

## *India's Late, Late Industrial Revolution*

There is a paradox at the heart of the Indian economy. Indian businessmen and traders are highly industrious and ingenious people, yet for many years Indian industry was sluggish and slow to develop. One of the major factors in this sluggish development was the command and control regime known as the License Raj. This regime has gradually been removed and, after two decades of reform, India is now awakening from its slumber and is experiencing a late, late industrial revolution. This important new book catalogues and explains this revolution through a combination of rigorous analysis and entertaining anecdotes about India's entrepreneurs, Indian firms' strategies, and the changing role of government in Indian industry. This analysis shows that there is a strong case for a manufacturing focus so that India can replicate the success stories of Asian countries such as Japan, South Korea, and China.

SUMIT K. MAJUMDAR is Professor of Technology Strategy in the School of Management, University of Texas at Dallas, Richardson. Intimately familiar with Indian industry, he has observed India's industrial transformation, from a closed backward economy to one rapidly becoming one of the world's major powers, from an inimitable historical as well as a contemporary perspective. He maintains deep ties with and regularly visits India to engage in interactions with entrepreneurs and policymakers from all of India's industrial sectors. His interest areas are competition policy, entrepreneurship, political economy, regulation, and technology strategy. He has published extensively in the academic and popular presses and has edited the two-volume *Handbook of Telecommunications Economics*.

Advance praise for *India's Late, Late Industrial Revolution*

In the spate of literature that is being published on India's economic growth, Sumit Majumdar's book can claim several special distinctions. First, it squarely focuses its attention on entrepreneurship, a central element in any capitalist growth story. He does not confine his attention to the so-called business Maharajahs but deals with the phenomenon of what he calls "democratization of entrepreneurship." Second, while arguing that the so-called economic reforms gave these small entrepreneurs their head, he does not take the side of those who regard all earlier state action as only inhibiting India's growth. He points out, for example, that nationalization of banking with its attendant broadening of the circle of borrowers from banks helped entrepreneurs in their ventures. Majumdar also does not blink in recognizing that the business practices of many entrepreneurs could be quite dubious, but for him that is an essential part of capitalist growth. I hope that both proponents and opponents of economic liberalization will read this book.

Amiya Bagchi  
*Institute of Development Studies, Kolkata*

Professor Majumdar's book comes when the Government of India is framing a new policy, stressing the importance of accelerating manufacturing activity. The author has come to the same conclusion, with the backing of an enormous amount of well-researched data. Very timely and well worth reading.

R. C. Bhargava  
*Chairman, Maruti Suzuki*

With an engaging mixture of anecdote and analysis, Sumit Majumdar identifies the democratised entrepreneurship that is at the heart of India's current economic revolution, and expounds and explains the historical context in which this has occurred. This important book should encourage Indians from all backgrounds to transform their lives.

B. R. (Tom) Tomlinson  
*Professor Emeritus, SOAS, University of London*

# India's Late, Late Industrial Revolution

Democratizing Entrepreneurship

SUMIT K. MAJUMDAR



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*This book is dedicated to the memories of  
two remarkable individuals*

*Anil Kumar Majumdar  
and  
Coimbatore Krishnarao Prahalad*

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Throughout the book I use the measure of lakhs (100,000) and crores (10 million) in dealing with numerical quantities of rupees (₹); the spelling is Americanized; and older place names such as Bombay, Calcutta, Madras, and Poona, are retained in place of the new names such as Mumbai, Kolkata, Chennai, and Pune.

## *Preface*

### **The Maharaj and the saffron**

I met my first payroll when I was 19 years old. There was a convention, in the hostel in Bombay for commerce, law, and science students that I stayed in as an undergraduate student, that a final-year commerce student or a postgraduate law or science student would become the Mess Secretary for each of the four messes that provided meals to residents. In my final year, it was not a case of me volunteering to become the Mess Secretary. It was a case of when on parade the entire line stepping back and leaving me stranded ahead. Thus, I, as a non-vegetarian Bengali, found myself the Mess Secretary of a Gujarati vegetarian mess. The Gujarati messes had a person of Gujarati origin designated as the Maharaj. He was the chief chef, the business manager and the major-domo. As the operations boss, he had hired a number of Maharashtrian helpers. These were supernumerary peasants, from the Konkan region of Maharashtra, whose family plots could not sustain their existence. They came to Bombay searching for work. Thus, in the course of my Mess Secretary tenure, I entertained several requests for an extra day off because a person had to go home to Konkan to lend a hand in harvesting the crops. But, it is not these sons of the Konkan soil that the story is about.

I took over the Mess at a time when inflation was 25 percent per annum in India. These circumstances explain why the parade line stepped back at duty allocation time. No one wanted to be perpetually accused of raising the prices of meals by his peers. Anyway, I had to meet payroll every week. I had to have adequate revenues. I had to control costs in a draconian way. My first task was to sit with the Maharaj, an astute businessman if ever there was one, and go through the economics of feeding about a hundred people twice daily. I discovered that there were certain very cheap vegetables peculiar to the Gujarati palate. These were *alvi*, *fansi*, *valor*, *tinda*, and *looni*. When

cooked as vegetables on their own, they were hardly edible. As a snobbish Bengali, I would have called them weeds. But I had made a major discovery. When chopped up, appropriately spiced, mixed with potatoes and fried, these weeds made superb vegetable cutlets. Cutlets were a product innovation, and a value-added item, as far as my Mess clients were concerned. Thus, hordes flocked to eat my meals. I offered value-added products. My costs went down, as did my prices. More individuals wanted to join my Mess. The Mess on the floor below, with a traditional menu, went out of business. My costs and prices went down even more, as I took over its clients. I had discovered the secrets and benefits of product innovation and scale economies, though I did not know it then.

This preface is not my story. It is the story of the Maharaj. Initially, the Maharaj was quite put out at my purchase of cheap vegetables, as his speculations were affected. But he soon realized that we were buying more in volume, and he kept his mouth absolutely shut. At the end of the year, when it was time to hand over, before we all went our separate ways, I decided to have a big feast. My Mess was flush with funds. I had generated large surpluses, even though inflation in India was raging. The Maharaj and I decided we would offer our clients, as the *pièce de résistance*, unlimited amounts of dry fruit shrikhand. Shrikhand is a rich, full-fat, milk-based sweet in which expensive dry fruits, such as almonds, cashew nuts, pistachio nuts, and raisins, can be added. To top it all off, saffron is also added to make the dish fit for the gods. One can consume, at most, a very small amount of such a rich food. Since my clients were impecunious and hungry students, they could eat well, some of them exceedingly well; but even they could not consume more than three or four small helpings of shrikhand. After that, a two- to three-hour nap was mandatory.

This is where the story of Indian business and industry comes in. Carried away by a wealth endowment effect, and a feel-good factor, from having created a liquid Mess, I had rashly told the Maharaj we would have only the very best. He would prepare the tastiest shrikhand he had ever made. His face was absolutely non-committal. We went through what we needed, and decided on the quantities of items required and to be ordered. When it came to the saffron, I had suggested that we would need to order a kilogram of it. His face showed an element of surprise, but he quickly masked it. Yes, he said, I was absolutely right. A kilogram of saffron was what we needed, and that



was what he would order straight away along with the other items. So, the order was placed with the Sahakari Bhandar, a giant department and provisions store, not far away, which catered to our needs.

Two days later I received a telephone call. It was the General Manager of the Sahakari Bhandar. I had never met or spoken to this august functionary, and had no need to. The Maharaj normally dealt with individuals several layers below. The General Manager was himself on the telephone because he was surprised, shocked would be more apposite, to receive such a large order for saffron. He explained to me that the quantity might not be available in all of Bombay. If we insisted, he would acquire it in little bits from every source in Bombay and surrounding regions to meet our order. He was curious to know what was it that we had in mind, what grand orgy was it that was being planned, because saffron was normally ordered and consumed in grams, and not in kilograms. A kilogram of saffron would be extremely expensive. When I described to him our special feast, he said that for the numbers planned we needed two to five grams at most; but, if we were scared of running short, he would supply us ten grams of saffron. A kilogram of saffron was enough to flavor two helpings of that dish for the entire population of the locality within a mile's radius of the hostel, say 50,000 persons. As I have since discovered, at my local Indian grocery store, one acquires just a sliver or two of saffron for one's culinary needs.

I then realized that the Maharaj, knowing my ignorance, had allowed me to go ahead with the order quantity because with the surplus 995 grams, or thereabouts, of the remaining saffron, he would have control over, he could then set himself up as a saffron trader and would make a small fortune. This was my first, shall we say humbling, experience that led to a realization of the ingenuity and drive of the Indian businessman, who would utilize all opportunities available.

When I was doing my postgraduate degree, at the Jamnalal Bajaj Institute of Management Studies, in our second year we had to develop a detailed business idea and a project plan. To seek out what industry we had to develop a business plan for, we were referred to the *Guidelines for Industries*. This was the Indian entrepreneurs' bible, as well as the bane of their lives, published annually by the Ministry of Industrial Development. We discovered that whatever industry we chose, almost all such industries were impossible to enter into for entrepreneurial new ventures because capacity limits for firms in that industry had

been reached. Government had dictated that only so much capacity in a sector could be installed, and firms had either installed that capacity or had acquired the licenses to do so.

In 1977, the Indian electorate had acted in overwhelmingly removing from power the draconian Indira Gandhi government that had imposed a state of emergency on India. An issue that had started nagging me as a student then was, why was India, the world's largest functioning democracy, an impossible place to engage in industry and business for a citizen of this democratic nation? We now know thanks, *inter alia*, to Seymour Martin Lipset and Robert Barro, that economic growth rates are higher in a democracy than under different political systems, such as a dictatorship.<sup>1</sup> Of course, what comes first, democracy or prosperity, is an open-ended issue. Alexis de Tocqueville had written: "I do not know if one can cite a single manufacturing and commercial nation from the Tyrians to the Florentines and English, that has also not been free. Therefore a close tie and a necessary relation exists between those two things: freedom and industry."<sup>2</sup> In India, the democratic political system came first, India having followed a domestic policy of inclusion,<sup>3</sup> and economic growth, along with industrial growth, followed later.<sup>4</sup> Thus, the democratization of enterprise came well after India had become a democratic republic.

If Indian businessmen were innately entrepreneurial, commercially insightful, and highly ingenious persons, as the Maharaj demonstrated, why was there this paradox in India's industrial performance? Why was Indian industry backward? Why was Indian industry primitive in its methods, as I discovered later when I started working in Calcutta and directly observed Indian factories? Even later, when I started working in Britain, and observed some of Britain's declining factories, for example in the E14 postal district of London, which is now the financial district in the Docklands, the primitiveness of Indian industry, and the paradoxes of her economic performance, were exacerbated. The questions then became, when would the command and control regime, known as the *License Raj*, go away? When would the Indian economy awaken from the sleep of Rip Van Winkle; and what would happen after these occurred?

This book is a story of modern Indian enterprise that attempts to answer the questions articulated above. The intent is to evaluate India's industrial resurgence phenomenon over the last two decades. The data indicate that India is engaged in her own unique industrial revolution.

The timing is very late. As a result, the catch-up may be problematic. Based on research that I have carried out over several years on India's industrial performance, analysis of secondary data, interviews with policy makers and managers, and anecdotes, I explore the contours of India's late, late industrial revolution and evaluate some of its drivers. I draw straightforward conclusions, having attempted a close penetration of complex facts, a plethora of material, and a "blossoming, buzzing confusion," to conceptually understand the structure of Indian industry. Within the chapters, as relevant, I narrate anecdotes so that lay readers, as well as academics, may get a sense of the ground realities of Indian business and industry, yesterday and today, albeit based on my limited experiences.

The book is an interdisciplinary analytical narrative. It connects and combines materials related to economic growth, economic history, industrial organization, and management strategy. My approach to the analysis is pragmatic and limited. Endemic income inequalities, gender issues,<sup>5</sup> farmers' suicides, corruption, and poverty are major concerns in India. I do not stray into these topics, which are the mainstay of the development economics literature. There are many providing us with the necessary frameworks to assess poverty reduction approaches. I focus on industrial growth. By doing so, one retains unity among the related issues. Also, a number of poverty reduction issues can be dealt with after entrepreneurs' growth drives have created the funds for a corpus of necessary resources available for amelioration. This is one view of fostering development in the literature.<sup>6</sup>

While I hope that the story of Indian industry is compelling, targeted at a general audience, a specialized academic may find materials in the book to be of use. Eric Hobsbawm has remarked on the trade-offs between prose and numbers. An excess of the latter makes a book unreadable.<sup>7</sup> Similarly, economic historian Jonathan Hughes had said it was worth "bearing in mind that 'straight' history bores many readers and that unembellished economic analysis tends to mystify most."<sup>8</sup> Hence, a mixture of approaches is necessary. The topic demands facts. I have provided adequate data such that the book contains the necessary statistics. I have done this in spite of the risk that parts of the book, say, those dealing with the production growth of items such as caustic soda, may resemble excerpts of a five-year plan document, released by the State Planning Bureau of the People's Democratic Republic of Zabardastan. Partha Chatterjee had written

that: “History writing ... relies on the power of the rhetoric to produce the effect of truth.”<sup>9</sup> Thus, I have used rhetoric, in places, to make certain points.

I call India’s industrial resurgence a late, late industrial revolution, though the number of autonomous technological innovations triggering this change is small. An industrial revolution implies the application of scientific and technological knowledge and empirical processes to production.<sup>10</sup> It does not matter where such knowledge evolved. Initial levels of industrial growth may be the consequences of firms’ responses to market-opening incentives and demand. As time passes, growth will be driven by a number of unique autonomous endogenous innovations. Many of the technological functionalities that Indian firms use have been adopted from others’ examples. This approach is legitimate, and used by other Asian countries, though numerous business-model innovations in India now exist. Really, one should classify this on-going transformation as India’s late, late industrialization. But there is no point in splitting hairs. The fundamental transformation in India has been in the altered role of the state. Whether by design or accident, and more due to the latter, its role as the dictator-in-chief to India’s entrepreneurs has been simply washed away by the giant tsunami waves of autonomous entrepreneurship that have engulfed the nation.

There has been a transfer of power in India. A civil servant friend I have known since childhood described to me the contemporary role of civil servants like him and his colleagues as being enterprise facilitation. That is a very good thing. Government in India needs to be smart government. Whether that is happening or not is a pressing concern. But dealing with quality of governance is beyond this book’s scope. Unlike the late industrialization programs of Japan, Taiwan, South Korea,<sup>11</sup> and now China, where the government has played a major guiding role, in contemporary India such a role for the state does not exist.<sup>12</sup> Entrepreneurs have fully taken over. In a fully democratic manner, anyone can set up any business, of any scale, in any industry, anywhere in India. Just as all adult Indians have the right to vote, all Indians have the right to establish an enterprise. Equality of entrepreneurship opportunity defines modern India. This democratization of entrepreneurship is the real revolution. Hence, India’s industrialization story deserves the sobriquet of a late, late revolution.<sup>13</sup>

Since we are dealing in an entrepreneur-led Indian industrial revolution, albeit after a fashion, as described in Chapter 1, a logical structure for the book suggests we should understand details of the original industrial revolutions (Chapter 2), and India's role in those episodes. Considerable details are provided as background materials, and it is important to appreciate the contours of all of these industrialization episodes. A little-publicized fact is India's major role in triggering the original British industrial revolution in the eighteenth century. It was India's wealth, based on her land revenues and success in textile manufacturing, which provided Britain with the incentives and the finances to implement the first industrial revolution.<sup>14</sup> Till the industrial revolution, Indian textiles had been the world's largest manufacturing export.<sup>15</sup> A large proportion of the funds to set British industrialization in motion came from India. The British industrialization episode is the source of subsequent industrial growth experiences for the world's economies.

This book is about the present and the future of India's industry. I delve into India's economic history to bring the past in as an important context for the future. To cite social historian Keith Thomas, history "enhances our self-consciousness, enables us to see ourselves in perspective, and helps us toward that greater freedom and understanding which comes from self-knowledge";<sup>16</sup> consequently, India's own past business and industrial history (Chapters 3 and 4) merits some description. I do not go into the de-industrialization thesis, as the topic has been covered by others. A chapter evaluates the past experiences of India's Asian sisters, such as Japan, Taiwan and South Korea, to understand their late industrialization nuances, as these were contemporaneous with India's twentieth-century industrial experiences (Chapter 5). Again, considerable details are provided, as the experiences and examples of the various countries are salient for an appreciation of the way Indian industry may evolve.

India's contemporary entrepreneurship democratization is 20 years old, though it builds on past policy foundations. The issues of why it happened, why, unlike Western Europe and later East Asia, India did not succeed in the 1950s and 1960s in government-led industrialization, and the consequences of India's contemporary entrepreneur-led industrialization in transforming her economic landscape form the heart of the book (Chapters 6 and 7). The latter of the two chapters (Chapter 7) contains the data reflecting the occurrence of the waves

of tsunami constituting autonomous Indian entrepreneurship. There are many debates on India's growth and inclusiveness. India's growth has been a story of information technology and the services sector in public perception. Such a view short-changes other sectors. The share of the services sector in India's national income has risen. Chapter 8 contains a discussion of the role of the services sector in India. It summarizes analysis evaluating service sector productivity, the first to be so reported. The services sector in India engages in inefficiently producing commodities with the means of commodities. Such inefficiencies are rising. This is unsustainable. No theory suggests that service sector growth alone can lead to economic development. The services sector has generated growth and inflation, but not jobs and productivity. Chapters 6, 7, and 8 collectively help assess whether India's contemporary industrialization phenomenon is future-proof, or something too little and too late.

I follow up with a discussion on the role of the manufacturing functionality in past industrialization epochs, and why manufacturing is fundamental for the present (Chapter 9), even though industry's share in national income has been stagnant. The growth and development of an economy are propelled by innovation and technical change. These are reflected by the manufacturing function adding value to raw materials.<sup>17</sup> Industrial manufacturing-driven resource accretions for the economy, based on value addition, have major connotations for wealth creation and poverty reduction. Jagdish Bhagwati had written that "It is necessary to argue forcefully that efficiency and growth are important, indeed given our immense poverty the most important, instruments for alleviating poverty."<sup>18</sup> When the industrial revolution first commenced in Britain, in the eighteenth century, "the central problem of the age was how to feed and clothe and employ generations of children outnumbering by far those of any other time."<sup>19</sup> This problem was solved by wealth creation. Thomas Ashton wrote that "She [Britain] was delivered, not by her rulers, but by those who, seeking no doubt their own narrow ends, had the wit and resource to devise new instruments of production and new methods of administering industry."<sup>20</sup> This sentiment was echoed by Phyllis Deane, who stated that "It is now almost an axiom of the theory of economic development that the route to affluence lies by way of an industrial revolution."<sup>21</sup> Those governing in Britain also possessed wits. Eric Hobsbawm has written that "the right conditions were present in Britain ... since private

profit and economic development had become accepted as the supreme objects of government policy.”<sup>22</sup>

Wealth creation and poverty reduction are two sides of the same coin. Wealth creation implies a positive attitude, based on an additive motivation. Poverty reduction implies dealing with a negative condition, based on an amelioration dispensation. Industrialization is a value-additive process preceding amelioration, since it generates the resources that eventually improve the lot of people. If a central problem in India is poverty, then the creation of wealth, through this late, late industrial revolution, can lead to the amelioration of India's poverty.<sup>23</sup> The late Chidambaram Subramanian had written that “there are no rewards for caution in economic development. On the contrary, the economic history of nations has nowhere recorded a penalty for boldness.”<sup>24</sup> If a central concern in India is development, then bold risk-taking by her entrepreneurs in manufacturing can foster development.

Numerous theoretical reasons suggest that manufacturing should be the driver of development. India's manufacturing future matters enormously. Many possibilities exist for Indian industry to achieve global manufacturing stardom. Many necessary conditions are also required to take India's late, late industrial revolution forward, so that she is a pre-eminent manufacturing nation. She has to produce or perish. India is a heterogeneous economy, and I cannot even think of all the possibilities that will lead to the crystallization of this global stardom contingency, let alone cover the details, since the issues are so complex. The late Morris D. Morris stated that “To date no one, not even D. R. Gadgil in his seminal survey, ‘The Industrial Evolution of India,’<sup>25</sup> has been able to capture the relationship of the individual parts to the whole of the economic system.”<sup>26</sup> I pass on this challenge. I let it be carried forward for future scholarship. I cover some key dimensions of industrialization (Chapter 10) which, in my opinion, are necessary; but, in themselves, these are hardly sufficient. The normative elements within the sections of the chapter highlight certain aspects of industrialization that can make India's experiences unique.