Human Resources and China's Long Economic Boom

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EXECUTIVE SUMMARY

China's protracted economic boom rests on a long-term historical accumulation of skills and capabilities that extends far beyond the typical complement of human assets available to low-income nations.

MAIN ARGUMENT

An unusually rich complement of human resources accumulated prior to 1949 has played a central role in powering China's continuing economic boom. This legacy of human capital is particularly apparent in the initial stage of China's post-1978 boom, when rural communities shrugged off two decades of hunger and relentless anti-business propaganda to welcome modest reforms with an outpouring of entrepreneurial initiative. A survey of historical and contemporary evidence highlights the depth and breadth of economic capabilities in China's traditional rural society as well as the substantial expansion of human capital resulting from post-1949 initiatives. Cross-national comparisons focusing on the fortunes of overseas Chinese and on business formation in transition economies highlight the distinctive business acumen and organizational capabilities inherent in Chinese communities, particularly in regions with histories of deep involvement in trade and migration.

POLICY IMPLICATIONS

While not discussed in the article, this analysis has clear implications for policymakers.

- China's ongoing economic boom is firmly rooted in the economic and organizational capabilities of the country's populace. Arguments attributing Chinese economic gains to currency manipulation, subsidies, cheap loans, unfair trade practices, and other ephemera make good political rhetoric but have little economic merit.
- The availability of exceptionally strong human resources, including administrative and management skills in the public sector, makes China's economy resilient in the face of setbacks. China's current government is a world leader in reversing economic difficulties arising from war, hyperinflation, disorganization, famine, civil strife, and SARS, as well as fallout from international financial upheavals in the late 1990s and again in 2008–9. Herd behavior among Western media hoping or fearing that the latest strike, civil unrest, environmental upset, or mine disaster will destabilize the Beijing regime seems far-fetched. The Chinese state, fortified by rapidly growing financial as well as human resources, is well-positioned to deal with unexpected challenges. In the absence of major breakdowns in domestic political stability or global markets, we should expect further advances in the quantity and quality of China's economic output.

hina's recent economic surge is the latest, and largest, in a succession of major growth spurts dating back to the British industrial revolution. This article arises from the author's belief that efforts to understand the origins of China's great boom fail to appreciate the central importance of human resources accumulated prior to 1949. The combined impact of this valuable legacy and additional capabilities developed during the initial decades of the People's Republic of China (PRC) enabled the explosive response to modest rural reform efforts, initiating the unprecedented boom that is now well into its fourth decade.

It is this author's contention that China's current boom is inextricably linked to historical processes that endowed ordinary Chinese villagers with unusually strong organizational and economic capabilities prior to the Communist victory in 1949. Following the establishment of the PRC, official policies deepened these capabilities, partly through efforts to expand education and meet the basic needs of Chinese citizens and partly through the unintended consequences of agricultural collectivization. PRC policies certainly enriched China's stock of human resources. But the flowering of the rural economy unleashed by the reforms of the late 1970s rested squarely on the spontaneous revival of commercial expertise and entrepreneurial capabilities that seemed to have vanished under a twenty-year onslaught of collective regimentation and anti-market propaganda. This article argues that the historic reservoir of market knowledge and organizational skill among ordinary villagers accumulated over the decades and centuries prior to 1949 gave China a unique developmental advantage.

The assertion that a lengthy accumulation of human capabilities is a key factor underpinning China's ongoing boom carries two implications. Application of Chinese policies, institutional arrangements, and development strategies is unlikely to deliver superior outcomes in poor nations that lack China's historic advantages. Vague notions of a transferable "Chinese economic model" or "Beijing consensus" make sense only if one assumes—mistakenly in this author's view—that circumstances in other poor nations are fundamentally similar to conditions in pre-reform China.

The argument also raises historical questions. If, as Frederick Harbison argued several decades ago, one views "human resources as the wealth of nations," and if China has long possessed an unusually rich complement of human assets, why did accelerated development commence only in 1978?¹

¹ Frederick Harris Harbison, Human Resources as the Wealth of Nations (New York: Oxford University Press, 1973).

This article begins with a brief excursion into China's rural economy before and immediately after the reform initiatives of the late 1970s. It then focuses on the development of human capabilities before and after 1949, followed by a series of brief comparisons intended to highlight the unusual accumulation of human capabilities among ordinary Chinese.

SOMETHING IS MISSING IN STUDIES OF CHINA'S AGRICULTURAL REFORM

Once growth begins to accelerate, economists can fairly claim considerable understanding of the ensuing growth dynamics. In China the sharp rise in farm output that followed the spread of the household responsibility system beginning around 1978 resulted in big increases in the supply of human energy, non-farm labor, industrial materials, foreign exchange, and confidence, each of which added fresh impetus to the initial expansion. But what explains the explosive response to the initial dose of modest reform?

China's rural reform consisted of three elements: rapid dissolution of most agricultural collectives and restoration of household farming, a considerable increase in the price at which state agencies purchased grain, and a partial revival of rural markets for farm and subsidiary products. These initiatives offered a welcome change from the intrusive, politically charged, and often counterproductive micromanagement typical of the collective system established in the late 1950s. But the new rural economy was no more than a halfway house between the collective structure and the market system that had dominated village China for centuries prior to 1949.

Despite the partial nature of the post-1978 reforms, a few statistics can summarize the swift and dramatic response. **Table 1** compares the highest pre-1978 achievements with the average results for the three years 1984–86.

Efforts to analyze this massive expansion emphasize the impact of incentives. Rather than forcing farmers to work on behalf of collectives that encompassed dozens or even thousands of households, the new "household responsibility system" assigned residual income and output after payment of taxes and other costs to the cultivators themselves, an arrangement that resembled the incentives facing pre-1949 owner-tillers or tenants paying fixed annual rents. In addition, poor work incentives may have muffled potential productivity gains arising from commune-era investments in land leveling, irrigation, and water conservancy efforts until after the reforms of the late 1970s.

TABLE 1

The Dramatic Response to China's Agricultural Reforms

	Pre-1978 peak	Average for 1984–86	Index for 1984–86 (pre-1978 peak=100)
Gross output value for farming (1952=100)	217.4	294.0	135.2
Crop output (million tor	ns)	•	
Grain	286.3	392.6	137.1
Cotton	2.6	4.6	176.9
Oil-bearing crops	5.1	14.1	276.4
Sugar	20.2	55.6	275.2

Source: Department of Comparative Statistics of the National Bureau of Statistics, China Compendium of Statistics 1949–2008 (Beijing: Zhongguo tongji chubanshe, 2009), 35, 37.

Researchers find a strong and entirely plausible association between early adoption of the new system and differentially rapid expansion of farm output.² Efforts to understand the scale of the response seem less plausible. Regression studies seem to explain too much in the sense that they account for most of the agricultural output growth without considering potentially important contributions from eliminating the artificial distinction between collective and private plots and from rising human energy and productivity due to improved diets.³

Restoration of incentives, partial revival of markets, and delayed benefits from commune-era investments in agricultural infrastructure surely suffice to explain a good deal of progress. But when we consider the extraordinary scale of the transformation that followed the partial reform of China's rural system, these factors seem insufficient. Consider the following:

• Despite the commune system's blatant shortcomings, pre-reform agriculture was far from primitive. Louis Putterman notes that 1979

² See, for example, Justin Yifu Lin, "The Household Responsibility System in China's Agricultural Reform: A Theoretical and Empirical Study," *Economic Development and Cultural Change* 36, no. 3 supplement (April 1988): 199–224; and Justin Yifu Lin, "Rural Reforms and Agricultural Growth in China," *American Economic Review* 82, no. 1 (March 1992): 34–51.

³ See Robert W. Mead, "An Examination of China's Agricultural Reforms: The Importance of Private Plots," China Economic Review 11, no. 1 (2000): 54–78; and Thomas G. Rawski, "Social Capabilities and Chinese Economic Growth," in Social Change in Contemporary China: C.K. Yang and the Concept of Institutional Diffusion, ed. Wenfang Tang and Burkart Holzner (Pittsburgh: University of Pittsburgh Press, 2007), 91.

yields of rice, wheat, and corn equaled or exceeded world and Asian averages, although they fell below yields recorded in the United States, South Korea, and Japan.⁴

- China's agricultural output surge, summarized in the figures noted above, is probably the largest expansion (in terms of percentage changes) of agricultural production in world history (discounting episodes involving revival from war or natural disaster).
- The burst of agricultural growth following reforms initiated during the late 1970s coincided with a considerable resource outflow from the farm sector. Grain output rose by 37% between 1978 and 1984–86 despite a decline of 8.1% in sown acreage, implying that average grain yields rose by approximately 45% between 1978 and 1984–86.⁵ Although official data show a modest rise in farm labor, both Chinese and international researchers have found evidence of a rapid decline in agricultural work. One study estimated that the average number of workdays devoted to farming in 1984 and 1986 was only 73.5% of the comparable figure for 1979.⁶ Assuming no change in farm labor during 1978–79, the increase of 35.2% in agricultural output value between 1978 and 1984–86 implies a rise in farm labor productivity of 35.2/.735, or 47.9%.

Rural economic revival went far beyond the application of more intense effort in response to the restoration of individual incentives. The reform unleashed a torrent of entrepreneurship replete with written contracts, creation of supply chains and market networks, circumvention of official restrictions, bribery, and profiteering—a veritable census of way-stations along the "capitalist road" that an unceasing stream of pronouncements, speeches, regulations, documents, campaigns, and exhortations had denounced, restricted, and often punished during China's twenty years of rural collectivization.⁷ The sudden reappearance of this entrepreneurial repertoire following a lengthy hiatus illustrates the reality of "stock[s] of knowledge transmitted from generation to generation" including "practical knowledge, or 'knowing how'....[leading to] shared behavioral regularities or shared routines

⁴ Louis G. Putterman, Continuity and Change in China's Rural Development: Collective and Reform Eras in Perspective (New York: Oxford University Press, 1993), 14.

National Bureau of Statistics, Zhongguo tongji nianjian 1990 [China Statistical Yearbook 1990] (Beijing: Zhongguo tongji chubanshe, 1990), 357.

⁶ Thomas G. Rawski and Robert W. Mead, "On the Trail of China's Phantom Farmers," World Development 26, no. 5 (May 1998): 767–81.

⁷ Typical descriptions include Anita Chan, Richard Madsen, and Jonathan Unger, Chen Village under Mao and Deng, 2nd ed. (Berkeley: University of California Press, 1992), 217–82; and Thomas P. Lyons and Victor Nee, The Economic Transformation of South China: Reform and Development in the Post-Mao Era (Ithaca: Cornell University East Asia Program, 1994).

within a population." Furthermore, the vast majority of Chinese farmers who participated in this remarkable growth spurt began from a position of what international researchers describe as "absolute poverty," referring to per capita income or consumption below the equivalent of \$1 per day.

Although official sources provide a figure of 133.78 renminbi for average per capita net rural income for 1978, this figure is based on small and unrepresentative surveys that overstate actual income levels. Crude calculations place the actual average around 100 renminbi, which is roughly equivalent to the \$1 cut-off. With model units and communes outside major cities reporting incomes far above the national average, most Chinese villagers fell within the World Bank's definition of absolute poverty during the mid-1970s. Information on urban and rural grain distribution fits well with the diagnosis of widespread absolute poverty in pre-reform Chinese villages: average calorie consumption among Chinese village residents remained consistently below World Bank standards of nutritional adequacy for every year between 1959 and 1977. 11

Development specialists regard the improvement of living standards among populations mired in absolute poverty as a daunting task. While agreeing that "the market is the most efficient mechanism to secure gains in growth and poverty reduction," one group concludes that "the market must be supplemented...particularly in the earliest stages of development and where poverty persists." They advocate a "market-plus" strategy that "involves a committed, combined effort of the state, market forces, and international assistance, along with civil society and non-governmental organizations." 12

There is a contradiction here. China's poverty alleviation achievements during the first decade of reform dwarf all other historic accomplishments in this area, whether measured by the number or the proportion departing from absolute poverty. World Bank analysts estimate that the proportion of impoverished rural Chinese declined from three-quarters to less than one-third between 1980 and 1990. Owing to the possible reliance on inflated official income figures for the early years, these results could understate the extent

⁸ Chris Mantzavinos, Douglass C. North, and Syed Shariq, "Learning, Institutions, and Economic Performance," *Perspectives on Politics* 2, no. 1 (March 2004): 77.

⁹ Rural savings in pre-reform China were negligible, obviating the distinction between income and consumption.

¹⁰ Thomas G. Rawski, "Is China's Development Success Transferable?" in Reform and Development in China, ed. Ho-Mou Wu and Yang Yao (London: Routledge, 2010), 339.

¹¹ Rawski, "Social Capabilities," 91.

¹² Nancy Bearg Dyke, Persistent Poverty in Developing Countries: Determining the Causes and Closing the Gaps (Queenstown: Aspen Institute, 1996), 2.

of poverty alleviation. ¹³ But these achievements occurred under a partially reinstated market, with no international assistance, no contribution from nongovernmental agencies, and declining state support, particularly in the areas of health insurance and health care. In essence, the standard explanation of the rural boom that initiated China's long growth spurt tells us that China achieved the world's most impressive record of poverty alleviation in the absence of major factors that specialists regard as essential to such outcomes.

Several decades ago, the prominent economic historian Richard Easterlin asked, "Why isn't the whole world developed?" Conventional explanations of China's post-1978 agrarian boom invite a revival of Easterlin's query. If household management of farming, higher prices for farm products, modest encouragement of rural markets, and public investment in land improvement and water management can generate explosive growth, why is worldwide poverty eradication so painfully slow? Surely the list of countries meeting or exceeding these modest conditions is far longer than the roster of nations that can boast large reductions in the number and proportion of impoverished citizens.

How can this inconsistency be resolved? Is it possible that development specialists have exaggerated the obstacles to poverty alleviation? If not, the likely alternative is that researchers have overlooked a key ingredient in explaining China's poverty alleviation accomplishments. Since the first alternative seems improbable, this article focuses on the second.

Where might one observe missing elements that allow China's economy to advance in the absence of circumstances widely regarded as essential for progress? Easterlin proposes the spread of formal education as the key to expanding the dispersion of the new technologies that underpin modern economic growth. He tabulates data for 1950 from the United Nations and World Bank showing that the rate of adult literacy in China (48%) was far larger than in India (19%), other low-income Asian nations (24%), North Africa (12%), and sub-Saharan Africa (17%). ¹⁵

While applauding Easterlin's focus on the human factor, the economist's instinctive enthusiasm for quantification leads to excessive emphasis on the association between human capital and school attendance. The Head Start program offers underprivileged American children the preparation needed

¹³ Martin Ravallion and Shaohua Chen, "China's (Uneven) Progress against Poverty," Journal of Development Economics 82, no. 1 (January 2007), table 2.

¹⁴ Richard A. Easterlin, "Why Isn't the Whole World Developed?" Journal of Economic History 41, no. 1 (March 1981): 1–17.

¹⁵ Ibid.

to benefit from schooling, apparently because the link between education and economic potential may fade or even vanish unless students enter the schoolhouse door with sufficient preparatory human capital.

If we extend the search for neglected sources of economic vitality in China's post-reform rural economy beyond formal education, unexpected human contributions leap from the pages of contemporary and retrospective accounts. **Table 2** charts the development of rural firms known as township-village enterprises (TVE).

TABLE 2

Rapid TVE Growth Reveals Latent Rural Managerial Capabilities

		f TVE firms ions)		TVE workers ions)
	Total	Industry	Total	Industry
1978	1.52	0.79	28.26	17.34
1985	12.22 4.93		69.79	41.37
1990	18.50	7.22	92.65	55.72

Source: Zhongguo xiangzhen qiye nianjian 1993 [China Yearbook of Township-Village Enterprises 1993] (Beijing: Nongye chubanshe, 1993), 142–43.

The data show a rapid expansion of TVEs. In particular, industry, a category dominated by activities that deviate from long-standing patterns of rural production, saw a net gain of more than four million firms between 1978 and 1985, followed by an additional two million during the ensuing five years. Employment at industrial TVEs expanded by 24 million during 1978–85, with a further increment of 14 million workers between 1985 and 1990.

TVEs often originated as primitive workshops, but rapid export growth demonstrates that many firms rapidly evolved into substantial operations with impressive competitive strength. Export procurement from TVEs jumped from 9 billion renminbi in 1986 to 27, 49, and 119 billion renminbi in 1988, 1990, and 1992. By 1992, TVEs accounted for 42.4% of all goods procured for export and supplied 53% of China's manufactured exports. ¹⁶ Clearly, rural

¹⁶ Zhongguo xiangzhen qiye nianjian 1989 [China Yearbook of Township-Village Enterprises 1989] (Beijing: Nongye chubanshe, 1989), 174; and Zhongguo xiangzhen qiye nianjian 1993 [China Yearbook of Township-Village Enterprises 1993] (Beijing: Nongye chubanshe, 1993), 272–74.

factories contributed heavily to China's march toward its current position as "workshop of the world."

Obvious questions arise. While some TVEs received technical advice, funding, and second-hand equipment from urban enterprises, managers were typically local rather than recruited or transferred from urban areas. Where did these millions of managers come from? How were they able to operate industrial firms? And who kept the books for millions of new firms?

Managerial incompetence is hardly mentioned in the considerable literature on TVE development. Despite the prevalence of absolute poverty, China's pre-reform rural labor force, especially in the coastal provinces (whose share in TVE export procurement during 1986–88 amounted to 85%–88%), included literally millions of individuals who were capable of organizing, managing, and expanding substantial manufacturing establishments.¹⁷

This observation applies equally to the commune era (from 1958 to the late 1970s). China's "people's communes" are properly remembered as a failed experiment in social engineering that initiated a terrible famine and stalled China's rural economy for two decades. Even so, one may ask who managed approximately 53,000 communes (with an average membership close to 15,000 people), 600,000 production brigades (typical membership over 1,000 people), and roughly 4 million production teams? Here again, the extensive literature scarcely mentions problems with management and accounting, except to note that income distribution cycled between production teams and production brigades in response to political gyrations—adding to the burden of documentation. This suggests that recordkeeping—which involved daily logging of activities and work points for the entire population of adult villagers, compiling annual point totals used to determine year-end payouts of grain and cash, and tabulating loans of grain or cash to be deducted from these payouts—posed no major challenge in most rural localities.

The contrast with Uma Lele's observations that "in Ethiopia the local-level administration...lacked developmental capacity almost completely," that "agricultural projects in East Africa...suffer from a shortage of... accountants....[who can master] a simple cost-accounting system," and that "autonomous programs have usually had expatriate management from

¹⁷ Zhongguo xiangzhen qiye nianjian 1989, 174.

¹⁸ Numbers and average size of units refer to 1978; see Thomas G. Rawski, *Economic Growth and Employment in China* (New York: Oxford University Press, 1979), 76.

the outset" focuses attention on the rural origins of China's unusually deep resources of administrative and managerial capability.¹⁹

This brief discussion of the rural response to China's early reform initiatives touches on central themes of this article:

- 1. China's accelerated growth during the post-1978 reform era is not simply a response to developments and policies under the PRC. Along with these contemporary influences, China's protracted economic boom rests on a long-term historical accumulation of skills and capabilities that extends far beyond the typical complement of human assets available to low-income nations.
- 2. China is particularly unusual in that the presence of human capabilities beyond the norm for low-income regions is not limited to urban or commercial elites, but permeates rural society.
- The key assets involve organizational capability—that is, the capacity to form, manage, and operate activities that involve large numbers of people.
- 4. These developmental capabilities are not evenly distributed but cluster in coastal regions.

The remainder of this article pursues these themes by reviewing historical, contemporary, and comparative evidence undergirding the claim that long-term accumulation of human capital represents a key ingredient in China's recent economic boom.

DEVELOPMENT OF HUMAN CAPABILITIES: HISTORICAL EVIDENCE

In comparison with other preindustrial societies, daily life in imperial China for commoners as well as elites was permeated with the trappings of commerce—not just markets with fluctuations of price and currency values, but documents (e.g., contracts, receipts, and tax records), public and private organizations with formal and informal regulations, and shareholding.²⁰ What is unusual is not the existence of bank drafts, land contracts, and so on—commercial tools that existed in many world regions—but the frequency with which ordinary villagers (including women as well as men) participated

¹⁹ Uma J. Lele, The Design of Rural Development: Lessons from Africa (Baltimore: Johns Hopkins University Press, 1975), 127, 132, 171.

²⁰ This section draws on the author's joint work with Loren Brandt and Debin Ma.

in arrangements demonstrating awareness of devices that in other societies rarely spread beyond political and commercial elites.²¹ Transactions in land illustrate this complexity.

Ownership

During the Qing era (1644–1911), land could be purchased, sold, rented, mortgaged, and divided. Transactions were frequently complex and often recorded in written documents, many of which survive in libraries and archives.²² Ownership of a single plot could be vested in separate parties endowed with rights over the surface and sub-surface respectively—the so-called two lords to a field (*yitian liangzhu*) or three lords to a field (*yitian sanzhu*) systems—rights that could then be sold, leased, or used as collateral. Tenants as well as owners could buy, sell, lease, or mortgage their access rights. Long Dengao has collected many such contracts. **Figure 1** summarizes arrangements regarding a tract of woodlands in Guizhou with over one hundred separate owners, some with shares as small as 1/608.

By the middle of the Qing era, farmland was widely distributed among millions of households and (especially in the south) kin-based lineage organizations. John L. Buck cites sources showing 92.7% of land held by private owners in 1865 (as opposed to land held by the crown, nobles, schools, temples, military units, and ancestral halls). His surveys conducted during 1929–33 obtained similar results, with private owners controlling a minimum of 82.4% of land in every region and more than 90% in most.²³

The majority of farm households owned land. Buck's surveys found that 83%–99% of farmers in the northern wheat region owned at least some of the land that they farmed. In the southern rice region, pure tenancy was more common, with up to 46% of farmers owning no land and full owners accounting for 27%–38% of farmers surveyed, as opposed to 65%–76% in the wheat region.²⁴

²¹ See, for example, Myron L. Cohen, Kinship, Contract, Community, and State: Anthropological Perspectives on China (Stanford: Stanford University Press, 2005); and Rawski, "Social Capabilities."

²² See, for example, Yuji Muramatsu, "A Documentary Study of Chinese Landlordism in Late Ch'ing and Early Republican Kiangnan," Bulletin of the School of Oriental and African Studies 29, no. 3 (1966): 566–99; Yang Guozhen, Mingqing tudi qiyuewenshu yanjiu [A Study of Ming-Qing Land Contract Records] (Beijing: Renmin chubanshe, 1988); and Zhang Deyi and Hao Yisheng, eds., Zhongguo lidai tudi qizheng [Historical Chinese Land Title Deeds] (Baoding: Hebei daxue chubanshe, 2009).

²³ John Lossing Buck, Land Utilization in China: A Study of 16,786 Farms in 168 Localities and 38,256 Farm Families in Twenty-Two Provinces in China 1929–1933 (Shanghai: Commercial Press, 1937), 193.

²⁴ Ibid., 193, 197.

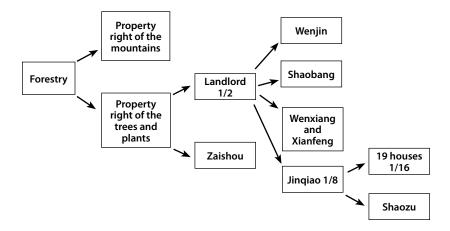
FIGURE 1

Transactions of a Share of Land Rights: A Case Study of Wood Trading in Guizhou

The Miao mountainous area in Guizhou was an important area for forest plantation and trading of woods. The remaining documents of contracts reflected the transaction of share[s] of property rights.

Drawers of this contract of trading Chinese fir, the Yanwan natives Fan Xianzong, Xianxiu, Weiyuan, Shaopei, and Shaozhai, for the lack of silver, were willing to give away a log of Chinese fir, located at Ranlou....The right of this log would be divided into two shares, the planters took one while the landlord took the other; the landlord's share could be further divided into four shares: Wenjin took one, Shaobang took one, Wenxiang and Xianfeng shared one, Jinqiao took one; Jinqiao's one share was further divided into two shares: Shaozu took one and the other one share went to the 19 households. Today the share was sold by the 19 households to Jiang Yinghui. The parties agreed to a sale price of 10 hang, 1 qian, and 5 fen of silver. After the transaction, the property would be under the administration of the buyer, and the sellers' brothers and irrelevant people should not utter any protest. In fear of the lack of evidence later, this contract of sale was to be kept for examination's sake forever.

Note: the 19 households were listed in the following (including the contracts with the landlord)... It is indeed the truth that the 19 households sold their share together.



Source: Denggao Long, "The Diversification of Land Transactions in Late Imperial China" (paper presented at the Asian Historical Economics Conference, Beijing, May 2010), citing Luo Hongyang, "Qingdai Qiandongnan Jinping miaozu linye qiyue zhimaiqi yanjiu" [Qing Dynasty Miao Sales Contracts for Forest Land in Jinping, Southeast Guizhou], Minzu yanjiu, no. 4 (2007): 80–90.

Ta-chung Liu and Kung-chia Yeh estimate that in 1933 79% of Chinese workers were engaged in agriculture;²⁵ prior to 1900, the share of the workforce in agriculture was surely greater. Buck's surveys found that 19%–20% of farm work was performed by hired labor,²⁶ suggesting that hired farm workers

²⁵ Ta-chung Liu and Kung-chia Yeh, The Economy of the Chinese Mainland: National Income and Economic Development 1933–59 (Princeton: Princeton University Press, 1965), 69.

²⁶ John Lossing Buck, Chinese Farm Economy: A Study of 2,866 Farms in Seventeen Localities and Seven Provinces in China (Chicago: University of Chicago Press, 1930), 231, 234.

constituted perhaps 15% of China's labor force during the 1930s. With wage workers accounting for approximately one-fourth of China's workforce in the early 1930s, and probably somewhat less prior to 1900,²⁷ most Chinese were likely self-employed, usually as full- or part-owner farmers. Both owner and tenant farmers worked as residual claimants who could keep the fruits of their labor once they had satisfied the demands of the landlord and the taxman and had paid the other costs of production. With vast numbers of households engaged in handicrafts, peddling, and other market-linked activities, China's rural populace benefited from a wide dispersion of basic management skills long before the start of industrialization.

Commercialization

The Qing era witnessed increasing levels of commercialization and monetization. Former arrangements involving labor service and payment in kind yielded to the advancing cash economy. Payment of wages and taxes became cash transactions, while rents were paid either in cash or in the form of readily marketable crops.

Several authors have documented the deepening of domestic trade networks, which was especially notable in the vicinity of urban coastal and river ports.²⁸ Influential work by the late G.W. Skinner reveals nested hierarchies of marketplaces—differentiated according to the periodicity of market sessions, the scale of activity, and the array of products and services transacted—that extended from the largest cities to distant and humble villages.²⁹ The observation by Han-sheng Ch'üan and Richard Kraus that Qing "official [rice] shipments of several hundred thousand *shih* over distances above a thousand miles could be planned, executed, and completed in a matter of weeks without putting an appreciable strain on the existing transport facilities of even...comparatively backward" provinces illustrates the scale of market

²⁷ See Liu and Yeh, The Economy of the Chinese Mainland, 69. This assumes that employees include 15% of agricultural workers, 50% of workers in "old-fashioned transport," no workers categorized under handicrafts or peddlers, and 100% of workers in all other sectors. Wage employment then accounts for 56.5 million workers (30.7 million in agriculture plus 25.7 million non-agricultural workers), or 26.0% of overall employment.

²⁸ See, for example, Evelyn Sakakida Rawski, Agricultural Change and the Peasant Economy of South China (Cambridge: Harvard University Press, 1972); Robert Marks, Tigers, Rice, Silk, and Silt: Environment and Economy in Late Imperial South China (Cambridge: Cambridge University Press, 1997); and Wu Chengming, Wu Chengming ji [Collected Works of Wu Chengming] (Beijing: Zhongguo shehui kexue chubanshe, 2002).

²⁹ G. William Skinner, Marketing and Social Structure in Rural China (1964; repr., Ann Arbor: Association for Asian Studies, 1993).

operations.³⁰ The desire of British merchants to tap into what they viewed as an extensive network of domestic trade contributed to the outbreak of the 1839–42 Opium War, which spawned the system of "unequal treaties" that governed China's international commerce during the century prior to the Pacific War. Linda Cooke Johnson cites multiple descriptions of the large and growing size of Shanghai's trade prior to 1842, including references to "forests of masts" and suggestions that Shanghai's trade volume surpassed London's during the 1830s.³¹

The economic historian Fang Xing describes China's farm economy as a "dual system combining farming and handicrafts for household consumption and for commercial sale." Wu Chengming finds an acceleration of the long-term shift toward commercialization beginning in the second half of the nineteenth century and extending into the early decades of the twentieth century. The estimated volume of domestic trade rose by over 80% between 1869 and 1904–8, a rate much faster than the growth of overall output. According to Wu, the quantities of grain, cotton, and tea entering domestic trade channels in 1919–20 increased by 126%, 315%, and 28% respectively from pre-1840 levels. Buck's survey from 1921–25 shows that 2,866 farms in seven provinces sold slightly more than half their output (by value)—43.5% in four northern provinces; 62.8% in Anhui, Zhejiang, Fujian, and Jiangsu; and 52.6% overall. These results presumably reflect the increase in commercialization, partly owing to improvements in transport and communication facilitated by the spread of railways, steamships, and the telegraph.

China's domestic product markets displayed characteristics consistent with competitive outcomes, particularly in the more commercialized coastal and riverine districts, where many village households made daily trips to local markets. There were few restrictions on market entry. Frequent use of brokers and go-betweens allowed resourceful and reliable individuals to enter the world of commerce with no prior accumulation of wealth. In the absence of official restrictions on personal mobility, merchants were free to shift operations to promising locations; records of numerous *huiguan*, local

³⁰ Han-sheng Ch'üan and Richard A. Kraus, Mid-Ch'ing Rice Markets and Trade: An Essay in Price History (Cambridge: Harvard University East Asian Research Center, 1975), 58–59, 98. One imperial shih—also romanized as shi—of milled rice weighed approximately 185 pounds, so 300,000 shih is equivalent to more than 25,000 metric tons.

³¹ Linda Cooke Johnson, "Shanghai: An Emerging Jiangnan Port 1683–1840," in Cities of Jiangnan in Late Imperial China, ed. Linda Cooke Johnson (Albany: State University of New York Press, 1993), 175–76.

³² See Wu, Wu Chengming ji, 187.

³³ Ibid., 278-79.

³⁴ Buck, Chinese Farm Economy, 199.

organizations of merchants from far-away places, attest to the importance of commercial sojourning.³⁵ Chinese guilds typically sought inclusiveness, with membership open to any local participant in a particular trade who agreed to pay dues and observe guild regulations.³⁶

Availability of monthly price data for food grains collected by local officials allows further comment on the most important product market. The data confirm that mercantile networks created substantial price integration in the Qing food economy. Lillian Li observes that the increases in grain prices following crop failures were "moderate" (20%-70%) in comparison with the price consequences of "the worst European famines where prices doubled, tripled, or quadrupled."37 Yeh-chien Wang, who initiated the collection and study of these materials, concludes that "early eighteenth-century China was, on the whole, comparable with Europe in terms of market integration"; subsequent econometric analysis by Carol Shiue and Wolfgang Keller confirms this observation, and shows that the Lower Yangzi area achieved greater price integration than continental Europe, while England displayed the greatest development of grain price integration on the eve of the Industrial Revolution.³⁸ Substantial correlation of grain prices across space confirms the general applicability of Ramon Myers' observation that with "thousands of rice brokers and merchants" operating in the main producing and consuming regions, "large numbers of buyers and shippers," and a "constant flow of price information," "the final rice price represented the competitive forces of buyer demand and market supply."39 Similar conditions were common in markets for other grains, cash crops, and other major products with the notable exceptions of salt, on which the government sought to maintain its monopoly, and monetary metals.

³⁵ He Bingdi [Ho Ping-ti], Zhongguo huiguan shilun [Historical Survey of China's Landsmannschaften] (Taipei: Xuesheng shuji, 1966).

³⁶ John Stewart Burgess, *The Guilds of Peking* (New York: Columbia University Press, 1928); Hosea Ballou Morse, *The Gilds of China*, 2nd ed. (London: Longmans Green and Company, 1932); William T. Rowe, "Ming-Qing Guilds," *Ming-Qing yanjiu*, no. 1 (1992); and Christine Moll-Murata, "Chinese Guilds from the Seventeenth to the Twentieth Centuries: An Overview," *International Review of Social History* 53, supplement (2008).

³⁷ Lillian M. Li, Fighting Famine in North China: State, Market, and Environmental Decline 1690s-1990s (Stanford: Stanford University Press, 2007), 247.

³⁸ Yeh-chien Wang, "Secular Trends of Rice Prices in the Yangzi Delta 1638–1935," in Chinese History in Economic Perspective, ed. Thomas G. Rawski and Lillian M. Li (Berkeley: University of California Press, 1992); and Carol H. Shiue and Wolfgang Keller, "Markets in China and Europe on the Eve of the Industrial Revolution," American Economic Review 97, no. 4 (September 2007): 1189–216.

³⁹ Ramon H. Myers, The Chinese Economy: Past and Present (Belmont: Wadsworth, 1980), 94-95.

Organization

Individual activity was not the sole source of business acumen and managerial capability. Organizations with important commercial objectives permeated rural society, particularly in the south, where highly structured kinship groups conducted their own economic activities, often on a considerable scale. Even in the absence of prominent lineage groups, rural society was densely populated with organizations that extended well beyond the nuclear household, including temples, irrigation and crop-watching associations, militia, and other voluntary associations—often with written rules, and sometimes involving shareholding.

The extensive role of non-household organizations in economic life added both to the complexity of market arrangements and to the commercial and organizational experience of ordinary villagers. Temples and schools accumulated landed endowments to finance their continued operation. Kinship groups, especially in China's southern regions, were major economic actors, assembling landholdings and operating schools, markets, wharves, bridges, ferries, and other public services (as well as predatory enterprises), all for the purpose of accumulating wealth and influence. Groups established to manage irrigation, to protect crops from theft, and for other purposes added further opportunities for ordinary villagers to gain experience in the organization and functioning of complex entities intended to promote economic gain.

Ideology

Chinese ideology reinforced the business orientation of individuals and households. Ancestor worship encouraged the pursuit of long-term goals, particularly the survival and prosperity of households and surname groups, and systematically elevated accumulation within the constellation of individual and family objectives. The focus on economic abstinence to promote future benefits meshed nicely with Chinese farming methods, which lavished immense amounts of labor and fertilizer on small plots of land to maintain their current and future fertility. Popular proverbs reflected these attitudes.⁴⁰

⁴⁰ R. David Arkush, "If Man Works Hard the Land Will Not Be Lazy: Entrepreneurial Values in North Chinese Peasant Proverbs," Modern China 10, no. 4 (October 1984): 461–79.

Consequences and Implications

Researchers have traced the impact of these circumstances in three areas: personal investment in skill acquisition, entry into business, and entrepreneurship.

Personal investment in skill acquisition. The practical environment of village life in imperial China placed a considerable premium on literacy and numeracy, both of which reached substantial levels. Popular culture reinforced these tendencies: the heroes of widely circulated stories included scholars such as Zhuge Liang as well as monarchs and swordsmen. Evelyn Rawski shows that strong household demand for education, coupled with low prices for teaching services and books, produced levels of literacy in Qing China that outstripped much of preindustrial Europe. 41 Official interactions with the rural populace, including the collection of land taxes and the registration system intended to promote public security, routinely used written materials. A substantial publishing industry churned out agricultural manuals and other practical materials as well as cheap editions of popular novels. 42 Buck's rural surveys, conducted during the late 1920s and 1930s, found that 45% of males over the age of seven and 2% of females had received some schooling.⁴³ To this we must add evidence of widespread numeracy compiled by Baten, Ma, Morgan, and Wang. Their "estimates based on age-heaping data reveal [that] Chinese level[s] of human capital were among the highest in the world" during the late nineteenth and early twentieth centuries.44

Entry into business. Capital scarcity created opportunities for poor but able individuals to enter the bottom rungs of the commercial ladder by performing intermediary functions. Merchants anxious to turn over their limited capital willingly paid commissions in return for introductions and other services that accelerated the completion and execution of sales agreements. Such arrangements enlarged mobility prospects and widened the distribution of entrepreneurial skills and experience among ordinary Chinese, as did "Qing...commercial policies [that] were designed to facilitate

⁴¹ Evelyn Sakakida Rawski, Education and Popular Literacy in Ch'ing China (Ann Arbor: University of Michigan Press, 1979).

⁴² Cynthia Joanne Brokaw and Kai-wing Chow, Printing and Book Culture in Late Imperial China (Berkeley: University of California Press, 2005).

⁴³ Rawski, Education and Popular Literacy, 6, 18.

⁴⁴ Joerg Baten, Debin Ma, Stephen Morgan, and Qing Wang, "Evolution of Living Standards and Human Capital in China in the 18-20th Centuries: Evidences from Real Wages, Age-heaping, and Anthropometrics," *Explorations in Economic History* 47, no. 3 (July 2010): 347–59. Age-heaping refers to the tendency for uneducated people to give their ages in round numbers. Researchers use the extent to which the ages like 30 or 50 appear more frequently than, for example, 29 or 51 to measure the extent of innumeracy in the reporting population.

the role of the peddler and small merchant in the distribution network." ⁴⁵ The extreme division of labor noted by Madeleine Zelin in the production and marketing of handicrafts and manufactures reflects the limited capacity of capital markets to agglomerate funds from multiple sources and redistribute them to promising projects. ⁴⁶ As a result, the scale of enterprise was often limited by the availability of funds from the relatives and personal networks of would-be entrepreneurs.

Apprenticeship systems open to diligent sons of ordinary households also enlarged China's mercantile ranks. Young men who were apprenticed to tradesmen, merchants, or landlords worked long hours, often receiving little more than room and board, but acquired skills that enabled them to operate their own craft shops or stores or to become agents or managers for wealthy households.⁴⁷

Entrepreneurship. Information about boatmen illustrates the unusual depth of Chinese entrepreneurial activity. Jennifer Cushman observes that crew members of Chinese seafaring junks, who came from "the poor and indigent elements of coastal society," received no cash compensation but rather a "specific cargo allowance," which indicates that "crew members of a Chinese junk were merchants first and sailors second." Jing Su and Luo Lun report similar circumstances for sailors on vessels engaged in domestic trade along the Grand Canal. On East India Company vessels, by contrast, only officers were allotted cargo space.

Wide dispersion of entrepreneurship is also reflected in the fragmentation of commodity production, especially notable in handicrafts and manufacturing. This created "long chain[s] of middlemen and small processors that completed the path from the household economy to the consumer....Factories, such as they were, opened and closed with great

⁴⁵ Madeleine Zelin, "The Structure of the Chinese Economy during the Qing Period: Some Thoughts on the 150th Anniversary of the Opium War," in *Perspectives on Modern China: Four Anniversaries*, ed. Kenneth Lieberthal, Joyce Kallgren, Roderick MacFarquhar, and Frederic Wakeman Jr. (Armonk: M.E. Sharpe, 1991), 53–54.

⁴⁶ Ibid., 49-51.

⁴⁷ For apprentices in craft occupations, see Gail Hershatter, *The Workers of Tianjin*, 1900–1949 (Stanford: Stanford University Press, 1986), chaps. 3 and 4. Ta Chen provides an explicit account of mercantile apprenticeship in Ta Chen and Bruno Lasker, *Emigrant Communities in South China: A Study of Overseas Migration and Its Influence on Standards of Living and Social Change* (New York: Institute of Pacific Relations Secretariat, 1940), 61–62.

⁴⁸ Jennifer Wayne Cushman, Fields from the Sea: Chinese Junk Trade with Siam During the Late Eighteenth and Early Nineteenth Centuries (Ithaca: Cornell Southeast Asia Program, 1993), 99.

⁴⁹ Su Jing and Lun Luo, Landlord and Labor in Late Imperial China: Case Studies from Shandong (Cambridge: Harvard University Council on East Asian Studies, 1978), 59.

⁵⁰ Cushman, Fields from the Sea, 105.

ease....and many changed ownership" frequently.⁵¹ The same pattern is visible in markets for agricultural goods. Amano Motonosuke's 1941 study of rice trade in Anhui, "where rice passed through over 60 hands in its shipment from the producer...to Shanghai, only one province away," illustrates their complexity and efficiency.⁵²

These descriptions (and many others) portray a society in which commercial knowledge, mercantile experience, and entrepreneurial skills were widely dispersed among ordinary citizens. These circumstances surely contributed to the rapid expansion of small-scale manufacturing and trading in both the private (the so-called Wenzhou model) and public (the TVE model) sectors following the reform initiatives begun during the late 1970s.⁵³

DEVELOPMENT OF HUMAN CAPABILITIES: CONTEMPORARY EVIDENCE

Human capital has continued to accumulate since the establishment of the PRC in 1949. Recent developments add to the evidence of unusual levels of economically relevant skills among China's populace. The following discussion touches on both issues.

Education

China's stock of human capital, notably strong for a poor society when the PRC emerged, has developed rapidly since 1949 as Beijing has dramatically enlarged educational opportunities. Although China's plan era did little to raise living standards after the initial recovery from wartime damage, educational attainment rose impressively, with school attendance for elementary-age children rising from 49.2% in 1952 to 61.7%, 84.7%, and 95.0% in 1957, 1965, and 1975.⁵⁴

⁵¹ Zelin, "Structure of the Chinese Economy," 51.

⁵² Amano Motonosuke, "Shina ni okeru kome no ryūtsū kikō to sono ryūtsū hiyō" [The Organization and Cost of Rice Marketing in China], Tōa keizai ronsō 1, no. 1 (1941): 95–126, as described in Rawski, Agricultural Change and the Peasant Economy of South China, 104.

⁵³ Dwight H. Perkins et al., Rural Small-Scale Industry in the People's Republic of China (Berkeley: University of California Press, 1977); Peter Nolan and Fureng Dong, Market Forces in China: Competition and Small Business—The Wenzhou Debate (London: Zed Books, 1989); and William A. Byrd and Qingsong Lin, China's Rural Industry: Structure, Development, and Reform (New York: Oxford University Press, 1990).

⁵⁴ Zhongguo tongji nianjian 1986 [China Statistics Yearbook 1986] (Beijing: Zhongguo tongji chubanshe, 1986), 738.

Educational progress further accelerated during the reform era. Secondary school attendance has become nearly universal: the proportion of elementary school graduates entering junior high school jumped from 44.2% in 1957 to around two-thirds during the mid-1980s, eventually topping 95% in 1990.⁵⁵ The proportion of junior high graduates entering high school has also risen from 39.8% in 1957 and similar levels during the 1980s to 40.6%, 51.2%, 69.7%, and 83.4% in 1990, 2000, 2005, and 2008. The past decade has also brought spectacular increases in college attendance, with the number of undergraduates rising from 165,000 in 1978 to 614,000 and 950,000 in 1990 and 2000, then jumping to 3.1 million in 2005 and 5.3 million in 2009. The number of graduate students has quadrupled in less than a decade, rising from just over 300,000 in 2000 to 1.4 million in 2009.⁵⁶

These changes have transformed the educational profile of China's labor force, as is evident in **Table 3** from estimates of the distribution of scholastic attainment among non-student adults between ages 16 and 65.

TABLE 3

Percentage of Non-Student Working-Age Adults
by Level of Highest Diploma

Year	No diploma	Primary	Junior high	Senior high	Tertiary
1952	73.9	19.6	4.8	1.4	0.4
1978	39.6	33.4	20.6	5.7	0.7
2005	15.1	32.8	33.6	15.7	2.7

Source: Dwight H. Perkins and Thomas G. Rawski, "Forecasting China's Economic Growth to 2025," in China's Great Economic Transformation, ed. Loren Brandt and Thomas G. Rawski (Cambridge: Cambridge University Press, 2008), 837.

In 1952, barely one-fourth of working-age adults had completed primary school, and only one in fifteen had earned a diploma beyond the primary level. By 2005, the majority of working-age adults possessed diplomas at or above the junior high level, and fewer than one in six had no diploma.

⁵⁵ Zhongguo tongji nianjian 1990, 721; and Zhongguo tongji nianjian 2009 [China Statistics Yearbook 2009] (Beijing: Zhongguo tongji chubanshe, 2009), 805. This discussion ignores figures for the late 1970s, which appear distorted, probably because of the reopening of schools following the Cultural Revolution.

⁵⁶ Zhongguo tongji nianjian 2009, 796; and Zhongguo tongji zhaiyao 2010 [China Statistical Abstract 2010] (Beijing: Zhongguo tongji chubanshe, 2010), 170.

The ongoing expansion of higher education means that these figures, which omit educational qualifications earned outside the regular school system and therefore understate the diffusion of educational attainment, will continue to improve.

Strong and accelerating growth of educational attainment certainly reflects official emphasis on schooling. Educational outcomes also demonstrate the powerful impact of traditional Chinese reverence for education and learning. Official birth-control policies have intensified the historic determination (and financial sacrifice) with which Chinese parents pursue their children's education. The respect assigned to teachers (*laoshi*), even in humble rural classrooms, recognizes the centrality of education in the constellation of Chinese values, as well as the responsibility borne by educators. The behavior of Chinese teachers reflects this duality of status and responsibility. Unlike their peers "throughout the developing [world who]...are often absent from school" at astonishingly high rates, Chinese teachers not only attend school but often form life-long bonds with their students.⁵⁷

When the political disturbances known as the Cultural Revolution closed many schools and jettisoned merit-based selection in favor of affirmative action for workers, farmers, soldiers, and their offspring, aspiring students immersed themselves in individual study, while some families reverted to pre-1949 arrangements by establishing what amounted to informal versions of former private academies. These responses reflect an abiding belief in cultural continuity. Despite the depredations of the Red Guards and the suspension of education-based wage differentials between the late 1950s and the early 1990s, 58 students and their families anticipated the resumption of formal education and the return of social and economic benefits long associated with education. The reinstatement of merit-based college entrance examinations brought a massive turnout. As Chinese intellectuals quickly reclaimed their traditional social standing, the class entering college in 1977 attained almost heroic status in China's education-conscious society, which once again

^{57 &}quot;The Millennium Development Goals: Global Targets, Local Ingenuity," *Economist*, September 23, 2010. Some years ago I received a holiday greeting from a long-silent Chinese student. When I sent a note expressing my pleasure at hearing from a former student, I received an immediate reply including the phrase, "I am always your student."

⁵⁸ Hou Fengyun reports "large-scale wage reductions for high-level mental workers" in 1957, 1959, and 1961 and that "mental workers...were mostly excluded" from wage increases in 1959, 1961, 1963, and 1971. He describes the years 1976–90 as an era of no payoff to education. Apparently referring to the late 1980s, Hou notes that average pay in universities was 57 remninibi less than in the food and drink sector. See Hou Fengyun, Zhongguo renliziben xingcheng ji xianzhuang [Formation and Present Circumstances of Human Capital in China] (Beijing: Jingji kexue chubanshe, 1999), 181–85.

rewards top examinees with the public acclaim that American society lavishes on outstanding athletes.

With demand outpacing the growth of public facilities, private schooling has flourished. Because public colleges systematically discriminate against rural applicants (who are routinely rejected in favor of urban students with lower examination scores), rural households have rushed to enroll their children in new and less selective private institutions. When a private school linked to a well-regarded provincial university proved unable to fulfill the expectation that graduates would receive diplomas bearing the name of the public institution, students rioted. One student's experience illuminates the underlying circumstances: "Mr. Wang said he came from an impoverished farming community in Henan. His parents devoted their savings and borrowed heavily from friends and relatives to pay his tuition, which he said greatly exceeded his family's annual income." Chinese history is replete with similar episodes in which families of modest means draw on personal networks to finance the education of promising sons.

The Maoist idea that "redness," or political merit, can replace expertise has receded from the public arena. Instead, there is a new emphasis on the need for quality (*suzhi*) in the training, selection, and promotion of personnel. In practice, quality means formal educational credentials, particularly at the college level and above. Current calls for quality echo the traditional belief that leadership, including military command, is the domain of highly educated men (and now women). The push for suzhi has fuelled huge demand for inservice training, short courses, and television academies as well as a lively market for fraudulent or purchased diplomas. The rush to upgrade credentials is visible at the aggregate level: successive census enumerations show rising levels of (self-reported) educational attainment among cohorts far beyond the years of school attendance.

Private Business

The recent revival of private business under difficult conditions represents a triumph of ingenuity over adversity that illustrates the enduring influence of Chinese tradition in contemporary economic life. Chinese policy eliminated most private business activity for two decades beginning in the mid-1950s. By the mid-1970s, Chinese cities had come to resemble today's Pyongyang: empty avenues largely devoid of traffic and commercial undertakings. Numbers

⁵⁹ Joseph Kahn, "Rioting in China over Label on College Diplomas," New York Times, June 22, 2006.

of stores and markets declined despite rising population; private ventures risked criticism or suspicion of criminality. Reform gradually relaxed these restrictions, initially in the countryside. Beginning in the late 1990s, a series of legal and administrative initiatives, including explicit recognition of the state's obligation to protect private ownership rights and invitations for private entrepreneurs to join legislative bodies and enter the Communist Party, substantially improved the business climate for private-sector operators.

Despite these gains, the environment for private business remains challenging. Without operational remedies for official abrogation of property rights that are now at least theoretically protected by the state, private businesses find themselves obliged to seek informal protection in ways that invite criminal prosecution. Official attitudes toward private operators can be inferred from the yearbook issued by China's Administration of Industry and Commerce. The statistical section begins with tables showing the number of administrative hearings, punishments, appeals, and registration violations, and only then reports such information as the number of registered enterprises and their employees. 61

Foreign investors often demand "national treatment" for their operations, complaining that host governments discriminate in favor of local firms. In China the opposite situation obtains, with privately owned Chinese firms seeking the benefit of the treatment routinely awarded to their foreign and public-sector rivals. A May 2010 policy announcement illustrates the problem: "The central government released guidelines on further encouraging private investment in a wider range of key industries, a move indicating that the authorities are placing more importance in private investment's role in sustaining economic growth," while simultaneously mentioning ongoing barriers to private participation in some "key industries." Descriptions of this announcement drew skepticism about its actual impact. One researcher complained that enforcement of earlier guidelines meant to encourage the private sector was "unsatisfactory" due to "lack of coordination and few details on...implement[ation]" and expressed the hope that the new guidelines "are not merely empty words."

⁶⁰ Xiaoxuan Liu and Shiyong Zhao, "Woguo geti gongshanghu weihe 5 nian jianshao 810 wan?" [How Did the Number of Individual Industrial and Commercial Enterprises Shrink by 8.1 Million in 5 Years?], China Economic Network, October 15, 2006 ∼ http://www.cenet.org.cn/article.asp?articleid=25052.

⁶¹ Zhongguo gongshang xingzheng guanli nianjian [Yearbook of the Industry and Commerce Administration of China] (Beijing: Zhongguo gongshang chubanshe).

⁶² Qingfen Ding and Ning Yang, "Private Investment Encouraged," China Daily, U.S. edition, May 14–16, 2010.

China's financial institutions systematically discriminate against the private sector, which has little access to bank loans or to domestic stock and bond markets. Bankers' reluctance to lend to private firms arises partly from information gaps but also from the fear that they may be suspected of corruption if such loans are not repaid. Bad loans to public-sector firms, which may also arise from corrupt dealings, are unlikely to attract prosecutorial attention.

Under these circumstances, the expansion of private business is quite astonishing. Beginning from near zero prior to the start of economic reform, recent data compiled in **Table 4** show that the private sector, ⁶³ which now includes just under 40 million formally registered units, accounts for roughly one-sixth of investment outlays and exports and about one-seventh of tax payments. Yet despite private firms' substantial contribution to investment, taxes, and exports, their long-standing exclusion from organized financial markets continues: less than 4% of short-term bank loans (and no doubt a smaller share of long-term loans) accrue to private businesses. ⁶⁴ As a result, private firms must draw funds from personal networks and semi-legal or

TABLE 4
Private and Individual Business in China's Economy

Category	2006	2007	2008
Share of completed fixed investment (%)	16.1	17.9	18.9
Share of total exports* (%)	13.8	16.0	17.0
Share of tax payments (%)	14.0	13.0	13.6
Share of short-term bank loans (%)	2.7	3.1	3.4
Annual increase in employment (millions)	10.3	10.0	10.0

Source: "2008 nian Zhongguo minying jingji fazhan xingshi fenxi" [Analyzing the Development Situation of China's Private Economy in 2008] ≈ http://www.china.com.cn/news/zhuanti/09myjjlps/2009-09/25/content_18603550_4.htm.

Note: Asterisk indicates export data are for private firms only.

⁶³ Private business includes three types of undertakings. There are two categories of officially recognized enterprises—private (siying) firms with eight or more employees and individual (geti) firms with seven or fewer workers—as well as a residual category of informal, unregistered operations that escapes enumeration in China as in other economies.

⁶⁴ Zhongguo tongji nianjian 2009, 773.

illegal private financial entities that issue loans at rates well above those offered by major banks. 65

Employment represents the most remarkable aspect of China's private business achievements, given the massive difficulties the country faces in employing its huge workforce. With farm employment in long-term decline and formal employment in other categories virtually stagnant, domestic private business, which added 10 million workers annually during 2006–8, dominates employment creation—a key policy objective.⁶⁶

Working in an environment that is severely deficient in elementary protection of property rights that are widely viewed as essential foundations of business development, the private component of China's economy has grown from nearly nothing at the start of reform into a large and dynamic sector that contributes to the strong growth of output, exports, and fiscal revenue. Private business has emerged as the chief source of new employment opportunities for China's vast workforce. Given the obvious shortcomings of the formal institutional structure, these achievements highlight the importance of networking, informal finance, private understandings between entrepreneurs and officials, and other informal arrangements involving personal trust as key underpinnings of private business growth. Because socialism is widely regarded as having undermined rather than strengthened informal institutions (which will be discussed further below), the legacy of business-supporting social structures developed in the decades and centuries prior to 1949 is the probable foundation of private business dynamism during China's reform era.

International Trade

China has transformed itself from among the world's most isolated economies to a global leader in cross-border movement of both commodities

⁶⁵ Descriptions of informal finance, often operating on a large scale, use terminology (e.g., qianzhuang, referring to traditional institutions known as "native banks") and report business methods reminiscent of traditional practice during the Qing and Republican eras. For a discussion of the gap between deposit and lending rates in state banks and informal lenders, see Kellee S. Tsai, Back-Alley Banking: Private Entrepreneurs in China (Ithaca: Cornell University Press, 2002); and Xuxhao Jiang and Changfeng Ding, "Minjian jinrong lilun fenxi: Fanchou bijiao yu zhidu bianqian" [Theoretical Analysis of Informal Finance: Categories, Comparisons, and System Change], Jinrong yanjiu, no. 8 (2004): 102. The latter notes that China's Supreme Court authorizes enforcement of loan contracts charging up to quadruple the rate that major banks impose for similar loans.

⁶⁶ Formal employment, represented by the number of staff and workers (*zhigong*), increased by 2.6 million, or 2.3%, between 2000 and 2008. Excluding categories that contain private firms—namely, firms with overseas Chinese or foreign investment and units classified under "other" ownership—produces a decline in formal employment amounting to 8.6 million, or 8.1% of the 2000 figure. *Zhongguo tongji nianjian 2009*, 123.

and capital. China is now the world's leading exporter and ranks second only to the United States in annual imports. China's trade ratio of 62.7% (the combined total of imports and exports expressed as a share of GDP), towers above comparable figures for other large nations, even though the overwhelming share of trade activity clusters along China's eastern seaboard.⁶⁷

Arguments attributing China's remarkable trade performance to some combination of cheap labor and artificially low currency value, while not without merit, are not convincing. The critics fail to note that maintaining China's renminbi currency at low, officially determined rates increases the domestic currency cost of imported energy, materials, and components (mostly priced in dollars) to domestic export producers. It also requires excessive (from a domestic policy perspective) expansion of currency issue, which, if not fully sterilized by raising reserve requirements for domestic banks or requiring the banking system to hold large amounts of government bonds, accelerates the growth of domestic prices and wages. These factors erode the supposed advantage of a low renminbi to China-based exporters and diminish the likely effect of revaluing China's currency on the competitiveness of Chinese products in overseas markets.

Rapid diversification of Chinese exports away from low-end, labor-intensive goods that compete on price alone further undermines the thesis that China's export success rests on unfair trade practices. Researchers have documented the swift increase in the range and sophistication of Chinese exports. Although the frequency with which China-based firms assemble and then export goods containing sophisticated components produced elsewhere leads these studies to overstate the complexity of China-based production activity, trade statistics as well as factory visits confirm the upward trend of quality and variety among China-based export manufacturers.

The leading role of foreign-invested firms, which regularly account for over half of both exports and imports, in China's foreign trade has led some observers to deprecate the innovative capability of Chinese manufacturers.⁶⁹ But nominally foreign firms are often owned or managed by overseas Chinese;

⁶⁷ Zhongguo tongji nianjian 2010 [China Statistics Yearbook 2010] (Beijing: Zhongguo tongji chubanshe, 2010), 38, 229. The figure is for 2007; concerns about the veracity of official GDP figures for 2008 and 2009 led me to omit values for those years.

⁶⁸ Loren Brandt, Thomas G. Rawski, and John Sutton, "China's Industrial Development," in *China's Great Economic Transformation*, ed. Loren Brandt and Thomas G. Rawski (Cambridge: Cambridge University Press, 2008); Peter K. Schott, "The Relative Sophistication of Chinese Exports," *Economic Policy* 23, no. 53 (January 2008): 5–49; and Jesus Felipe, Utsav Kumar, Norio Usui, and Arnelyn Abdon, "Why Has China Succeeded—and Why It Will Continue to Do So," Levy Economics Institute of Bard College, August 2010 ~ http://www.levyinstitute.org/publications/?docid=1292.

⁶⁹ George Gilboy, "The Myth behind China's Miracle," Foreign Affairs 83, no. 4 (July/August 2004): 33-49.

we comment below on the domestic origins of their business acumen. Attributing China's export growth to the technology, capital, and skills provided by overseas multinationals overlooks the question of why overseas direct investment clusters in China (when other countries offer lower wages and less opaque political systems), neglects the contributions of Chinese personnel within foreign-invested firms, and assumes that China lacks the entrepreneurial talent that would allow domestic firms to take advantage of the knowledge and experience gained by working in and cooperating with foreign enterprises. Recent developments in high-speed railways and construction equipment offer particularly well-documented examples of China's expanding innovative capabilities, which are also visible among manufacturers of telecoms hardware, home appliances, automobiles, trucks, aircraft, machine tools, and many other products.⁷⁰

Entrepreneurial Governments

China has a long tradition of competent public administration. The examinations that qualified candidates for Qing official positions included questions about practical issues of political economy. The imperial bureaucracy assigned specialists to areas such as water control and money supply that called for particular expertise. The career paths of officials appointed to oversee counties or prefectures reflected their capacity to deal with practical matters involving order, stability, and livelihood in the areas under their jurisdiction.

During the reform period, we see many instances of entrepreneurial behavior on the part of local governments. Enlarged participation by Chinabased firms in transnational supply networks represents one important dimension of China's economic boom. Andrew Sheng emphasizes the role of local government in the design and construction of the supply chain.... [which does] not grow spontaneously....[but rather] because East Asian cities found it beneficial to [establish]...special development zones that reduce transaction costs, have superior infrastructure and also critical mass....[and by] reducing government intervention and bureaucratic costs....cutting down taxes and improving customs clearance, licensing and even inspection or enforcement action."

⁷⁰ Loren Brandt and Eric Thun, "The Fight for the Middle: Upgrading, Competition, and Industrial Development in China," World Development 38, no. 11 (2009): 1555–74; and Jamil Anderlini and Mure Dickie, "China: A Future on Track," Financial Times, September 23, 2010.

⁷¹ See, for example, Barry Naughton, ed., The China Circle: Economics and Electronics in the PRC, Taiwan, and Hong Kong (Washington, D.C.: Brookings Institution Press, 1997).

⁷² Andrew Sheng, "Understanding Global Supply Chain," China Daily, U.S. Edition, July 12, 2010.

Ke Ding's study of industrial clusters in Zhejiang illustrates the importance of activist government in a region renowned for its reliance on individual entrepreneurs. Ding finds that specialized markets facilitated the growth of industrial clusters; these markets typically depend on "active intervention from the local government." Case studies describe the contributions of local administrations, which include the construction and management of market facilities, the classification of commodities, efforts to shift private operators from trading into manufacturing, a focus on quality control, and efforts to upgrade the product mix of local firms.

Local government entrepreneurship is not a common feature of public administration in Qing or Republican China. The idea that local government responsibility extends beyond the maintenance of local economies to encompass their expansion and qualitative development is a recent phenomenon that appears linked to the Great Leap Forward of the late 1950s, when local administrations were in effect ordered to find ways to expand production of grain and steel without relying on resources from higher levels.

Yet while local government entrepreneurship is new, the underlying administrative methods are not. In Yiwu, Zhejiang, for example, the local Administration of Industry and Commerce constructed a new market and then, in order to promote specialization, announced that booth operators would be required to deal exclusively in one of sixteen product categories (rather than, as had occurred in the past, trading across product lines). The operators, concerned that this restriction would reduce their profit prospects, declined to register for the specialized business licenses needed to make use of the new facilities. Local officials resolved the problem by resorting to the same tactics employed by Qing magistrates: they "approached some of the leading merchants of the Yiwu market....In the end, most of the booth-keepers were registered....[and] the situation...underwent a dramatic change, resulting in the industrial cluster formation."

Even though the incentive system for local officials, with its heavy weight on GDP growth, leads to falsification of statistics, ill-conceived and wasteful projects, and other unfortunate outcomes, local government entrepreneurship has surely made substantial contributions to China's recent economic dynamism. The party secretary of a major Chinese university, an

⁷³ Ke Ding, "The Role of the Specialized Markets in Upgrading Industrial Clusters in China," in Upgrading Industrial Clusters in Emerging Economies, ed. Akifumi Kuchiki and Masatsugu Tsuji (Houndmills: Palgrave Macmillan, 2010), 272.

⁷⁴ Ibid., 274-75.

economist, credits local governments with leading China's V-shaped recovery from the 2008–9 downturn: in his words, local leaders responded like "uncaged tigers" to Beijing's call for acceleration of local investment projects as an anti-recession move.⁷⁵

DEVELOPMENT OF HUMAN CAPABILITIES: COMPARATIVE EVIDENCE

The thesis advanced here—that Chinese society incorporates an unusually rich array of economically relevant business, networking, and organizational skills that are primarily attributable to legacies dating long before 1949—is inherently comparative. The argument is that social formations inherited from the past equip Chinese to better cope with the vagaries of modern market systems than their peers elsewhere. To verify this thesis, the following pages draw explicit comparisons involving overseas Chinese, the transition economies that emerged following the break-up of the Soviet Union and its East European socialist allies, and the economic differences between China's coastal and interior regions.

Overseas Chinese

The historical record of Chinese migration to Southeast Asia provides an excellent opportunity to compare the economic behavior of Chinese villagers with members of other societies. The success of the migrants, whose descendents exert powerful influence over economies throughout Southeast Asia, stands as eloquent testimony to the differential business skills that allowed ordinary Chinese to prosper in alien and often hostile environments.

Research in Thailand by the late G.W. Skinner highlights the economic capabilities of ordinary Chinese before and during the heyday of European imperial expansion. Chinese migrants, many of whom "came to Siam almost straight from the farm," came to dominate Thailand's domestic and international commerce. Skinner explains this in terms of cultural contrasts. In the "Thai universe," shaped by the ecology of "an underpopulated and fertile land where the requirements for subsistence were...easily obtained.... thrift as such was of limited value, and work for its own sake simply senseless." Chinese migrants hailed from a different universe: "a grimly Malthusian setting where thrift and industry were essential for survival." Ideology

⁷⁵ Author interview, October 2009.

reinforced this divergence: Chinese struggled for wealth to preserve family and lineage continuity, while Thai norms frowned on "excessive concern for... material advancement." Differences in proverbs tell the story: for the Chinese, "Money can do all things," but for the Thai, "Do not long for more than your own share."

Recognizing the strength of entrenched Chinese interests, the British forced the Thai monarch to grant them "equal commercial rights as well as additional privileges" in 1855, benefits that soon extended to "all the major trading states of Europe and America." In 1890, "after thirty-five years of Western free trading...under privileged conditions," Chinese merchants still controlled nearly two-thirds of Bangkok's trade, more than double that engrossed by the British. In Siam, as in China and Japan, the domestic business of European and U.S. firms was invariably managed by "a Chinese merchant of some wealth, Western training, and standing in the Chinese community." Chinese dominance extended even to the rice trade, "the biggest prize of all in Siam," where "the pioneering Western mills were abandoned or passed into Chinese hands." 77

A succession of Siamese rulers entrusted the entire apparatus of foreign commerce, including the construction and operation of ocean-going vessels as well as the management of both import and export trade, to Chinese merchant-entrepreneurs from Fujian. Beginning in the fifteenth century, "the Chinese had begun to act on behalf of the Siamese Court" in commercial affairs. Royal trading, which dominated Siam's international commerce, was "dependent on Chinese who staffed the apparatus at all levels: royal factors, warehousemen, accountants, captains, seamen, and customs officials." Such practices reflected the commercial expertise of Chinese merchants, who, in comparison with indigenous populations, were "more knowledgeable about sailing junks and about market conditions at the various ports of call (where merchants were more often than not Chinese compatriots)" and also skilled "in bribery and other 'wheeling-and-dealing' techniques [that] enabled them to transact business with minimal cost and delay."

Similar circumstances prevailed in regions under European colonial control. "At Batavia and Luzon, the services of Chinese as middlemen and procurers for the European colonials were indispensable." Chinese influence

⁷⁶ G. William Skinner, Chinese Society in Thailand (Ithaca: Cornell University Press, 1957), 97, 92, 93, 95.

⁷⁷ Ibid.,102, 105.

⁷⁸ Sarasin Viraphol, *Tribute and Profit: Sino-Siamese Trade 1652–1853* (Cambridge: Harvard University Council on East Asian Studies, 1977), 40, 19.

⁷⁹ Ibid., 8.

expanded despite a massacre of Chinese at Batavia (1740) and the expulsion of non-Christian Chinese from the Philippines (1775). "The Batavia government...attempted to get rid of Chinese influence, but ironically the Chinese economic position grew stronger." 80

In addition to Southeast Asia, Chinese mercantile networks encompassed Korea, Japan, and Russia's Pacific coast. After Commodore Perry forced Japan to permit foreign trade, Chinese merchants, who had long-standing ties with the officially recognized trade emporium at Nagasaki, were quick to seize new opportunities. In 1871 a foreign observer commented that if the Chinese staff of foreign trading firms "were suddenly removed, business [in Japan's treaty ports] would come to an abrupt halt." Two decades later, the foreign community became deeply concerned about "the damage to foreign businesses which would be done if war broke out between China and Japan... because of the possible internment of Chinese compradores." Considerable portions of Japan's late nineteenth century trade with Korea—especially cotton textile exports from Japan—were handled by "Chinese merchants in Nagasaki." Despite the rise of Japan's regional power, Japanese business networks in Korea "struggled with Chinese rivals."

Many detailed accounts show how individuals situated within networks of trade and migration accumulated organizational as well as technical skills. Fujian's well-known specialization in human trafficking, currently managed by groups popularly known as "snake-heads," dates from the sixteenth century, when smuggling would-be migrants from the Chinese mainland to Taiwan "had become a profitable occupation in Amoy." Likewise, K.C. Fok describes networks based in Hong Kong during the late nineteenth and early twentieth centuries that linked overseas migrants with their home villages in Guangdong. Ma Zhuchao, for example, developed a network built on personal ties with a far-flung group of emigrants, all of whom originated from a particular area in Guangdong's Taishan region. Ma acted as an intermediary

⁸⁰ Viraphol, Tribute and Profit, 170.

⁸¹ J.E. Hoare, "The Chinese in the Japanese Treaty Ports 1858–1899: The Unknown Majority," Proceedings of the British Association for Japanese Studies 2, no. 1 (1977): 26–27.

⁸² Kazuko Furuta, "Inchon Trade: Japanese and Chinese Merchants and the Shanghai Network," in Commercial Networks in Modern Asia, ed. S. Sugiyama and Linda Grove (Richmond: Curzon, 2001), 73.

⁸³ Kenji Kimura, "Japanese Business Networks in Prewar Korea: The Case of the Enterprises of Kameya Aisuke," in Sugiyama and Grove, Commercial Networks, 53.

⁸⁴ Chin-Keong Ng, Trade and Society: The Amoy Network on the China Coast 1683–1735 (Singapore: Singapore University Press, 1983), 83–84.

in both the family and business lives of his clients, combining remittances, services for new emigrants, banking, lending, and trade agency.⁸⁵

Entrepreneurship in Former Socialist States

Cross-national comparisons of small business formation find that transition economies of the former Soviet Union and the ex-socialist nations of Eastern Europe "have lower rates of entrepreneurship than are observed in most developed and developing market economies."86 The authors attribute the limited scale of enterprise formation in former socialist nations to several factors, including "the weakness of [formal] institutions such as property rights enforcement." Despite "the rapid pace of formal institutional change in transition economies during the 1990s, changes in informal institutions" lagged behind, reflecting both "the remnants of the planned economy...[and] more importantly...the social attitudes shaped during the communist period."87 Katherine Verdery argues that, under socialism, "social space consisted of a mass of atomized households at the bottom and a massive bureaucratic and repressive apparatus at the top.... [which, for individuals, resulted in a] common experience of atomization, of alienation from one another...and of the expropriation of initiative and a capacity to make plans."88

The development of market-oriented institutions in the former Soviet Union and Eastern Europe, including new laws, sweeping privatization, and sharp reductions in official involvement in business decisions, has moved far ahead of China's reform. The informal legacy of Communism may well be stronger in the former Soviet Union, which experienced over half a century of economic planning, than in China, which seems more comparable to countries such as Poland, Hungary, and Bulgaria, where Communism arrived only after 1945. This logic leads to the expectation that small-scale private enterprise formation in China might fall between the modest outcomes for economies of the former Soviet republics and the higher figures observed in Eastern European nations. The duration of

⁸⁵ K.C. Fok, "Lineage Ties and Business Partnership: A Hong Kong Commercial Network," in Sugiyama and Grove, Commercial Networks.

⁸⁶ Saul Estrin and Tomasz Mickiewicz, "Entrepreneurship in Transition Economies: The Role of Institutions and Generational Change," Forschungsinstitut zur Zukunft der Arbeit, March 2010 ~ http://www.iza.org/en/webcontent/publications/papers/viewAbstract?dp_id=4805, 26.

⁸⁷ Ibid., 2

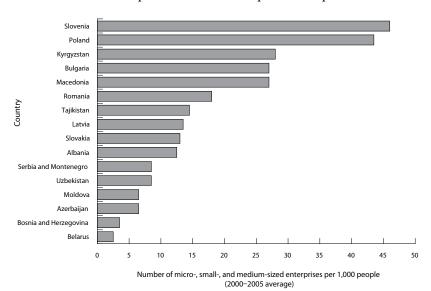
⁸⁸ Katherine Verdery, "Theorizing Socialism: A Prologue to the 'Transition," American Ethnologist 18, no. 3 (August 1991): 433.

planning in the latter countries resembled China's, but they enjoyed more complete transitions toward full market systems.

World Bank data on numbers of micro-, small-, and medium-sized enterprises per 1,000 persons in the former Soviet Union and several Eastern European economies allow us to check the validity of these expectations (see **Figure 2**). Although the margin of error surrounding these data is probably considerable, it is possible to compare China's per capita enterprise data with the World Bank figures for other transition economies.

FIGURE 2

European Data on Entrepreneurship



Source: World Bank, World Development Indicators, compiled in Saul Estrin and Tomasz Mickiewicz, "Entrepreneurship in Transition Economies: The Role of Institutions and Generational Change," Forschungsinstitut zur Zukunft der Arbeit, March 2010 → http://www.iza.org/en/webcontent/publications/papers/viewAbstract?dp_id=4805, figure 1.

Figure 2 tabulates the average of annual data for 2000–2005, showing numbers of enterprises per 1,000 persons for several transition economies. Omissions include nations with high rates (the Czech Republic had about 87 and Hungary about 55 enterprises per 1,000 persons in 2003) and very low

rates (Russia, Estonia, Armenia, Croatia, Lithuania, Georgia, and Ukraine all reported no more than 0.05 firms per 1,000 persons in 2005).⁸⁹

Comparable Chinese figures appear in **Table 5**, which includes official data on the number of enterprises registered with the National Administration of Industry and Commerce (*Guojia gongshang xingzheng guanliju*, abbreviated below as NAIC) as well as estimated totals intended to offset apparent gaps in the official data.

Official Chinese data include information about private (*siying*) firms employing eight or more workers as well as individual (*geti*) enterprises with seven or fewer workers. ⁹⁰ Focusing on the official totals of private and individual firms registered with the NAIC, the Chinese figures, which show an average for 2000–2005 of 21.0 firms per 1,000 residents at the national level and 27.3 urban firms per 1,000 urban residents, appear to confirm the suggested link between duration of socialist planning and enterprise formation noted above. The NAIC data compiled in Table 5 suggest that small enterprise is less common in China than in some Eastern European economies that had market economies before 1945 (such as the Czech Republic, Hungary, Poland, and Slovenia) but is more common in China than in societies with longer histories of socialism (such as Russia and Ukraine,).

However, the NAIC registration data appear to understate the extent of Chinese small business activity for several reasons, which are reviewed here in order of diminishing importance. First, these data vastly understate rural enterprise. Certainly for China, and in all likelihood for other countries, the data exclude family farms from the "enterprise" category, even though farming involves similar activities (selection of business line, organization of production, investment, marketing, purchasing of inputs, record-keeping, cash management, and interaction with government agencies) and carries the same risks (loss of assets and bankruptcy) associated with non-farm enterprises. Only 1.04% of Chinese private or individual firms registered in 2007 were active in farming, forestry, herding, or fishing, and more than one-fourth of those were located in cities or towns, leaving the share of rural

⁸⁹ Data for Hungary and the Czech Republic are from Lorena R. Leon, "Understanding the Potential Macroeconomic Impact of the Implementation of Technologies for Digital Business Ecosystems in Europe" ~ http://www.digital-ecosystems.org/events/2007.01/macroeconomic-impact.pdf. Remaining data are from "Economy Statistics > Micro, Small and Medium Enterprises > Number (Per Capita) (Most Recent) by Country," Nation Master ~ http://www.nationmaster.com/graph/eco_mic_sma_and_med_ent_num_percap-medium-enterprises-number-per-capita.

⁹⁰ The Chinese data include small numbers of large firms of the sort that the data for other countries omit. Since the number of large private firms is a tiny fraction of the total, correcting this inconsistency would have no effect on the discussion that follows.

Registered and Estimated Numbers of Private and Individual Enterprises, 1999-2008 TABLE 5

Year	Registe	Registered private (siying) enterprises	g) enterprises	Registered in	Registered individual (<i>geti</i>) enterprises	enterprises	Total numk	Total number of registered enterprises	d enterprises
	Urban	Rural	National	Urban	Rural	National	Urban	Rural	National
1999	893,989	614,868	1,508,857	12,539,223	19,061,392	31,600,615	13,433,212	19,676,260	33,109,472
2000	1,079,231	682,538	1,761,769	11,251,243	14,462,375	25,713,618	12,330,474	15,144,913	27,475,387
2001	1,291,200	737,300	2,028,500	11,285,600	13,044,400	24,330,000	12,576,800	13,781,700	26,358,500
2002	1,548,444	886,838	2,435,282	11,621,997	12,152,855	23,774,852	13,170,441	13,039,693	26,210,134
2003	805,139	2,200,385	3,005,524	12,389,775	11,142,072	23,531,847	13,194,914	13,342,457	26,537,371
2004	2,387,701	1,262,969	3,650,670	13,264,451	10,240,460	23,504,911	15,652,152	11,503,429	27,155,581
2005	2,800,068	1,500,848	4,300,916	14,293,749	10,345,185	24,638,934	17,093,817	11,846,033	28,939,850
2006	3,300,349	1,680,425	4,980,774	15,620,189	10,335,877	25,956,066	18,920,538	12,016,302	30,936,840
2007	3,798,607	1,714,513	5,513,120	16,840,448	10,574,850	27,415,298	20,639,055	12,289,363	32,928,418
2008	4,550,600	208,400	6,572,000	18,586,700	10,586,600	29,173,300	23,137,300	10,795,000	35,745,300

Table 5 cont.

	Official p	population data (millions)	millions)	Registered	and revised prival	te and individual !	Registered and revised private and individual businesses per 1,000 persons	00 persons
Year	1 4	-	1,1	1	Rural	ral	National	onal
	Orban	KUrai	National	Organ	Registered	Revised	Registered	Revised
1999	437.5	820.4	1,257.9	2'08	24.0	119.4	26.3	88.6
2000	459.1	808.3	1,267.4	26.9	18.7	93.3	21.7	69.2
2001	480.6	7.95.7	1,276.3	26.2	17.3	86.2	20.7	63.6
2002	502.1	782.4	1,284.5	797	16.7	83.0	20.4	8.09
2003	523.8	2'89/	1,292.3	25.2	17.4	86,4	20.5	61.6
2004	542.8	757.1	1,299.9	28.8	15.2	75.6	20.9	56.1
2005	562.1	745.5	1,307.6	30.4	15.9	79.1	22.1	58.2
2006	577.1	737.4	1,314.5	32.8	16.3	81.1	23.5	59.9
2007	593.8	727.5	1,321.3	34.8	16.9	1.48	24.9	61.9
2008	2'909	721.3	1,328.0	38.1	15.0	74.5	26.9	57.9
Average, 2000–2005	000-2005			27.3	16.9	83.9	21.0	61.6

and 2008 data are from "Stying giye fazhan de jiben qingkuang" [Basic Conditions of Private Enterprise Development], Zhongguo wang, September 27, 2009 ~ http://www.china.com.cn/news/zhuanti/09myjjlps/2009-09/27/content_18613563.htm (for siying enterprises); and from "Geti gongshanghu fazhan de jiben qingkuang" [Basic Conditions of Individual Industrial and Commercial Source: This table includes population data from Zhongguo tongji nianjian 2009; registered enterprises from annual issues of Zhongguo gongshang xingzheng guanli nianjian, except for 2001 and 2008 data. 2001 data are from "2001 nian Zhongguo feigongyouzhi jingii fazhan baogao" [Report on the Development of Chinas Non-State Economy in 2001], Sina Finance, April 17, 2001; Firms], Zhongguo wang, September 27, 2009 ~ http://www.china.com.cn/news/zhuanti/09myjjlps/2009-09/27/content_18613708.htm (for geti enterprises).

firms engaged in these occupations at a mere 0.75% of the NAIC total.⁹¹ Because the rural component of the economy and labor force is far larger in China than in countries such as Russia, Poland, and Hungary, an adjustment that expands the coverage of rural business would sharply elevate China's relative standing in Figure 2.⁹²

Small business operators often seek to evade the fees and tax liabilities that accompany enumeration and registration. Several factors may enhance the extent of undercounting in China.

- Massive migration into cities has created a huge and highly mobile
 "floating population" whose frequent shifts of occupation and location
 may increase undercounting due to evasion (e.g., by peddlers) as well
 as to the authorities' limited capacity to identify and register a large
 and shifting population of micro-businesses.
- A 1998 reorganization transferred appointment and financing of local NAIC branches to provincial authorities. This reform simultaneously removed the supervisory authority of local governments over local NAIC branches and weakened their funding, as authorities at multiple levels retained segments of province-level appropriations, leaving the local branches with insufficient funds to meet their payrolls. The unintended consequences of this verticalization included loss of morale at the local branches and the conversion of these branches into "agencies that took the effort to collect fees as their main task."93 Both features presumably reduced the count of registered enterprises: the former by decreasing official determination to achieve a comprehensive tally of firms, and the latter by intensifying the efforts of small businesses to escape the dragnet of official exactions.
- The authorities in some jurisdictions may lack the capacity (or willingness) to make a reasonably accurate count of small enterprises. Chinese observers attribute the large decline in reported enterprise numbers during 1999–2000 (see Table 5) to a general clean-up of records. Subsequent figures include implausible entries—for example,

⁹¹ Zhongguo gongshang xingzheng guanli nianjian 2008, 703.

⁹² Official Chinese data for 2005 show that 64.0% of Chinese workers reside in rural areas and that agriculture occupies 61.3% of rural workers, implying that agriculture occupied 39.2% of all workers. See Fang Cai, Albert Park, and Yaohui Zhao, "The Chinese Labor Market in the Reform Era," in Brandt and Rawski, *China's Great Economic Transformation*, 168, 190. While this figure is surely too high, the correct figure is undoubtedly larger than the World Bank figures for agriculture's share of 2005 male employment in Poland (18.0%), Russia (12.3%), Hungary (6.9%), and the Czech Republic (4.8%). See "Data > Indicators: Employees, Agricultural, Male (% of Male Employment)," World Bank ~ http://data.worldbank.org/indicator/SL.AGR.EMPL.MA.ZS.

⁹³ Liu and Zhao, "Woguo geti gongshanghu."

reported declines of 46.1% and 34.3% in the number of individual enterprises in Hebei and Jilin provinces.⁹⁴

 China's urban governments make unusual efforts to promote urban development and limit the growth of shantytowns. Such policies eliminate legal venues for small businesses, which may be forced into the shadow economy.

Among these shortcomings, only the undercount of rural business is amenable to immediate modification. China's Research Center for Rural Economy (RCRE) conducts an annual survey of rural households that collects detailed information about income and expenditure. The data for 1999 cover 6,971 households containing 28,999 persons. The household accounts contain 11,403 entries under the heading "income from household-run business," of which 3,462 pertain to "revenue from self-operated enterprises" in manufacturing, construction, transport, retail, or other (non-primary) activity. In addition, the data include 7,941 reports of "income from household-run business" in planting, fishing, herding, or forestry.

These data imply an average of 393.2 enterprises per 1,000 persons in the RCRE sample for 1999, of which 273.8 represent primary-sector activity and 119.4 relate to enterprises in manufacturing or services.⁹⁷

The bottom panel of Table 5 replaces the NAIC registration figures for rural enterprises by assuming a total of 119.4 enterprises per 1,000 persons in rural China for 1999 and then applying the annual percentage changes in numbers of rural enterprise per 1,000 persons from the NAIC figures to obtain a revised series of enterprises per 1,000 persons in rural China. This single adjustment makes no effort to correct either the apparent undercount of rural primary-sector businesses or the unlikely downward trend in individual rural enterprises, for which the NAIC figures show an improbable 55% decline between 1999 and 2008. Even so, the revised figures for enterprises per 1,000 persons shown in the bottom right-hand column

⁹⁴ Liu and Zhao, "Woguo geti gongshanghu."

⁹⁵ Many researchers have used these data. For a description of the survey, see Dwayne Benjamin, Loren Brandt, and John Giles, "Inequality and Growth in Rural China: Does Higher Inequality Impede Growth?" Forschungsinstitut zur Zukunft der Arbeit, September 2006. A list of variables is available in John Giles, "The RCRE Household Data Set: Variable Definitions" ~ https://www.msu. edu/~gilesj/RCREHouseholdVariables.pdf.

⁹⁶ The author is indebted to Jialu Liu for providing these data.

⁹⁷ Removing migrants from the population total would increase these figures by about 2%. There is also a potential for a presumably small undercount if a single household manages multiple enterprises in a single sector (for example, retail).

⁹⁸ The revised rural figure for 2000, for example, is calculated from the revised 1999 figure by applying the officially recorded percentage changes in rural enterprises per 1,000 persons.

of Table 5, which in all likelihood understate the actual totals by a large margin, surpass all available figures for former Soviet-bloc economies with the sole exception of the Czech Republic.

Thus, contrary to expectations, a partially revised metric places China near the top of post-socialist economies in terms of small-business creation. Considering that formal institutions offer fewer protections to private entrepreneurs in China than in most other ex-socialist societies, the explanation for China's strong development of private business must emphasize the presence of informal arrangements that encourage and support the development of private business even in a difficult institutional environment.

Saul Estrin and Tomasz Mickiewicz argue that decades of Communism undercut trust and other informal arrangements that support entrepreneurship and private business. They report that "generalised trust was severely damaged during the command economy period, and is only recovering slowly" in the former Soviet Union and the transition economies of Eastern Europe. 99 While these authors see the malign social consequences of Communism continuing to limit entrepreneurship two decades after the Soviet Union collapsed, China, although still ruled by the Communist Party, consistently ranks among the highest-scoring nations in terms of generalized trust. In the fifth wave of the World Values Survey (2005–8), over half of Chinese respondents (52.3%) reported that "most people can be trusted," more than double the global average of 24.6%. 100 This result is also more than twice the average for residents of former eastern-bloc nations (20.9%), 101 who are said to be caught in a "low trust trap" where deficits of bridging social capital and trust reinforce each other in lowering individuals' incomes and well-being."102 Lolle and Torpe classify Chinese as "particularized trusters" because they tend to withhold trust from new acquaintances and from members of different religions and nationalities. 103 But these reservations leave ample space for ethnic Chinese to build business networks both within and beyond China's borders.

⁹⁹ Estrin and Mickiewicz, "Entrepreneurship in Transition Economies," 26.

¹⁰⁰ Wenfang Tang kindly provided these data from the World Values Survey.

¹⁰¹ See table 1 in Henrik Lolle and Lars Torpe, "Identifying Social Trust in Cross-Country Analysis: Do We Really Measure the Same?" forthcoming in Social Indicators Research and available at ~ https://springerlink3.metapress.com/content/d25832r0700189k5/resource-secured/?target=fulltext.pdf&sid=0gye4jjhbjqqpj55pedyh355&sh=www.springerlink.com.

¹⁰² Katarzyna Growiec and Jakub Growiec, "Trusting Only Whom You Know, Knowing Only Whom You Trust: The Joint Impact of Social Capital and Trust on Individuals' Economic Performance and Well-Being in CEE Countries," Munich Personal RePEc Archive, June 22, 2010 ≈ http://mpra.ub.uni-muenchen.de/23350/.

¹⁰³ Lolle and Torpe, "Identifying Social Trust in Cross-Country Analysis."

Entrepreneurship in China's Coastal and Interior Regions

Both historically and today, China exhibits wide regional variations in commercial capabilities, which are concentrated in coastal regions that have dominated domestic and especially international exchange for centuries. Links between involvement in international exchange and commercial sophistication abound. In Fujian, for example, Chin-keong Ng writes that

Trade in the pre-sixteenth century period was mainly an activity of the urban population and monopolized by a small number of merchants. Around 1500, it was recorded in a local gazetteer that the more interior districts...were still "unfamiliar with commerce" and their people "value only...agriculture"....After the mid sixteenth century, trading activities in these districts are no longer the monopoly of the larger coastal cities....More local people were engaged in trade, while tens of thousands of the rural South Fukienese sought their new livelihood in trade overseas. Around 1600, it was estimated that one half of the Fukienese population earned their living outside the home village. 104

The gap between commercially skilled populations along China's coast (especially in the south) and less adroit inlanders was already noted as early as 1500 and is clearly visible in China today, reflecting the persistence and heritability of cultural traits and organizational knowledge. In addition to the dominance of the coastal provinces in foreign trade and incoming FDI, which persists despite vigorous official efforts to increase the share of interior regions in cross-border flows of commodities and investment funds, 105 several examples illustrate the depth and persistence of regional variation in commercial sophistication.

• Cheng Li notes that "China's entrepreneurs are disproportionately distributed along the southeast coastal area." This reflects both the relative openness of regional governments in the south to promoting and supporting private business and the differential entrepreneurship of coastal residents (and in-migrants). 106 Supportive local government arises partly from the center's willingness to ease long-standing restrictions by establishing special economic zones (SEZ) at the outset of reform. Data for 2007 show that 62.5% of private firms (with eight or more employees) and 42.2% of individual ventures clustered in ten eastern provinces. The leading coastal provinces of Guangdong,

¹⁰⁴ Ng, Trade and Society, 12.

¹⁰⁵ Zhongguo tongji nianjian 2009, tables 17.12 and 17.19.

¹⁰⁶ Cheng Li, "China's Political Trajectory: Internal Contradictions and Inner-Party Democracy" (paper prepared for the conference "The Rise of China," Mount Holyoke College, March 7–8, 2008), 8.

Jiangsu, Shandong, and Zhejiang accounted for close to one-third (30.8%) of the individual firms. ¹⁰⁷

- Discussions surrounding the reform also recognized the superior commercial and entrepreneurial skills in the coastal regions. According to the memoirs of former premier Zhao Ziyang: "Originally, there were going to be more SEZs along the coastal regions, including around Shanghai and in Zhejiang province. But [prominent economic specialist] Chen Yun said that those areas were not to establish SEZs. This region, as Chen Yun put it, was famous for its concentration of opportunists who would, with their consummate skills, emerge from their cages if given the slightest chance." 108
- Long after initial reforms spread beyond the SEZs, Chinese observers recognize the continuing obstacles to development arising from obstructive governments and inadequate human resources in central and western China. In April 2008, Vice Premier Wang Qishan, addressing the Central China Investment and Trade Exposition in Wuhan, "urged leaders in central China to further liberate their thinking and speed up reform." Wang emphasized the importance of "transforming minds" and instructed the assembled leaders to "reduce intervention into micro-economic operations." Commerce Minister Chen Deming's promise to "help set up centers to train business brains in East China for the central region" highlighted the significance of regional differences in economic culture. 109
- Field investigations conducted in 2007 revealed regional differences in adjustment to the growing penetration of domestic and international market forces. Firms in Xian and Baoji (Shaanxi Province) frequently commented on their own limited sales capability. An apparel firm reported that its market position had slipped due to competition from coastal firms that enjoyed a six-month advantage in learning about fashion trends. The manager of a state-owned textile firm in Xian rejected suggestions that his firm could increase profitability by dyeing its products rather than selling plain cloth. His comment: *nanfang* (i.e. southern or coastal) firms do such things, but we don't—seemed to divide China's populace into two types: entrepreneurial risk-takers from the coastal south and more stolid personalities elsewhere.
- Factory visits in coastal areas provide similar observations. "Managers
 at a leading maker of auto parts were only able to produce products
 that were less 'quality demanding' in their inland facilities....They

¹⁰⁷ Zhongguo gongshang xingzheng guanli nianjian 2008, 260-61.

¹⁰⁸ Ziyang Zhao, Prisoner of the State: The Secret Journal of Zhao Ziyang (New York: Simon and Schuster, 2009), 102.

¹⁰⁹ Zhengzheng Gong, "Central China Urged to Up Ante," China Daily, April 28, 2008.

also report that efforts to raise standards encounter broader cultural obstacles at interior plants, even though they regularly use workers from the same provinces to staff their superior coastal plants."¹¹⁰

CONCLUSION

This article identifies human resources—specifically, the legacy of knowledge, skills, customs, and business practices accumulated during the decades and centuries prior to 1949—as key elements in the development and especially in the origins of China's continuing economic boom.

Economists increasingly recognize the far-reaching impact of cultural attributes. A succession of Nobel laureates has prodded practitioners of the dismal science to relax their traditional focus on individual decisionmaking and consider the economic consequences of cultural attributes. Friedrich Hayek identifies traditions and institutions as "the results of the experience of successive generations which are handed down....as a product of cumulative growth without ever having been designed by any one mind."111 Douglass North highlights the importance of collective learning, "not just the span of an individual's life or of a generation of a society."112 Leonid Hurwicz elaborates on North's view that "small initial differences in social or other characteristics may result in totally different paths of institutional development" and proposes an approach to constructing models of institutions in general as opposed to particular institutions. 113 Among students of Asia, Kazushi Ohkawa and Henry Rosovsky tie Japan's long-term development to a continuously expanding "capability to absorb borrowed technology," which they associate with Meiji era mercantile precursors of twentieth-century zaibatsu conglomerates. 114

While emphasizing the historical roots of China's current growth spurt, there is no need to downplay the substantial contribution of human resources developed under the PRC, visible in improved public health, expanded educational attainment, and extended life expectancy for the world's largest

¹¹⁰ Brandt, Rawski, and Sutton, "China's Industrial Development," 624.

¹¹¹ Friedrich A. von Hayek, The Constitution of Liberty (Chicago: University of Chicago Press, 1960), 27.

¹¹² Douglass C. North, "Economic Performance through Time," American Economic Review 84, no. 3 (1994): 359.

¹¹³ Leonid Hurwicz, "Social Absorption Capability and Economic Development," in Social Capability and Long-Term Economic Growth, ed. Bon Ho Koo and Dwight H. Perkins (Houndmills: Macmillan and St. Martin's Press, 1995), 126, 34.

¹¹⁴ Kazushi Ohkawa and Henry Rosovsky, Japanese Economic Growth: Trend Acceleration in the Twentieth Century (Stanford: Stanford University Press, 1973), 202, 19.

national population. In addition, the emphasis on local initiatives introduced during the Great Leap Forward has evolved into a unique and effective (though often wasteful) style of public-sector entrepreneurship on the part of local governments. Finally, the commune system, which set out to extinguish China's tradition of small-scale rural capitalism, produced an unintended boomerang effect that actually sharpened the entrepreneurial instincts of China's village population, thus fuelling the explosive response to the modest and hesitant rural initiatives that signaled the start of the reform era. 115

But despite the scale and impact of recent improvements in China's stock of human resources, there is massive evidence linking China's current boom to historic legacies that antedate the Communist revolution of 1949.

- Following twenty years of intensive and uncontested official efforts to denigrate entrepreneurship and profit-seeking, "when China stopped suppressing such activities...the response was immediate. Shops, restaurants and many other service units popped up everywhere....[because the] Chinese...had not forgotten how to trade or run a small business."
- Although emigration and persecution depleted the ranks of experienced business operators, lack of management skill—a subject notably absent from pre-reform educational curricula—offered no major obstacle to the operation of communes during the plan era or of rural and urban enterprises once the reforms began. China's deep reserves of rural management capability highlight the significance of what Tim Wright has termed China's historic "abundance of smalltime entrepreneurs."
- Reflecting long-standing cultural values, Chinese students and their families continued to pursue education in the face of extended periods of negative financial returns for graduates, suspension of merit-based school admissions, school closures, and political persecution of intellectuals.
- China's greatest achievement of poverty alleviation occurred during
 the initial reform decade, a period in which external assistance was
 notably absent. This episode, along with the substantial growth of
 private business in the face of limited support from the government,
 legal system, or organized finance, points to the importance of pre1949 informal institutions in understanding China's recent boom.

¹¹⁵ Rawski, "Is China's Development Success Transferable?" 342.

¹¹⁶ Dwight H. Perkins, "The Transition from Central Planning: East Asia's Experience," in Koo and Perkins, Social Capability, 231.

¹¹⁷ Tim Wright, Coal Mining in China's Economy and Society 1895–1937 (Cambridge: Cambridge University Press, 1984), 325.

• Accounts of current business methods illustrate these links with the past. A 2009 Economist report patronizingly describes China as "a society that believes that even the simplest transaction must be accompanied by receipts with thickets of signatures and 'chops' (seals)."¹¹⁸ But these are nothing other than the modern incarnation of systems developed by generations of businesses to protect against fraud and to assure clients that their hard-earned funds will arrive safely and without loss at the doorstep of recipients located in distant provinces or continents. These techniques enabled first TVEs and now private firms to make major contributions to employment and exports in the absence of official mechanisms that protect property rights and without a well-developed system of commercial law.

Comparative accounts further illuminate the unusual economic capabilities of ordinary Chinese. The business achievements of Chinese migrants surpass those of host populations not just in Southeast Asia but even in the United States, where enterprises owned by Chinese (and other Asians) "have better average outcomes than white-owned businesses." Even though would-be entrepreneurs in states formerly belonging to, or associated with, the Soviet Union benefit from market institutions that are generally better developed than in China's Communist-ruled system, comparative data show fewer enterprises per 1,000 persons in nearly all these states than in China, even without adjusting for what appears to be a serious undercount of Chinese agribusinesses. The alleged tendency for Communist rule to erode interpersonal trust, a standard explanation for weak entrepreneurship in the former Soviet Union and its former allies, remains invisible in China. Instead, the Chinese demonstrate high levels of interpersonal trust, reflecting traditional behavior patterns that have survived six decades of Communist rule.

Recent events add to the evidence of Chinese exceptionalism. In the Italian city of Prato, "Chinese laborers, first a few immigrants, then tens of thousands....transformed the textile hub into a low-end garment manufacturing capital—enriching many, stoking resentment and prompting recent crackdowns." A local industrialist commented that "the Chinese are very clever. They're not like other immigrants." Reporters noted that "what seems to gall some Italians most is that the Chinese are beating them at their own game—tax evasion and brilliant ways of navigating Italy's notoriously

^{118 &}quot;Logistics in China: Return to Sender," Economist, April 30, 2009.

¹¹⁹ Robert W. Fairlie and Alicia M. Robb, Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States (Cambridge: Massachusetts Institute of Technology Press, 2008), 172.

complex bureaucracy—and have created a thriving, if largely underground, new sector while many Prato businesses have gone under." ¹²⁰

Equally revealing is the Chinese term *tuangou*, which loosely translates as "team buying or group buying (also known as store mobbing)":

This term refers to a recently developed shopping strategy originating in the People's Republic of China. Several people—sometimes friends, but possibly strangers connected over the internet—agree to approach a vendor of a specific product in order to haggle with the proprietor as a group in order to get discounts. ¹²¹

Why did the development of this consumer technique await the spread of the Internet to China? Commenting on the economic achievement of Chinese migrants in Southeast Asia, Maurice Freedman offers an answer that summarizes the thrust of this essay: the fundamental reason why "the Chinese were economically successful...[was and remains] because in their quest for riches they knew how to handle money and organize...in relation to money." [22]

¹²⁰ Rachel Donadio, "Chinese Remake the 'Made in Italy' Fashion Label," New York Times, September 13, 2010.

^{121 &}quot;Tuangou," Wikipedia ≈ http://en.wikipedia.org/wiki/Tuangou.

¹²² Maurice Freedman and G. William Skinner, The Study of Chinese Society: Essays (Stanford: Stanford University Press, 1979), 26.