

**COMPARISON OF PATENTING STRATEGIES OF LARGE COMPANIES
AND MSME IN EASTERN INDIA**

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ABSTRACT

In present study, we have explored the difference of patent strategies between small and large firms and if there is a difference in the technological value of patents between small and large firms. This question is especially important in the light of the discussion on strategic patenting. This can be seen as a major challenge for the patenting system, thus being an important policy issue.

Key words: MSME, patenting, Business strategy

JEL Classification: O 32, O 34, F 12

1. Introduction

In India, Micro, small and medium sized enterprises (MSMEs) contribute nearly 45% to manufacturing and about 40% to the Indian export sector. Their contribution to the Indian GDP is 8% and the sector has registered growth rate of 10.8%. Indian MSMEs have moved up the value chain from manufacture of simple goods to manufacture of sophisticated products. In line with the overall growth in Indian economy, MSMEs have entered the services sector as well. Associated with this high growth rates, MSMEs in India are also facing a number of challenges in view of turbulent and uncertain market scenario, increasing domestic and global competition, fund shortage, sub-optimal scale of operation, technological obsolescence, supply chain inefficiencies etc. To survive with such issues and compete with large and global enterprises, MSMEs need to adopt innovative approaches in their working. Government of India and State Governments have introduced various policies for development of MSMEs. Intellectual Property Rights (IPR) is the tool to exploit innovation for business development. Thus integration of an

effective Intellectual property management system at multiple levels, would boost competitiveness and growth of the MSMEs.

In present study, we explore the indicators determining the patent strategies between small and large firms differ and if there is a difference in the motive, technological value of patents, researcher teams and internationalization outlook between small and large firms.

2. Literature Review

Large companies account for the lion's share of patent applications, which is even amplified when looking at patent filings at the international level (Blind et al. 2006; Frietsch et al. 2010; Hingley/Bas 2009; Moge 2005). This differing role in the overall innovation process gives rise to the question of why and especially how patent activities and strategies differ between small and large enterprises. SMEs face higher financial constraints than their large counterparts do (Breitzman/Hicks 2008). They do not have the necessary resources at their disposal and virtually possess less market power to enforce their rights (Neuhäusler 2012).

3. Methodology

3.1 Research Questions

As indicated in introduction, MSMEs are facing a more and more severe technological competition in the globalization era. This technological competition and the globalization of value chains increase the necessity to integrate IPR at the core of business policies and decision making. While large enterprises often act at their innovative and technological frontier, fully exploiting their technological capabilities, MSMEs often have the potential for further increase. This study examines the participation rate of MSMEs in patenting activities, differentiating patent filings by technology area, for MSMEs located in Kolkata, India.

3.2 Data

The analyses are based on patent data set of Indian Intellectual property Office. Total no. of granted patents in Kolkata Patent Office have been collected and categorized so as to find out the indicators for comparison of patenting strategies of large enterprises and small enterprises. The

data include no. of companies, located in a particular region of Kolkata, one of the metro cities in India, having filed and granted patents. The data has been sorted by eliminating the individual and Government funded applicants.

4. Results and Discussion

SMEs' financial constraints and the high-cost of patenting, associated with uncertainty about the success of the developed inventions, lead to differing patent strategies, different field specific engagement as well as differences in the perceived value of patents.

I. Motive

a. Large patent portfolio, including patents for the purpose of blocking competitors. Additionally, most of the existing strategic motives for patenting are potentially more beneficial for large enterprises. Their closeness to science as measured by non-patent literature citations. Especially in science based industries, university spin-offs and high-tech companies more generally seem to be intensively engaged in science interactions, which imply that those firms also more often build on a scientific knowledge base. Larger resource base of MNEs allows them to build on scientific knowledge especially in order to gain access to non-core technologies.

b. Due to the high costs for applying and renewing patents, SMEs can be assumed to use patents less often strategically in technology competition.

Many small firms simply cannot afford a large patent portfolio, including patents for the purpose of blocking competitors. Additionally, most of the existing strategic motives for patenting are potentially more beneficial for large enterprises

SMEs use patents as a protection from imitation, which is still the main motive for small firms to file a patent. The first one is to file a patent in order to gain access to the capital market, i.e. the banks or venture capital, and attract investors. The second is to generate licensing revenues.

c. Indicator used : Bargaining power

- d. Inference: Patents from SMEs are more valuable. Therefore, SME patent filings are granted more often, are cited more often by subsequent patents, cite more previous patents; cite more non-patent literature, than the patents from large and multinational enterprises do.

II. Technological significance

- a. Higher threat potential of large enterprises that is further increased by the presence of a large patent portfolio, which leads to greater experience or routine in patenting and in the enforcement of rights.
- b. SMEs first of all have been shown to have a lower capability of pursuing their IPR in case of infringements. SMEs are more often target of opposition or litigation because of their lower bargaining power.
- c. Indicator used: grant of a patent; withdrawn patents (strategic decision); number of forward citations; opposition (or litigation) history
- d. Inference: Patents filed by SMEs are opposed more frequently than patents filed by large enterprises.

III. Research Teams –

- a. For larger companies, a larger team of inventors should involve a larger set of skills. As inventions basically are a combination of existing ideas, the larger skill-set may result in a technologically more valuable invention.
- b. MSMEs less often have a formal R&D department and even do not always have R&D personnel
- c. Indicator used : Average number of inventors per patent
- d. Inference: The inventor teams of MSMEs are smaller on average than the inventor teams of large ones.

IV. Internationalization

- a. For large enterprises : The application of a patent and the associated search for information, translation, as well as the costs to employ a patent lawyer or even maintain an in-house patent division is significant cost factor at the patent processing

- stage, which are even amplified when it comes to filing patents in foreign jurisdictions. Applicant has more opportunities to license his technologies, arrange cross-licensing agreements or even partnerships, or enlarge his profits from technology investments.
- b. For MSME: New distribution channels have to be created; the firms have to increase their marketing investments and might have to build up supplier networks, increasing transaction costs. Because SMEs control fewer resources in general, they can thus be assumed to file fewer patents internationally than larger firms do, as they approach fewer markets due to the market development costs.
 - c. Indicator Used : Family size of a patent
 - d. Inference:
 - i. SMEs file less of their patents internationally than large firms do.
 - ii. SMEs patent the same invention in fewer countries than large firms, i.e. they patent less broadly, and therefore have a smaller family size on average.

5. Conclusions

In this paper, patterns in the patenting activities of SMEs in comparison to the patenting activities of large firms were analyzed. More specifically, we explored in which respects the patent strategies between small and large firms differ – in terms of sector of activity, technological value of patents and internationalization.

The implications of the results on the differences in SME and MNE patenting for innovation policy are manifold. SMEs are not only essential but even a pushing factor for the structural rejuvenation of innovation systems. Thus, they should be supported in their R&D and patenting efforts because there are reasons that deter SMEs from patenting.

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