

FDI Spillovers and Local Productivity Growth: Evidence from Indian Pharmaceutical Industry

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The study tests the FDI spillover hypothesis in the Indian Pharmaceutical industry using an unbalanced panel data for a sample of firms over the period 1989-90 to 2000-01. The study estimates firm-specific productive efficiency growth for domestic firms from the frontier production function and relates the same to a set of firm-specific attributes along with the variables of foreign presence. The study found that the presence of foreign firms per se may not be important for productivity growth of domestic firms unless it is complemented by the latter's R&D activity or size. Therefore, the study concludes that policy efforts to encourage R&D and some concentration of size of the domestic firms in the industry may be more desirable than passively liberalizing the FDI policy from the point of view of increasing productive efficiency of local enterprises.

I Introduction

Indian pharmaceutical industry provides a unique example of a late industrializing country successfully building domestic capabilities in a highly competitive knowledge-intensive industry. The industry which did not have any technological base to start local production during the 1960s, has made significant technological transformation during the period 1970-1990. It has also achieved a high degree of self-sufficiency with regard to its requirements of basic raw materials and intermediates. One important component of policy intervention that made this transformation possible is related to foreign investment in the industry.

To begin with, during the period 1948-1970 the industry was largely dominated by Foreign Direct Investment (FDI) firms, accounting for about 80 per cent of domestic production of formulations. They were mostly engaged in importing bulk drugs and processing them into formulations to sell in India (Kumar and Pradhan, 2003). During this phase of FDI domination there was little international transfer of technology to the industry as most of the patent holding foreign companies were reluctant to translate their patent enjoyed under the Patent Act of 1911 into local production. In few of the cases where domestic enterprises made attempts to start local production they were denied access to technology through legal adjunction obtained by FDI firms under the Patents and Designs Act, 1911¹. During this phase, drug prices in India were one of the highest in

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¹ Many such cases can be found in the literature. The case of Unichem Laboratories being prevented from producing tolbutamide and Excel Industries from producing aluminium phosphate are two famous cases where foreign parent-owners had legally prevented domestic companies from producing the product locally (Desai, 1980).