Caselli, Francesco (2005), “Accounting for Cross-Country Income Differences” in Philippe Aghion and Steven N. Durlauf (eds.) *Handbook of Economic Growth*, volume 1A, Elsevier, Amsterdam, 679-741.
- Herrendorf, Berthold and Ákos Valentinyi (2012), “Which sectors make poor countries so unproductive?” *Journal of the European Economic Association* 10(2): 323-341.
- Hsieh, Chang-Tai and Peter Klenow (2009), “Misallocation and manufacturing TFP in China and India” *Quarterly Journal of Economics* 124(4): 1403-1448.
- Hsieh, Chang-Tai and Peter Klenow (2010), “Development Accounting” *American Economic Journal: Macroeconomics* 2(1): 207-223.
- Inklaar, Robert and Marcel Timmer (2013), “Capital, labor and TFP in PWT8.0” available at [www.ggd.net/pwt](http://www.ggd.net/pwt).
- Lagos, Ricardo (2006), “A model of TFP” *Review of Economic Studies* 73(4): 983-1007.
- Restuccia, Diego and Richard Rogerson (2013), “Misallocation and productivity” *Review of Economic Dynamics* 16(1): 1-10.