

A Simple Accounting Framework for Distortion on Sectoral Resource Allocation

Shuhei Aoki*

September 15, 2006

Abstract

I propose a simple multisector accounting framework to analyze the effect of distortion on sectoral resource allocation to aggregate productivity. Using the framework, I define translog-type allocational efficiency indexes which measure how the distortion affects aggregate productivity. I theoretically show that the indexes are closely related to sectoral reallocation term in Basu and Fernald (2002), and the concept of entropy, especially Theil (1967)'s entropy measure. Using the indexes, I estimate the distortion using sector-level data of developed countries, and find that for Italy and Japan, distortion on sector-level resource allocation explains about 30% of aggregate productivity differences between US and these countries.

JEL Codes: E23, O11, O41, O47

References

- Basu, Susanto, and John G. Fernald, 2002, Aggregate productivity and aggregate technology, *European Economic Review* 46, 963–991.
- Theil, Henri, 1967, *Economics and Information Theory*. Studies in Mathematical and Managerial Economics, Volume 7 (North-Holland Publishing Company).
- Vollrath, Dietrich, 2005, How important are dual economy effects for aggregate productivity?, mimeo., University of Houston.

*Graduate School of Economics, University of Tokyo, Japan. email: shuhei_aoki@mail.goo.ne.jp I thank especially Toni Braun, Fumio Hayashi and Minoru Kitahara for helpful comments and suggestions. All remaining errors are mine.