Foreword

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Ten years ago, it would have caused just about anyone to smile at the prediction that by 2007 the world steel industry would be led by an Indian entrepreneur who had taken over the prize gems of French, Luxembourg, and Spanish genius. However stunning, the acquisition of Arcelor by Lakshmi Mittal represented more a bold financial strategy than a signal of India's own technological prowess. Nevertheless, this acquisition was followed shortly after by the takeover of the Anglo-Dutch company Corus by Tata, which had slowly upgraded its technological capabilities in its Indian operations over decades. Clearly, it could not be denied: something had happened in India.

But what? It is tempting to look at software and information technology for clues, for India has undeniably generated several global powerhouses in this sector. Less than a decade ago, the Indian software industry was called a 'body shop' where boring code was produced according to Western designs. I recall a meeting that I organized at the Wharton School – where Gita took her PhD – of top Indian and American software managers to discuss the then mild topic of 'outsourcing'. A young head of the software outsourcing unit of a large American multinational was outright dismissive of the thought that Indian software firms would be more than a remedy for bad code (the 'Y2K' nightmare) and dependent party to software innovation. It was an interesting meeting because many of the Indian software managers in that room went on to lead their companies to the top ranks of world software companies by 2007.

The idea that Indian companies might soon be major players in pharmaceuticals seems today equally farfetched. Of course, many Indian companies are already important manufacturers of generic drugs. The innovative capability to compete in biotechnology seems today a distant objective. Acknowledging all the caveats in logic by analogy, is it nevertheless not reasonable to ask if the experiences of the steel and software industries might at least demand a more cautious assessment of the speed of technological learning in some of the poorest countries in the world?

The world, so unfairly marred by an unequal distribution of income and wealth, is most cruel in wasting the most precious resource of human minds. No wonder we often see many of those who have the dual good fortune of being bright and educated leave their countries for want of opportunity and make their careers in more wealthy countries. If only these minds would return to their countries could we then see real progress, it was often believed.

But this belief, which so often plagued the conscience of those who did leave, is false. For the great depository of collective intelligence is not the aggregation of individual brains, but their organization. It is the organization that harnesses their capabilities, provides the incentives for innovation, and gives the capabilities by which to achieve and implement new technological knowledge. The sudden emergence of Indian multinationals is not simply a story of individual intelligence and leadership – though one cannot doubt their importance. Rather, this emergence is the accretion of decades of collective learning within Indian firms, which, when released from the shackles of a too paternalistic government, entered quickly into the world scene as multinational companies.

Gita Surie has gathered in this book a priceless account of the ‘micro histories’ of some of the most prominent Indian companies in the industries of steel, software, and biotechnology. The history of the steel companies focuses on their evolution from dependence to innovators by the creation of a rich community of practice that could absorb and improve the importation of foreign knowledge. Software is not the same story. The firms are often relatively young and they were not created in reference to national industrial planning. Their dynamic is more condensed and their rise more rapid. The biotechnology industry is the darling of the trio. Here Gita Surie emphasizes the experimentation in organizational designs and the implementation of a learning heuristic that relies upon incremental expansion.

What happened then in India? Gita Surie’s answer is that India developed over recent years highly capable firms that progressed by organizational learning and evolution. Of course, in the background are such factors as the impressive technical institutes, the cost advantage for employing engineers, and the favorable tax treatment of exports. These factors have enabled Indian firms to expand, but they do not explain their success.

Ultimately, the story that Gita Surie offers us is an inside look at the historical development of organizations in an emerging market. The detailed analysis shows a history of trials, many of which failed, some that succeeded. Economic progress is more than the addition of so much labor and so much capital. It is rather the outcome of the organization of these factors of production.

It is the growing ability of some Indian firms to organize better than firms located in other countries that explains their entry into the ranks of the largest multinational corporations. This may seem as a sudden emergence from the outside. Inside, it is the outcome of a lot of hard work and learning. If the book holds a general lesson for development, it is that organizations, and not only factors of production or institutions, matter and matter a lot.