

Yeasty vs. mushroom-like patterns of hyper-integrated productivity growth: An analysis of six advanced industrial economies

Topic: Productivity and Efficiency Analysis

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[Abstract]

The aim of this paper is to apply a visualisation technique for depicting sectoral concentration patterns of technical change to a disaggregated physical productivity measure, which is based on the notion of hyper-integrated labour content of commodities.

In Harberger (1998), a particular Lorenz-curve type of diagram is introduced, which displays the cumulated absolute contribution of each industry to aggregate TFP growth, according to its cumulated share in initial value added. From the form of the curve, it is possible to infer relative sectoral contributions to aggregate performance. In particular, Harberger (1998, p.4) coined the distinction between a 'yeasty' and 'mushroom' pattern, representing a balanced and broad growth pattern as opposed to an uneven and localised one, and conjectured that a 'mushroom' vision dominates the growth process.

However, given that TFP growth reflects additive real cost reductions rather than physical productivity changes, Harberger's diagrams could be applied to Pasinetti's (1988) physical notion of vertically hyper-integrated labour content of commodities, to identify the concentration pattern of total labour-saving trends among a set of growing sub-systems (in the sense of Sraffa, 1960, p. 89).

Hence, by switching the disaggregated unit of analysis from industries to (growing) sub-systems, Harberger diagrams are devised from a set of Input-Output accounts, fixed-capital flow matrices and labour input coefficients; depicting hyper-integrated productivity patterns and, thus, evaluating Harberger's conjectures with respect to this productivity measure for six advanced industrial economies (US, UK, Germany, Japan, France and Italy) during the 1995-2005 period.

[References]

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