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**Technical Change in Developing countries: A Dynamic Model of Adoption,
Learning and Industry Evolution**

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Abstract

This paper develops and analyses a dynamic model, which combines both the adoption and the industry evolution theories. We model the decision of adoption, learning entry and exit of firms. These decisions depend on the interaction of technology characteristics ((effectiveness, machinery and information costs...) and other economic indicators (firm's size, technology capability, competition concentration, returns of scale,...). We use the model's theoretical results to analyze simultaneously the effects on the structure and the average efficiency of the industry and to develop a framework for understanding the public policy action necessary to enhance adoption and average productivity in developing countries. The model we suggest also analyses effects on industry evolution and social welfare.

Keywords: Technological adoption, learning, efficiency, competition, industrial dynamics, developing countries.

JEL- Classifications: L1, L11, L22, L25, O3, O31, and O33.

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