Chapter 3 THE PATH NOT TAKEN

On October 2, 1950, Mahatma Gandhi's birth anniversary, Nehru declared that independent India's primary goal was "to put an end to unemployment." He returned to that theme in September 1951. India's "biggest problem," he said, was "the problem of development, of removing unemployment and poverty from the country."

Unemployment was, indeed, India's biggest problem. But the new nation was hopeful, a mood that filmmaker Raj Kapoor captured in his 1951 film Awaara (vagabond or tramp). On an anonymous city street, the lead character, Raj—dressed Charlie Chaplin—style with cocked hat and baggy trousers tied above his waist and ending above his ankles—playfully sings, "Awaara hoon, I am a vagabond, a tramp." Raj, played by Kapoor, has dropped out of school and is unable to find a job. So, he sharpens his skills as a pickpocket and petty thief, which regularly lands him in jail. The future is bright, however, and Raj's doting mother believes her son will one day be a lawyer, a goal for which she makes many sacrifices. As Maharajkrishna Rasgotra, one of India's most distinguished post-independence diplomats, wrote, "In 1951–52, the country's mood was one of self-discovery, and hope."²

Beneath the hope, economic trouble was brewing. India's exports did not pay for its imports. This shortfall created a growing balance of

payments deficit—the gap between international dollar payments (for imports and other services) and receipts (from exports and other sources, such as workers' remittances). To fund that deficit, India was becoming more indebted to foreign lenders, leading to the risk of international bankruptcy.³ India's two problems—employment shortfall and bankruptcy risk—had a common long-term solution, a competitive Indian economy, one that expanded exports to create jobs for larger numbers of people and pay for more imports.

The bankruptcy threat needed immediate attention, and Indian authorities used a quick short-term fix to diffuse it. On Monday, September 19, 1949, India devalued the rupee by 30 percent relative to the U.S. dollar—from Rs. 3.30 to Rs. 4.76 per dollar. The devaluation brought the expected relief. Indian exporters lowered their dollar prices, which helped raise exports. The rupee price of imports went up, inducing Indians to reduce their imports. India's balance of payments improved. The threat of bankruptcy diminished.⁴

It was the right step. But devaluation did not solve India's long-term problem. Devaluation is like aspirin: it reduces the pain but does not cure the sickness. As long as Indian farms and factories remained inefficient—had low productivity—prices of Indian products would remain high. India would struggle to export. Imports, however, would keep increasing to meet the food and industrial supply needs of the growing population. The balance of payments deficit would increase again. Boosting exports would require repeated devaluation—like swallowing repeated doses of aspirin. The Indian economy was in this "unhappy state," as Nehru acknowledged in parliament.⁵

To emerge from its "unhappy state," India needed higher-productivity farms and factories. More productive farms would increase the domestic supply of food and reduce the need for food imports, which accounted for between 15 and 20 percent of the dollar value of India's imports. Higher manufacturing productivity was critical to expand exports on a scale that would employ large numbers of people and pay for imported machinery and raw materials.⁶

The message in the immediate aftermath of independence was that Indians were not just greatly underemployed, they were also unproductive

in their workplaces. As a new nation, India had to employ many more people and employ them in much more productive ways.

And to achieve a high-employment, high-productivity economy, India required a development strategy more closely aligned to that of Japan after the Meiji Restoration of 1868. Japan at the time of the Meiji Restoration had crucial features that made it the best economic model for India. Japan's economy was predominantly agricultural, the nature of its agriculture—small farms and hand-operated farming—was similar to India's, its youth population was growing rapidly as death rates fell faster than birth rates, and its citizens had little formal schooling. From that starting point, Japan had achieved high agricultural productivity growth and rapid expansion of primary education. Above all, Japan pioneered accelerated industrialization through aggressive pursuit of export markets. By the 1920s, Japan had bootstrapped itself into the ranks of the world's industrialized nations.

India came tantalizingly close to following Japan's development path. In an August 1949 letter to the prime ministers of Indian provinces (referred to as chief ministers of states after India became a republic in January 1950), Nehru highlighted the "relatively short period of time" within which Japan achieved "astonishing development." He even expressed admiration of the Japanese as colonial masters for industrializing Taiwan "within fifteen years or so to an amazing extent," a feat he recognized had "hardly a parallel anywhere." Russia also had lessons to offer, Nehru noted. But "Japan," he concluded, "has even more to teach us, because Russia gives us a very complicated picture."

India's First Five-Year Plan (1951–1955) recognized the valuable lessons from Japan's development experience. In particular, the plan referred admiringly to the post-Meiji agricultural performance and the internationally competitive and employment-generating small and medium-sized firms. It is remarkable how quickly after independence those lessons became clear. It is also remarkable how poorly the lessons were learned.

Indian Agriculture Veers Off-Track

Indian planners knew the Japanese numbers well and saw them as achievable benchmarks for India. Grain output per farm worker in

Japan doubled over the forty-year period between 1880 and 1920. While grain output increased by 77 percent over these years, the number of agricultural workers actually *declined* and the area under cultivation increased by only 20 percent. Of special relevance to India, Japan's farmers achieved their phenomenal productivity gains on small, privately held, hand-operated land holdings, which were on average, between two and three acres in size and were typically further divided into several tiny and dispersed strips. The farmers relied on seed varieties carefully selected by local research stations and complemented these with the liberal use of fertilizers. Steadily improved water and pest control, better methods of transplanting and weed control, and more effective methods of irrigation and drainage made crop yields less sensitive to the excess or shortfall in rainfall.⁸

As farmers became more productive, labor requirements in agriculture declined and the share of Japanese workers in agriculture fell from 80 percent in 1880 to 50 percent in 1920. Japan's cities absorbed the country's rapidly increasing population. The cities provided jobs in large factories, especially in textiles; satellite townships provided jobs in small and medium-sized firms, which typically used labor-intensive techniques and either supplied specialized inputs to larger firms in the cities or made products for international sales.⁹

In the early 1950s, productivity on Indian farms was between one-fifth and a quarter of that in Japan. The best-irrigated and best-managed farms, located in the West Godavari district of Andhra Pradesh, yielded only half the rice per acre the average Japanese farm did at the time. India's First Plan's authors recognized that Japan's productivity increases occurred "mainly through better seeds, manure, and insecticides, and improved agricultural practices, none of which required large capital outlays." Indian planners believed that crop yields "comparable" to Japan's were within India's reach. With 70 percent of its workforce in agriculture, India needed Japan-style high agricultural productivity growth to feed the nation; India also needed Japan-style rapid industrialization and urbanization to employ its exponentially growing population.¹⁰

To accelerate agricultural productivity growth, the First Plan rightly concluded that India needed land reforms (more land to the tiller) and

a community development program to provide "extension"—technical support—services to farmers. More land to the tiller would enhance fairness. It would raise incomes and nutritional levels of farming families and give them a greater incentive to raise productivity. Extension services would bring new ideas from research centers to farms. These were sensible plans. They fell victim to poor execution.¹¹

The most ambitious of India's land reform initiatives was the abolition of zamindari. Zamindars were landowners and often also middlemen who collected taxes on behalf of the British government, mainly in eastern India. The zamindar was a hated cultural figure who loaned money to desperate cultivators at extortionary interest rates and enforced his authority with brutal financial and physical methods. In the much-acclaimed 1953 movie Do Bigha Zamin ("Two bighas of land," signifying a tiny land parcel), a memorably rapacious zamindar seeks to evict a tenant from two bighas of land using forged papers showing that the tenant owed him an insurmountable debt.¹²

Indian leaders of different ideological persuasions—Nehru with his empathy for greater equality and Sardar Patel despite his deference for private property—agreed that *zamindari* needed to go. Nehru, in a letter to the state chief ministers, wrote that if *zamindari* abolition fails, "our entire social and economic policy fails."¹³

By the early 1950s, the states had legally abolished *zamindari*. But the implementation of the legislation did little for the small Indian farmer. The main beneficiaries of the change were the former large tenant farmers, who now owned the lands they cultivated. That empowering of large peasants kick-started "capitalist" farming in India. Others gained little or nothing. The *zamindars* evicted their small tenant farmers by claiming that they had cultivated the land themselves all along, a claim that allowed them—under the law—to keep the land for themselves. Such exaggeration of personally cultivated lands was possible because the land records either did not exist or were under the control of the *zamindars*. Small independent farmers, agricultural laborers, and the landless got, at best, "tiny pieces of land." The *zamindars* received generous compensation for the revenue-collection rights they surrendered, placing a heavy fiscal burden on the state governments and reinforcing inherited inequality.¹⁴

Another initiative aimed to place a ceiling on the land that individual farmers held, so that land in excess of a specified limit might be distributed to small farmers and landless labor. But, as the constitutional scholar Granville Austin wrote, "The legislation that survived judicial scrutiny contained loopholes ample enough to accommodate a tractor." The implementation of the legislation dragged on for years, during which time large landholders partitioned the land they owned into many parcels. They used the common practice of benami transactions, which concealed the identity of the true owner by registering the parcels in the names of family members and even of farm animals, thus creating a superficially legal basis for retaining control of the land. A third initiative to protect the rights of tenant farmers in non-zamindari (particularly the so-called ryotwari) areas failed almost entirely because—as in the zamindari case—poor or missing land records prevented tenants from establishing their rights or because landlords claimed the land back on the grounds that they intended to cultivate it themselves. Landlords could also circumvent ceilings on land rents by charging higher interest rates on moneylending.¹⁵

Indian land reforms never stood a chance. Many Congress Party leaders were large landlords; they undermined the reforms to protect themselves and their friends and supporters. Nehru had little appetite to challenge the landed interests. In a letter to chief ministers, he helplessly wrote, "This result has not been what we had looked forward to." However empathetic he might have been, Nehru lacked the political resolve to pursue the cause of a more equal India.

Japan's small and medium-sized farmers also did not benefit from the ineffectual Meiji land reforms. But fruitful collaboration between farmers and research centers helped boost land and labor productivity. ¹⁷ That attempted collaboration was a huge disappointment in India.

Indeed, India's extension services—under the Community Development Program—failed utterly. The World Bank diplomatically concluded that the "caliber and organization of extension work was not consistently adequate." Other commentators were brutal. One expert wrote, "The texture of operations was discouragingly shoddy." Even Indian government officials despaired about the "problems of implementation." An elaborate "web of bureaucratic routines" hindered the real work. The

village-level community development workers were assigned unrelated tasks and lacked professional training and authority. Farmers refused to take their advice seriously.18

The University of Chicago economics professor Theodore Schultz added that a problem arose also because Indian farmers were "generally illiterate" and possessed "low levels of skill." It was a mistake, Schultz said, to think that agriculture required mainly a "strong back" and the ability to "do manual work." Japan's farmers, even with their elementary school education, could master "complex and difficult farm practices" taught by experienced extension workers.19

The Cost of Industrial Illiteracy

At independence, Indian manufacturing enterprises employed 10 percent of the country's workforce and produced 16 percent of the national income. These were low contributions even by the benchmark of India's low per capita income.²⁰

India's low level of industrialization at independence was, in a sense, a surprise. Dynamic entrepreneurs from the highly educated Parsi community had given the Indian textile industry an early start. Cowasjee Davar founded the first mill in 1854, almost a century before independence. Maneckjee Petit followed Cowasjee but died early, and it was his brilliant son Dinshaw who blazed new trails. Others with greater name recognition today included Nowrojee Wadia, who founded the Bombay Dyeing and Century Mills, and Jamshedji Tata, who established the famous Empress Mills, a textile manufacturer, and then started India's first steel mill. India's textile factories operated machines from Lancashire, which through the early twentieth century were the best available. Non-Parsis joined the fray, slowly at first and then in greater numbers. Textile production spread from its hub in Bombay, notably to Ahmedabad (the largest city in present-day Gujarat), Kanpur (in present-day Uttar Pradesh), and Coimbatore (in the state today known as Tamil Nadu).21

Between 1870 and 1890, Indian textile producers earned bountiful profits. The operation of Indian railways from the mid-1850s made it easier and cheaper to transport goods across the country. Dinshaw Petit also led the spectacular charge of Indian yarn exports to China. Compared to the mills in Lancashire, Indian mills benefited from lower wages, domestic sources of cotton, and significantly lower transportation costs to China; in 1892, they sold 70 percent of their yarn in China. During these boom years, India's mill owners invested in modern spinning and dyeing innovations. In 1891, the Indian textile industry employed 150,000 workers.²²

Signs of trouble appeared in the early 1890s. Chinese mills began increasing their efficiency. But it was the ferociously competitive Japanese mills that broke the Asian supremacy of Indian textile mills. With labor as cheap as in India, Japan's textile producers increased their productivity at an especially rapid pace. With Japan's entry, Indian mills lost their advantage of low wages and low transportation costs to the lucrative Chinese yarn market. India's textile industry did remain significantly larger than Japan's textile industry until the first decade of the twentieth century. Indian mill owners continued to use world-class machinery and adopted spinning and dyeing innovations. But they proved unable to compete with the Japanese mills.²³

The problem through these critical years was the low productivity of Indian workers, which largely offset the advantage of their low wages. A startling calculation by the economic historian Gregory Clark showed that if Indian workers in 1910 were magically made as productive as those in New England (United States), their wages could rise fivefold, from \$0.78 a week to \$3.93 a week, while maintaining high profitability on scarce Indian capital.²⁴ The implication was sobering: Indians were poor because industrial workers—even in the country's most internationally successful industry—had such low productivity.

In the 1920s, the productivity of Japanese workers increased rapidly along with their improving education and advances in production techniques adopted by their employers. Having displaced Indian producers from the Chinese market, Japan's textile manufacturers advanced ominously into India. Some Indian companies did try to respond to that challenge but most felt overwhelmed, especially after the Japanese government allowed the yen to depreciate in the 1930s. Instead of undertaking a concerted efficiency-enhancement effort, Indian textile mills retreated behind increasingly high import tariff barriers, where they also squeezed their workers using the constant threat of job loss.²⁵

In a famous research paper published in 1993, MIT economics professor Michael Kremer was struck by Gregory Clark's finding of strikingly wide variation in worker productivity across countries. Kremer reasoned that differences in education likely explained differences in productivity. Bettereducated, more skilled workers made fewer errors and were typically paired with other skilled workers, who then improved each other's efficiency. The potential for efficiency gains encouraged factory managers to experiment with more innovative uses of machinery, further raising worker output.²⁶

The data supports Kremer's conjecture on the importance of education. I use female primary school enrollment rates as a metric of a society's commitment to mass education. Worker productivity in 1910 was higher in countries with higher female primary school enrollment two decades earlier (Figure 3.1). The United States, having achieved 100 percent female primary enrollment by the early 1870s, had the most productive mills.

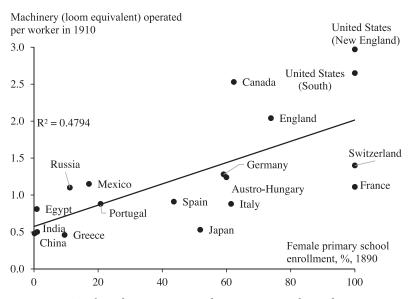


FIGURE 3.1: Textile workers were more productive in societies that made greater commitment to education.

Note: Female primary school enrollment for Austro-Hungary is the average of the now two countries. Source: Machinery (loom equivalents) per worker from Clark, Gregory. 1987. "Why isn't the whole world developed? Lessons from the cotton mills." *The Journal of Economic History* 47.1: 141–173, Table 3; female primary school enrollment from Barro, Robert J. and Jong-Wha Lee. 2015. *Education Matters: Global Schooling Gains from the 19th to the 21st Century*. New York: Oxford University Press.

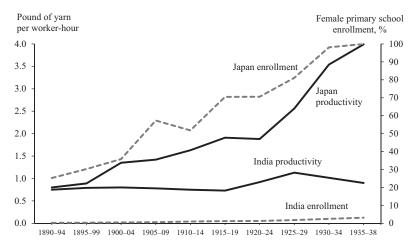


FIGURE 3.2: Japanese worker productivity soared with the spread of education.

Note: Female primary school enrollment is lagged by twenty years, that is, for 1890–1894 pounds of yarn/worker, the enrollment is in 1870.

Source: Pounds of yarn per worker from Wolcott, Susan and Gregory Clark. 1999. "Why nations fail: Managerial decisions and performance in Indian cotton textiles, 1890–1938." The Journal of Economic History 59 (2): 397–423, Table 1; female primary school enrollment Barro, Robert J. and Jong-Wha Lee. 2015. Education Matters: Global Schooling Gains from the 19th to the 21st Century. New York: Oxford University Press.

Of course, in 1910, Japan had not gained the full productivity benefits of its enormous strides in primary education since the Meiji Restoration in 1868. The message was simple: the benefits of education take time to accrue. The policy warning was clear: invest now in education or sacrifice productivity for decades.

As Japan raced toward near-universal primary education, their mills rapidly increased their productivity (Figure 3.2). That step-up in productivity in the early 1920s coincided with their entry into the Indian market.

Arno Pearse, a British historian and general secretary of the International Federation of Textile Producers' Associations, surveyed the technical operations of mills in India, China, and Japan in the late 1920s. Of Japan, he wrote that "one notices everywhere the results of a good general education; every mill girl reads and writes, and possesses a general education quite on par with that of most European countries." Japanese companies had greater incentives to run special training classes for foremen and female supervisors to help them increase the output rate of

their receptive factory-floor workers. In a direct comparison with the low productivity of Indian workers, Pearse noted that the much superior education in Japan led to less "defective work" and quicker adoption of more advanced technologies.²⁷

Thus, just as Japan's farmers and extension workers benefited from national mass education, mill owners and employees leveraged off their government's education drive to create learning factory floors. Indian textile producers, in contrast, fell into a "bad equilibrium." They employed largely illiterate workers whom they kept on a leash with highly insecure work. Neither the factory managers nor the workers had an incentive to invest in each other. Indian mill owners had flourished in the nineteenth century by paying low wages and selling to markets where they had little competition. But in the early twentieth century, Japan's producers exposed the weakness of India's low-wage/low-productivity strategy.²⁸ The stunned Indian mills quickly lost ground in the adoption of new technologies and became saddled with old machines.

Steel production was a brighter spot amid prevailing Indian industrial inefficiency. The Tata Iron and Steel Company (TISCO)—the dominant prewar producer—had produced finished steel as early as 1912 at Jamshedpur in what is now the state of Jharkhand. At first, TISCO, like the textile industry, received the protection of import tariffs, in part because India's labor force was much less efficient than in the United States and Europe. TISCO management, however, gained efficiency through improved production techniques that helped eliminate the need for tariff protection for steel by 1947. In the end, TISCO could hold its home ground against foreign competition. But a number of other Indian industrial sectors still required protection from imports.²⁹

Upon achieving independence, therefore, Indian industry had only rare bright spots and was unable to compete internationally and provide employment to large numbers of Indians. That was a handicap India needed to urgently overcome.

Nehru Nixes Development of Small and Medium-Sized Firms

In principle, small and medium-scale manufacturers could generate substantial numbers of new jobs. Indian policymakers made a gesture toward small firms by promoting traditional hand spinning using a *charkha* (spinning wheel) and handloom weaving. But these traditional manufacturing operations could not compete with modern textile mills and power looms, and so served only niche markets at home and abroad. For India, hope lay in a variety of more "modern" small and medium-sized firms, which manufactured clothes, bicycles, cooking pots and pans, ceiling and table fans, and even textile machinery and parts. India's most dynamic entrepreneurs—merchants, engineers, artisans, and craftsmen—ran these businesses, typically in small-town industrial clusters.³⁰

Ludhiana in Punjab was a particularly vibrant town, known for textiles, knitwear, and shoes. It was also home to a nascent bicycle industry. In 1946, the Munjal brothers set up a "workshed" for the manufacture of bicycle parts and assembly of bicycles in Ludhiana. Satyananda, one of the brothers, had previously repaired bicycles and sewing machines in Lahore and Amritsar, where he learned to take them apart and assemble them. The form that unheralded beginning, the brothers and their children would grow their company Hero Cycles into a major bicycle producer. India had the potential to produce many such heroes.

Another diversified cluster centered around Coimbatore, about five hundred kilometers southwest of Chennai (then Madras). Coimbatore had developed a textile industry in the pre-independence years and had also diversified into garments and light engineering products. In addition, silver thread and wire (*jari*) producers in Surat and bangles producers in Firozabad (Uttar Pradesh) formed traditional manufacturing clusters with growth potential.³²

Small-town clusters had an honored place in the history of international industrialization. In his 1890 classic *Principles of Economics*, the great University of Cambridge economist Alfred Marshall described Staffordshire's pottery makers and Sheffield's cutlery producers as examples of industrial dynamism. Because many producers in "the same skilled trade" congregate in a cluster, their suppliers and toolmakers benefit by locating nearby. Such proximity generates tremendous productivity benefits: "If one man starts a new idea, it is taken up by others and combined with suggestions of their own; and thus, it becomes the source of further new

ideas. Children learn them unconsciously."33 Industrial clusters are intense forms of what economists call "learning-by-doing." Marshall would have recognized modern Silicon Valley as a high-tech upgrade of nineteenthcentury Staffordshire and Sheffield.

In Japan, a particularly successful example of Marshall-style concentration of highly interdependent producers was the bicycle-industry cluster in Sakai, a city near Osaka. Here, manufacturers produced handlebars, wheel rims, hubs, and spokes, all destined for a final bicycle manufacturer. A similar cluster produced parts of sewing machines. Thus, Japan developed a complex system of subcontractors, who fed producers, who in turn assembled the parts and shipped the final product to the consumer.³⁴

Like post-independence Indian manufacturers, Japan's small and medium-sized firms in the interwar years were "often financially unstable" and suffered from a reputation for poor quality.³⁵ My father, who was born in 1925, recalls that when he was a young lad in the 1930s, the Hindi word Japani (Japanese) was synonymous with "shoddy." He, for example, chose an English-made Hercules bicycle for thirty-five rupees over a bicycle produced in Japan that cost only twenty rupees but frequently broke down. Japanese exporters, however, didn't give up. They scoped out the Indian market to an astonishing degree, supplying plastic figures of Lord Krishna, which were used by families for decoration and by children in their religious game-playing. While Japan's exporters did not lose their low-quality reputation, they steadily upgraded to more advanced toys, such as wind-up mechanical cars and electric trams.

After the Second World War, Japan sold more sophisticated products to India, including various kinds of machinery. To the Americans, though, Japanese producers still exported low-tech, labor-intensive products such as women's blouses and men's and boy's shirts. Their reputation from the 1930s for shoddy products continued to hurt them. In 1954, a Rochester paper carried a report on "highly dangerous Japanese-made toys," which when placed near something hot would burst into intense flames and give off toxic gases."36

Such incidents, however, became rarer. Manufacturers in Japan subjected themselves to the supervision of American buyers and the rigor of their government's quality-control systems. They quickly leapfrogged to

high-precision products. By 1957, Japanese optical instruments—cameras, binoculars, and microscopes—began to enjoy an "excellent reputation" among American consumers for their high quality and low prices.³⁷

The lesson for India was once again clear. The world has a tolerance for cheap, low-quality products. Successful exporters use the period of tolerance to learn the techniques for upgrading product quality. Such learning and upgrading lies at the essence of economic development. Learning-by-doing complements and enhances domestic education capabilities. In Japan, educated workers, industrial clusters as hothouses of ideas, and the challenge of meeting the exacting standards of sophisticated foreign buyers were the multiple knowledge sources that propelled national productivity growth.

An extraordinary opportunity opened for India in the immediate postwar years. Pent-up global demand and reconstruction needs created a never-since-matched boom in world trade, especially in industrial products. With producers in Japan beginning to move upscale, India had the possibility of making headway in the less sophisticated and labor-intensive product segments of global markets.

India did not have a sensible discussion—then or later—on the potential of exports to create domestic jobs. To some analysts then, an export drive seemed out of reach. An "export pessimism" had gained ground. To its credit, though, India's First Five-Year Plan ignored such pessimism, which applied mainly to Latin American countries dependent on the exports of agricultural commodities and minerals. The First Plan made a passing reference to the possibility that India could expand exports of manufactured products such as "sewing machines, batteries, bicycles, and pharmaceuticals" by increasing sales beyond the small quantities Indian producers then sold to countries of Southeast Asia. 39

But Nehru downplayed such ideas. In July 1954, he delivered a public speech at Beawar, an industrial center in Rajasthan. The industry in Beawar included a textile mill, cotton gins, handloom weaving, and hosiery. "You will forgive me," Nehru said, "if I point out that textile mills and industries of this kind are child's play in the modern world and of no great significance. Nowadays, industries of a different kind are coming up. They are called heavy industries, which are the fountainheads of

other industries." Nehru insisted that India must build industries that produce machines to make other machines. He spoke of the Sindri fertilizer plant, which he said was bigger than all the industry in Beawar. "The steel-making plants are also huge," he said. 40 He made his priority clear: big, "heavy" industry.

Thus, at the start of its post-independence journey, India neglected two essential sources of economic development: agriculture and laborintensive manufacturing. In agriculture, powerful politicians thwarted land reforms and bureaucratic torpor weighed down extension services. And once Nehru belittled small and medium-sized manufacturing, India essentially gave up the possibility of generating job-rich manufacturing growth.

When Hope Began to Fade

In 1950, the Indian government began collecting social and economic data through sample surveys. The physicist and statistician Prasanta Chandra Mahalanobis established the method and practice for conducting these surveys under the National Sample Survey (NSS) umbrella.41 In 1954 the NSS began a gigantic nationwide survey of employment conditions. Based on that data and additional surveys, estimates showed that only 1 percent of Indians were "openly unemployed"—they had no job. However, there was vast underemployment among the rest. Most of the "underemployed" were in agriculture; they were idle between seasons or between different phases of a crop production cycle. Most farm households did not have enough work for all family members and so they spread the work among themselves. Additionally, mom-and-pop stores, restaurants, and transport providers in the "informal" sector harbored significant numbers of underemployed workers. If some of the underemployed stopped sharing tasks in order to work full-time, 15 percent of Indians would have nothing to do. Hence, India had an effective unemployment rate of 16 percent: 1 percent "openly unemployed" and 15 percent among the underemployed. 42 Indian planners called this effective unemployment, the shortfall or "backlog" in the demand for jobs.

The numbers were large. In 1955, India's population was about 410 million people. Of these, the 250 million older than age fifteen formed

the potential workforce. Many women and students chose not to work, leaving a labor force of 167.5 million. The 16 percent effective unemployment rate in a labor force of 167.5 million people implied that India had a shortfall of about twenty-six million jobs. In a 1958 research paper, Mahalanobis himself estimated the employment shortfall in 1955 to be twentyfive million. 43 Such numbers are imprecise; I believe that the shortfall was somewhere between twenty and twenty-five million jobs.

Also, India's population was growing quickly. Since the 1920s, better control of infectious diseases and modest improvements in sanitation had caused death rates—including infant mortality rates—to fall rapidly. Birth rates were declining at a more modest pace. Overall, therefore, an increasing number of babies were growing into young adults looking for jobs. If, as seemed likely, India's population were to grow at 2 percent a year for the rest of the century, the nation's population would reach a billion people by 2000. The additional workforce of hundreds of millions of people could be a blessing, a "demographic dividend" that powered savings, investment, and growth. Without productive jobs, India would be swamped by angry job seekers.

Frustration was already bubbling to the surface. In 1951, Raj Kapoor's hugely popular movie Awaara mirrored the nation's optimism. But as the 1950s wore on, hope turned into impatience. In 1953, twenty-eight-<mark>year-old Ritwik Ghatak, who stands today with h</mark>is Bengali compatriot Satyajit Ray in the pantheon of India's greatest filmmakers, produced his first movie, Nagarik (Citizen). In it, Ghatak tells the story of a college graduate searching for a job. The young man views each job opening with eager anticipation. He dreams of "a pretty house" in an "idyllic setting" where a street musician strums his violin. After each setback, he wakes to a rude reality. In that reality, he and his family slip down the economic and social ladder into precarity and urban squalor.44

In 1955, Raj Kapoor reappeared as Raj in the movie Shree 420, which everyone understood as "Mr. Crook" (the number 420 was a reference to the section of the Indian Penal Code under which crimes of dishonesty and deception are punished). In the movie's opening sequence, Raj in his Charlie Chaplin garb walks along a country road, with his bag of worldly belongings tied up in a bindle and his right big toe sticking out through a hole in his shoe. He sings as he walks: "Mera joota hai Japani, yeh patloon Englistani, sar pe laal topi Rusi, phir bhi dil hai Hindustani" (My shoe is Japanese, these trousers are English, the red hat on my head is Russian, but my heart is Indian). Those words virtually became a "national anthem," writes the journalist and human rights activist Rajni Bakshi. Raj's face lights up as he passes a sign pointing toward Bombay and, soon enough, he walks onto another anonymous city street. He begins his job search right away. "Meine B.A. kiya hai" (I have completed a B.A.), he says to the first person willing to talk to him. 45

Raj finds a home in a *basti*, a slum, above which rises a "towering mansion." To emphasize the point, the mansion's "corrupt and ruthless" owner is endowed with generous girth and multiple chins. In 1951, Raj the vagabond stuck to petty crime, remaining hopeful of better times; in 1955, Raj the crook uses his skills as a card-sharp to make a living as he moves into the orbit of a criminal gang.⁴⁶ The transition from hope to cynicism was happening quickly.

By 1954, Nehru's references to employment generation reached a new crescendo. He could see, he said, the "vastness of this unemployment problem"; he recognized that unemployment hid amid apparently employed workers. He was particularly annoyed at universities, which he said were "churning out" B.A. and M.A. degrees but imparting little education. Providing jobs for such degree holders, he said, was "very difficult." Thus, Nehru shared the worry of millions of Indians, which Ghatak and Kapoor sensed. Ghatak's movie was a lament. But Kapoor in *Shree 420* warned that poor job prospects for so many college graduates would breed social pathologies.

Repeatedly—in a December 1954 speech in the Lok Sabha (the lower house of the national parliament), in the resolution he drafted for the Congress Party conference at Avadi in January 1955, and in two speeches that followed the tabling of that resolution—Nehru said that his government's goal was to eradicate unemployment over the next ten years. The government would pursue this goal, he said, in a "socialistic" society, one that gave primacy to equality in Indian society.⁴⁸

These were worthy sentiments, but Nehru unfortunately had no strategy for a matching plan of action. As Gandhi recognized, Nehru was a

thinker, not a doer. His biographer Sarvepalli Gopal wrote that Nehru had no aptitude for conducting the administration of the state. He worked tirelessly but devoted "limitless attention" to "trivial matters." He allowed a sense of "drift" to creep into the state's administrative machinery. An editorial in the influential Bombay-based *Economic Weekly* echoed the theme: Nehru had a "weakness for outward show" but a "lofty disregard for unpleasant necessities."

Certainly, Nehru did not have the patience to follow Japan's development path, which required active and coordinated political and bureaucratic mobilization to raise agricultural productivity, educate the population, and create urban jobs for workers moving out of agriculture. For Nehru, it was easier to promote and open a steel plant, where he could deal with a limited number of stakeholders and moving parts.

And thus it was that, although he understood that agriculture needed revitalization and that unemployment was India's primary economic problem, Nehru started India down an alternative path.