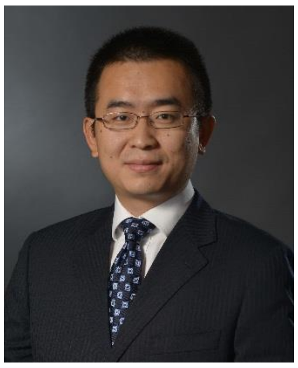
Lingnan University 嶺南大學

Department of Economics

Seminar

"Non-Neutral Technology, Firm Heterogeneity, and Labor Demand"

(in English)



Dr. Hongsong ZHANG
Assistant Professor of Economics,
School of Economics and Finance,
University of Hong Kong

Date: 12 November 2015 (Thursday)
Time: 10:00am – 11:30am
Venue: WYL314, Dorothy Y. L. Wong Building

Abstract:
The neutrality (non-neutrality) nature of technology is the key to understanding of many firm activities. This paper investigates the non-neutrality nature of technology heterogeneity across firms and over time. I develop a method to estimate the production function with non-neutral technology heterogeneity at the firm level, which is captured by a multidimensional productivity measure allowing for a capital-augmenting efficiency, a labor-augmenting efficiency, and a material-augmenting efficiency. The empirical results from Chinese steel industry show that: (1) the non-neutral technology heterogeneity across firms is large, both in efficiency levels and technological non-neutrality; (2) technology change over time is non-neutral towards saving labor and the trend is stronger for large firms; (3) while capital and labor efficiencies converge slowly in levels during the sample period, I found no obvious converging trend for the technological non-neutrality; (4) the non-neutral technology explains a large portion of the cross-firm variation in labor demand. Counterfactual experiments show that if the technological non-neutrality is completely removed starting 2001, the labor demand in 2007 would have been about 115% higher than that observed in the data in order to produce the same output.

Biography:
Hongsong Zhang obtained his PhD in Economics in Pennsylvania State University in 2013. His main research interests cover topics in empirical industrial organization, international trade, and applied microeconomics. His current research focuses on measurement of productivity and demand shock, research and development (R&D), innovation, and their interaction with firm (dynamic) activities such as participation in importing/exporting, R&D investment, new product development, entry/exit decisions, and capital investment decisions.

All Are Welcome

For enquiry: 2616 7190 (Carrie)