Foreign direct investment spillovers and technical efficiency in the Indonesian pharmaceutical sector: firm level evidence†

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The spillovers of Foreign Direct Investment (FDI) on domestic firms’ performances have been highly debated for many years. This article contributes to this debate by analysing spillovers effects on technical efficiency of Indonesian pharmaceutical sector using a unique unbalanced panel of highly disaggregated (at five-digit International Standard Industrial Classification (ISIC)) 210 firms over the period 1990–1995 (1001 observations). The Stochastic Production Frontier (SPF) and the Data Envelopment Analysis (DEA) based on Malmquist Productivity Indices (MPI) have been used to test the spillovers effects of FDI on technical efficiency. The empirical results from the SPF show that foreign firms are more efficient than domestic competitors, and the presence of the former increases the inefficiency of the latter. Similarly the results from the MPI demonstrate that FDI has a negative and significant impact on technical efficiency changes in domestic competitors, but generate positive spillovers to domestic suppliers.

Keywords: FDI spillovers; technical efficiency; stochastic frontier; Malmquist productivity index

JEL Classification: D24; D29; F23

I. Introduction

Foreign Direct Investment (FDI) is considered, in most developing countries, to be a driving force of economic growth, and policies are accordingly designed to attract more FDI. Host countries offer a wide range of fiscal and financial incentives to foreign firms. These incentives are justified on a common argument that FDI provides not only capital and additional employment but also new knowledge to recipient economies. The new transferred knowledge from Multinational Companies (MNCs) to their subsidiaries may spillover entire recipient economies and increase the economic performance of domestic firms (Blomstrom and Kokko, 1998). This knowledge spillover has recently been regarded as an important source of productivity growth for developing countries (Suyanto et al., 2009).

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