

Seeds of Industry: China's Economic Transformations from 1600 to 1950

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Introduction

This book traces three and a half centuries of economic transformation in China, from the late Ming through the Republican period, with a focus on how commercialization,

proto-industrialization, and early modernization reshaped both macroeconomic structures and everyday livelihoods. It argues that the path to twentieth-century industry was neither linear nor uniform. Instead, it unfolded through regional mosaics of agrarian change, handicraft specialization, market-village exchange, and factory organization—patterns that reveal striking continuities as well as sharp ruptures well before the advent of Communist industrial policy after 1949. By combining quantitative evidence with narrative case studies, the chapters that follow map these processes across space and time to explain why development diverged so markedly between regions.

Commercialization, for our purposes, refers to the growing prevalence of market relations in land, labor, and goods: tenancy contracts that priced risk, seasonal migration that arbitrated wages, and commodity chains linking upland tea gardens and wheat plains to riverine entrepôts and coastal ports. Proto-industrialization captures the diffusion of handicraft production beyond urban guild halls into rural households and small workshops, often coordinated by merchant capital through the putting-out system. Early modernization denotes the arrival—uneven and negotiated—of machines, steam power, corporate finance, railways, and new legal or managerial forms. These categories overlap and interact: a market village could simultaneously serve as grain entrepôt, textile workshop hub, and recruitment point for railway labor. To illuminate such intersections, the book moves between national statistics and local archives, between price series and the life histories of villages and firms.

The empirical backbone of the study is diverse. Grain prices, wage data, and silver flows anchor macro trends in purchasing power and market integration. Gazetteers, lineage records, and land registers reveal how communities adapted cropping patterns, tenancy, and inheritance to ecological constraints and shifting demand. Merchant correspondence, account books, and bank ledgers—alongside customs returns, factory surveys, and railway reports—document the rise of specialized districts in cotton, silk, porcelain, salt, and flour milling, and later the capitalization of industry through native banks, foreign firms, and modern joint-stock companies. Where possible, the quantitative series are presented with transparent methods and error margins; where numbers are thin, thematic case studies reconstruct mechanisms from multiple qualitative angles.

Interpretively, the book engages major debates about China's long-run performance: whether the eighteenth-century economy approached Smithian efficiency before encountering a "high-level equilibrium trap," whether an "industrious revolution" reallocated household labor toward market-oriented production, and how China's trajectory relates to the Great Divergence between Europe and Asia. Rather than posit a single turning point, the chapters emphasize sequences and thresholds: transport costs fell before railways via canals and coastal shipping; labor markets integrated where seasonal migration and remittance networks matured; institutional change in

property and contract law lagged or leapt depending on local politics and external shocks. The pattern that emerges is one of path-dependent modernization—contingent on ecology, state capacity, and the strategies of merchants, households, and officials.

Attention to space is central. The Yangzi Delta's dense markets and textile handicrafts contrasted with North China's grain plains and vulnerability to climate shocks; the Southwest's mineral frontiers and border trade produced different rhythms than the treaty-port coast; Manchuria's late but rapid industrialization under Japanese occupation generated a distinctive legacy of capital stock, infrastructure, and firm organization. By juxtaposing these regions, the book shows how identical national policies or global price movements could yield divergent local outcomes. Regional analysis also clarifies how rural industry persisted alongside modern factories, how cooperative experiments intersected with lineage institutions, and how gendered divisions of labor shifted with the diffusion of machinery and the timing of school and factory reforms.

Finally, the book situates war and state-building within, not apart from, these longer arcs. Nineteenth-century rebellions disrupted markets but also catalyzed institutional innovation; treaty ports reoriented trade and finance; the early Republic experimented with banking and corporate law; the wars of 1931–1945 and the civil conflict that followed reallocated resources, accelerated some industrial clusters, and devastated others. By 1950, China's economy contained both deep continuities—market villages, household industry, merchant networks—and the scaffolding of modern industry—railways, factories, banks—upon which later socialist industrialization would build and break. *Seeds of Industry* thus invites readers to see pre-1949 China not as a prelude awaiting a decisive rupture, but as a complex, evolving economy whose internal dynamics shaped what came next.

CHAPTER ONE: Commerce and Silver in the Late Ming, 1600–1644

In the first decades of the seventeenth century, a visitor traveling through the prosperous counties of the Yangzi Delta might have been forgiven for thinking that China was already well along in some great commercial experiment. Markets bustled in towns that a century earlier had been little more than clusters of thatched roofs. Cotton cloth changed hands in volumes that would have startled an official of the early Ming. And everywhere, it seemed, the clink of silver ingots accompanied the negotiation of prices for land, labor, and grain. The late Ming economy, for all its eventual catastrophe, was not a story of simple decline but one of vigorous

commercial expansion driven by a single glittering catalyst: silver.

To understand how silver reshaped China's economy in these decades, one must first appreciate the scale of the transformation it wrought. By 1600, the Ming dynasty had endured for over two centuries, and its monetary system bore the scars of earlier experiments. The dynasty had initially attempted to sustain a paper currency, the Da Ming Baochao, issued in 1375 during the reign of the Hongwu Emperor. In theory, paper money offered the state a convenient way to fund its expenditures without relying on scarce metals. In practice, however, the court issued notes without adequate backing, and by the mid-fifteenth century the paper currency had effectively collapsed in market transactions. The common people, with a pragmatism that would have pleased any modern economist, simply refused to accept notes they did not trust. Copper coins circulated alongside the paper, but copper supplies were erratic and the coins too heavy for large transactions. The result was a monetary vacuum, and silver rushed in to fill it.

The story of silver's arrival in China in large quantities is, in many ways, a story of global trade. Spanish colonists in the Viceroyalty of Peru and New Spain had discovered extraordinarily rich silver deposits at Potosí and in the mines of northern Mexico. Much of this silver made its way across the Pacific aboard the Manila galleons, which began regular sailings between Acapulco and Manila after 1565. Chinese merchants in Manila, already well established in the Philippine trade, exchanged silk, porcelain, and other goods for Mexican and Peruvian silver. The annual galleon carried silver valued at anywhere from several hundred thousand to over two million pesos in good years, and the greater part of this metal found its way to Chinese ports, particularly through the bustling entrepôt of Manila and from there to Fujian and Guangdong.

Portuguese traders operating out of Macau, leased to Portugal from 1557, provided another conduit for silver entering southern China. Lisbon's merchants used silver from Japan and eventually from the Americas to purchase Chinese silk, porcelain, and tea, creating a triangular flow of goods and metal that linked three continents. The Japanese silver mines of Iwami and elsewhere on Honshu had been exploited since the sixteenth century, and before the Tokugawa shogunate imposed tighter controls on foreign trade in the 1630s, Japan was itself a significant source of silver for the Chinese market. One contemporary Jesuit observer estimated that Japan and the Americas together supplied China with as much as thirty million pesos of silver over the course of the late sixteenth and early seventeenth centuries, though precise figures remain elusive. What is beyond dispute is that China had become the terminal sink for the world's silver, the great importing economy that absorbed the output of mines thousands of miles away.

Silver's penetration into the domestic economy was neither uniform nor instantaneous. In the north, where the economy was more heavily agrarian and where

distances between markets were greater, copper coins and grain continued to serve as media of exchange well into the seventeenth century. But in the Yangzi Delta, the southeastern coastal provinces, and the Sichuan basin, silver had become the dominant means of settling substantial transactions by the late sixteenth century. Peasants sold their cotton, mulberry leaves, or rice and received silver in return. Landlords collected rents in silver. And the state, through a series of fiscal reforms, increasingly demanded that taxes be paid in the white metal.

The most consequential of these reforms was the Single Whip Tax, known as *yitiaobian fa*, which was implemented in various provinces beginning in the 1580s under the direction of Zhang Juzheng, the Grand Secretary who dominated the Wanli Emperor's early reign. Before the Single Whip reform, the Ming tax system was a labyrinth of separate levies, each assessed in different units: some in grain, some in labor service, and some in copper cash. The system was complicated enough in calm times, but population growth, land concentration, and evasion had eroded its effectiveness. Zhang Juzheng's reform consolidated these levies into a single payment, assessed primarily in silver according to the amount of land a household held. The reform simplified administration and, perhaps more importantly, formally tied the fiscal system to the silver economy. Taxpayers now needed access to silver, which meant they needed to sell something—crops, handicrafts, labor—on the market. The reform did not create commercialization single-handedly, but it accelerated a process already underway and bound the peasant household more tightly to market relations.

The effects rippled through the countryside. In the Jiangnan region, where the most commercially developed counties lay, farmers had already been diversifying beyond subsistence rice cultivation. Cotton cultivation had spread through Songjiang, Suzhou, and surrounding areas during the sixteenth century, and many peasant households were producing cotton cloth on looms in their spare time. The raw cotton might be purchased at a local market, spun and woven at home, and then sold back to itinerant merchants who collected finished cloth and carried it to larger towns for dyeing and finishing. This arrangement, sometimes called the putting-out system, placed the peasant household at the center of a commercial network without requiring the household to abandon agriculture entirely. The returns from cloth production, paid in silver, could be used to pay taxes, purchase additional land, or cover shortfalls in the rice harvest. In this way, the domestic economy became more monetized, and the household budget became a balance sheet of market transactions rather than a closed cycle of subsistence.

Beyond textiles, a range of other commodities were entering long-distance trade. Tea from the hills of western Zhejiang, Fujian, and Jiangxi traveled north and south along river and coastal routes. Mulberry leaves for feeding silkworms became a trade item in their own right in Jiangnan, where the timing of the silkworm's appetite had to match the availability of leaves, and peasants who lacked sufficient land for mulberry purchased leaves from specialist growers. Sugar, produced in Fujian and Guangdong,

was consumed domestically and exported to Southeast Asia. Porcelain from Jingdezhen in Jiangxi reached markets across East and Southeast Asia and, increasingly, Europe. None of these trades were new in 1600, but their volume and the extent to which they were monetized in silver were unprecedented.

The growth of commerce brought with it the growth of market towns. Gazetteers from the late Ming record hundreds of *xiangzhen*, or rural market towns, that had grown up at junctions of waterways, at points where goods were transshipped, or near concentrations of specialized production. Some of these towns housed only a few hundred households; others, particularly in Jiangnan, had populations in the tens of thousands and functioned as genuine urban centers with shops, workshops, temples, and teahouses. The density of markets in the Yangzi Delta was remarkable by the standards of any premodern economy. A farmer in Songjiang or Changshu could reach a market town within a few miles, and from there goods moved to larger prefectural cities such as Suzhou, Hangzhou, or Nanjing, which served as regional entrepôts.

Urbanization, though still far below the levels that would be reached in nineteenth-century Europe, was significant in the Yangzi Delta. Estimates for the late Ming suggest that several regions had urbanization rates, loosely defined as the share of the population living in towns of more than a few thousand inhabitants, in the range of ten to fifteen percent. The national average was certainly lower, perhaps five to seven percent, but the concentration of urban population in the commercially active southeast gave that region an economic dynamism that belied the dynasty's political troubles.

The commercial expansion of the late Ming was not limited to the southeast. In the northwest, the Shanxi merchants, or Jin merchants, had already begun to build the networks that would later make them famous as China's bankers. They operated along the tea-horse trade routes that linked the central plains with the northern steppe and with the Tibetan borderlands, moving tea, textiles, and other goods in exchange for horses and other frontier products. In Sichuan, salt merchants operated under state-granted licenses, purchasing the right to sell government-produced salt in designated territories—a system that would become a recurring motif in China's fiscal history. And in Fujian and Guangdong, maritime traders navigated the waters of the South China Sea, linking Chinese ports with Southeast Asian markets in Manila, Ayutthaya, and beyond.

It would be an exaggeration to call this a capitalist economy in any Weberian or Marxian sense. The state remained an enormously powerful actor. The court regulated trade through customs barriers, licensed monopolies, and periodic sumptuary edicts. Official ideology, rooted in Confucian agrarianism, placed agriculture above commerce and merchants below scholars and farmers in the social hierarchy. The examination system continued to channel talent into the civil service rather than into business. Yet the reality on the ground often outran the ideology. Gentry families invested in

commercial ventures. Officials themselves held stakes in trading partnerships. And the fiscal reforms of the late sixteenth century had the effect of making commercial activity not merely tolerated but essential to the functioning of the state.

The role of the state in promoting—or at least accommodating—the commercial economy was complex. On one hand, the court's insistence on silver taxation compelled officials to maintain the conditions for trade: the suppression of banditry, the maintenance of roads and waterways, and the settlement of commercial disputes. On the other hand, the state's own fiscal needs led it to impose burdens that could stifle commerce. The Wanli Emperor's costly military campaigns in Korea in the 1590s and against the Later Jin in the 1610s and 1620s placed enormous strains on the treasury. Additional surcharges were levied on the existing tax base, and the government experimented with mining taxes and other levies that were bitterly resented by the population. Commercial taxes, though never as onerous as in some European states, were a persistent source of friction between merchants and officials.

Silver also introduced a new vulnerability into the Chinese economy: dependence on foreign sources of money. Because China was a net importer of silver, any disruption to the Manila galleon trade, any tightening of Japanese export controls, or any decline in American mine output could send deflationary ripples through the domestic economy. This vulnerability would become painfully apparent in the 1630s and 1640s, when a combination of European trade disruptions, Japanese sakoku policies, and the chaos of the Ming-Qing transition contracted the silver supply and contributed to a severe deflationary spiral. But in 1600, the silver economy seemed robust, even exuberant. Merchants in Suzhou and Hangzhou counted their gains in ingots and reinvested them in land, shops, and the education of sons who might sit for the civil service examinations.

The social dimensions of the silver economy deserve attention. The monetization of taxes and rents altered relationships between landlords and tenants, between creditors and debtors, and between households and the state. Tenants who paid rent in silver were exposed to the risks of silver price fluctuations, but they also gained a degree of flexibility that was impossible under older arrangements based on fixed grain quotas. Credit markets, though informal by later standards, were active. Pawnshops, native banks, and informal lending networks provided liquidity to farmers and merchants facing seasonal or unexpected needs. In Jiangnan, some landlords reinvested rental income in commercial ventures, blurring the line between landholding and entrepreneurship.

Women's economic roles, though they would receive fuller treatment in later chapters, were also shaped by the silver economy. In households engaged in textile production, women typically performed the spinning and weaving while men managed the commercial side of the enterprise—negotiating with merchants, purchasing raw materials, and handling silver transactions. The income generated by women's labor

was often critical to the household's ability to meet its tax obligations and to accumulate savings. Yet because silver transactions and property registration were overwhelmingly male domains, women's contributions remained largely invisible in official records, a silence that has complicated the work of historians ever since.

By the 1630s, however, the late Ming economy was showing signs of strain. The fiscal burden of repeated military campaigns, combined with a series of natural disasters—the Little Ice Age was bringing colder, drier conditions to northern China—placed the peasantry under increasing pressure. Tax arrears rose. Banditry increased. And the deflation associated with declining silver imports raised the real burden of debt for those who had borrowed at fixed silver amounts. The countryside grew restless, and in 1644 a rebel army under Li Zicheng took Beijing, ending the Ming dynasty. The Manchu armies that subsequently swept south to establish the Qing would inherit an economy that was, despite its stresses, far more commercialized and monetized than the one the Ming had governed a century earlier. That inheritance—its strengths, its fractures, and its regional unevenness—would shape the trajectory of the centuries to come.

Commerce and silver, then, were not mere backdrops to the political drama of the Ming's final decades. They were the medium through which millions of households participated in an economy that was increasingly interconnected, both within China and with the wider world. The late Ming did not achieve industrialization, nor did it replicate the commercial trajectories of early modern Europe. But it laid down layers of market integration, monetization, and commodity production that would prove remarkably durable, surviving dynastic collapse and persisting into the imperial and eventually the industrial age. Understanding these layers is the task of the chapters that follow, but it begins here, with the silver that coursed through the markets and workshops of a vast, restless empire on the eve of its most traumatic transformation.

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