

Research Highlights from Dr. Ruchi Sharma's Research Group

The research group on Innovation Studies focuses on issues related to R&D and patenting by Indian firms, universities and academic institutions. Specifically, we are analysing the impact of FDI on innovation by Indian firms, product and process innovation, financial issues concerning innovation by firms, patent valuation and foreign patenting. Lastly, we are also studying the impact of patent policy on economic growth through exports and value addition in manufacturing sector. Following are the results from the recent studies:

In light of the introduction of product patent regime in India to comply with TRIPs agreement, we evaluate the impact of patenting by pharmaceutical firms on its' monopoly power. We find that foreign firms are involved in extensive patenting of both products and processes in India though R&D conducted in the host country is minimal and in some cases declining as well [Figure 1 and Table 1]. Such firms in case of patented drugs are charging high price, are not manufacturing these drugs in India and are mostly importing them. We also find that both product and process patents have positive and significant impact on the monopoly power of foreign firms. Evidently, India has to be prepared for high drug prices in future under new product patent regime. Indeed the recent drug price control move of the GoI may be a step in the right direction though we have to balance availability of drugs vis-à-vis the accessibility.

Figure 1: Average R&D expenditure of select firms in Indian pharmaceutical sector

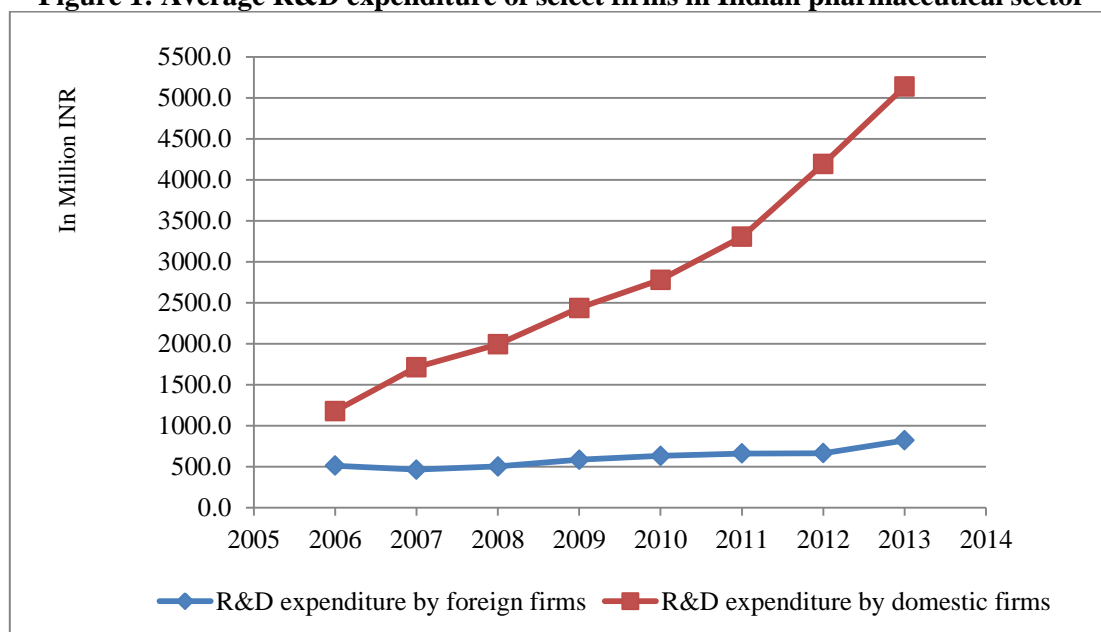


Table 1: Total patents granted to select firms in Indian pharmaceutical sector

| | Patents granted to foreign firms | Patents granted to domestic firms |
|------|----------------------------------|-----------------------------------|
| 2006 | 83 | 65 |
| 2007 | 289 | 236 |
| 2008 | 360 | 198 |
| 2009 | 263 | 129 |
| 2010 | 148 | 80 |
| 2011 | 103 | 88 |
| 2012 | 89 | 71 |
| 2013 | 55 | 36 |

In a related study, we evaluate the non-linear impact of innovation on monopoly power [Figure 3]. We find that product patent intensity has significant non-linear influence on firms' monopoly power. This finding has implications for R&D managers who may focus on introducing newer products rather than merely going for incremental innovation in the existing products.

Figure 3: Nonlinear relationship between innovation and Lerner index of monopoly power

