

Endogenous Growth Without Scale Effects: Another Policy

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Li (2003) (Endogenous Growth Without Scale Effects : A comment, *AER*) assesses the robustness of Segerstrom (1998) (Endogenous Growth Without Scale Effects, *AER*) welfare results by relaxing two restrictive assumptions made by this latter: the unitary value of the elasticity of substitution and the lack of inter-industry spillovers. The Li's generalized model overturns Segerstrom policy implication in terms of the size of innovations having to be taxed or subsidized.

In this article, we point out the fact that the innovation size does not have to be treated exogeneously as in Li (2003) and Segerstrom (1998) quality ladders models. In this article, qualitative increments of innovation (inventive steps) are heterogeneous, which constitutes a refinement of canonical quality ladders model where the qualitative increment is exogenous and constant.

Moreover, we introduce the role of an Authority (Patent Office, Gouvernement) that set a minimal level for the innovation size (following Hunt (1999)(2001) or O'Donoghue and Zweimüller (2004) (Patents in a Model of endogenous growth, *JEG*)): the patent novelty requirement

This patent novelty requirement set by the patent office, which imposed a restriction on the size of innovation to be granted, is thus another available instrument for innovation policy.

This patent policy using the novelty requirement as an instrument enables to reach the social optimum. In this paper, we investigate the consequences of this new policy for the market structure and the growth rate of the economy. The complementarity of this new instrument for innovation policy, with tax or subsidy to research and development expenses is also examined.

Based on the limiting price decision of firms the patent novelty requirement that is set determines the average mark-up in the economy so that this policy has consequences on competition organization. The average innovation size in the economy depend on the patent novelty requirement that is set so that the Authority can use the level of this requirement to influence the technological regime that appears in the economy (Do more radical or incremental innovations appear in the economy ?).

A deep analysis of the patent system lacked in previous quality ladders model of growth framework.. Switching from the optimal setting of fiscal policy for R&D given the size of innovation to the determination of the optimal level of novelty requirement given the level of subsidies to R&D, seems to be in phase with the actual importance given to intellectual property rights policy.