

How Has the Chinese Economy Developed So Rapidly? The Concurrence of Five Paradoxical Coincidences

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Abstract

This article examines five surprising and historically contingent coincidences, pertaining separately to land, capital, labor, entrepreneurship, and technological innovation, whose concurrence and confluence go a long way toward explaining China's remarkable record of development in the past thirty-five years. They also reveal the roots of the problems that have accompanied that development: gross social inequality, a persistent and oppressive bureaucracy, and a drastic environmental crisis.

Keywords

Chinese Communist party-state, land financing, drawing in businesses and investments, cheap labor, communist entrepreneurship, globalized technology transfer

How and why has the Chinese economy developed so rapidly, at 9% plus per year for 35 years? China's leaders themselves characterize their approach as “feeling for stones while crossing the river,” which means that there has been no fixed plan or path, and that much has happened by incremental choice and

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chance. They are in fact as surprised as the rest of the world by the stunning success of what has happened—the fastest and longest period of dramatic growth in economic history.

There has of course been a slew of answers proffered, some by scholars, others by journalists and commentators and others. We will leave that discussion to later, after the basic empirical information has been presented. What this article attempts to do is to offer first some tentative thoughts from an angle that has not received much attention. In particular, I emphasize here that five major coincidences, and their concurrence/confluence, go a long way to explaining this unprecedented and extraordinary Chinese experience. They help explain not just how the successful development took place, but also the problems it has wrought—gross social inequality, a still hugely burdensome bureaucracy, and a drastic environmental crisis.

The Five Paradoxical Coincidences

Land: Land-Use and the Chinese Communist Party-State

The Chinese Communist party-state was forged in revolutionary struggle and, through “socialist transformation” and the establishment of central planning, became a highly bureaucratized and authoritarian entity. Almost all analysts, as well as Chinese leaders themselves, are agreed that that mammoth entity became a hugely obstructive force against innovation and enterprise. What happened, we need to ask, when it remained intact and took on the new revolutionary task of reform, of marketizing the economy?

That combination of the Chinese Communist party-state with the drive for marketization was in and of itself extraordinary and paradoxical: how can a communist party committed to planned allocation of resources lead the way to market allocation by prices? In Russia and Eastern Europe, that kind of change was accompanied by the dismantling of the communist party-states. In China, the historical combination of continued communist party-state rule with marketizing reforms was itself paradoxical—in the sense of running counter to the expectations of most existing theory. It was itself an extraordinary coincidence of history.

To Western observers, accustomed to the experiences of capitalism, for that combination to work at all was surprising. To Chinese leaders, it was less so, given the historical experience with the other side of the Chinese Communist party-state: an organization that had proven to be extraordinarily effective in mobilizing human and material resources in protracted war, first of resistance against Japan, a much more powerful enemy, and then of revolutionary civil war against the American-equipped Guomindang armies, also

a much more powerful enemy. The Communist Party managed to win overwhelmingly against all odds. Then, after its triumph in revolutionary war, it proved its extraordinary effectiveness again in restabilizing and reorganizing the economy, and in fighting the United States, an even more powerful enemy than any it had faced, to a standstill in Korea. Just as dramatically, it led China's efforts to develop nuclear weapons and ballistic missiles, exploding the first atomic weapon in 1964 to the consternation of the world, followed by a hydrogen bomb in 1967, and a satellite in 1970. It would not be all that surprising, therefore, if the Chinese party leaders had some measure of confidence in the party's ability to lead another dramatic change. Though there surely could not have been any certainty about its ability to succeed, given the fact that nothing of the sort—a communist party leading marketizing reforms—had been done before.

As detached observers with the benefit of hindsight, we might tentatively make the following observation: the Chinese Communist party-state can be hugely oppressive and obstructive for the economy, yes, even to this day, yet it can also be tremendously effective and powerful in pursuing a set purpose.

A dramatic demonstration of the logic of the latter is in land-use by the party-state in its pursuit of reform. Generally speaking, land plays a major role in any development process, most especially in urbanization, not least because of its tremendous appreciation in market value along with urban development. In a society-economy with "secure private property rights," as in most present-day developed Western countries, for the state to exercise its "right of eminent domain" and gain control of land for urban infrastructural development could be very time-consuming and expensive.

The Chinese Communist state, however, was in a very different situation. Historically, the emperor did in theory claim ownership of all land, but that was a far cry from actual practice, in which secure ownership of land by peasant owner-cultivators and landlords had a long and stable history. But the revolutionary Chinese Communist party-state, after conducting the Land Reform (1946–1952) that had as its purpose the turning over of land to its cultivators, then went on to the "collectivization" of land and "socialist transformation" of property ownership. With collectivization, it in theory turned over land from individual peasant households to the collectivized village; in fact, however, with the village being the lowest rung in the administrative organization of the party-state, that village ownership could always be overriden by the party-state. What that meant was that the Communist party-state came to wield both theoretical/legal and practical ownership of all land in the country. With the coming of reforms, that party-state, unlike in Russia and Eastern Europe, where land was mostly privatized, held on to that control

and ownership of all land. In the cities, that ownership was simple and straightforward, without the complicating twist of collective ownership. There was and is no privately owned land, not even the land under the private residences of today. That gave the Chinese Communist party-state much greater control over the resource of land for urban development than a liberal-democratic state with firmly established private ownership of land. Chinese local governments, we might even say, have been in a position to do with land what American “robber barons”—like Andrew Carnegie, John D. Rockefeller, and J. P. Morgan (“Robber Barons,” 2003)—at the turn of the twentieth century had been able to do, and more.

The consequences have been far greater and more important than perhaps anyone could have expected, until after things had actually been tried and done. The state’s nearly total power over land meant, first of all, that it could requisition 征地 land for state-set development purposes almost at will, and relatively cheaply. To date, the state has requisitioned a total of perhaps 100 million mu (16,700,000 acres) or more of cultivated land (out of a total of about 2 billion mu of cultivated land nationwide) for urban development purposes,¹ most of it for relatively little, when compared to the value of the fully developed land.

In a majority of cases, the land could be requisitioned from the peasant cultivators (mostly in areas adjacent to the city) for a bare-bones compensation close to what the peasants were obtaining from farming the land. For example, if the peasant household holding the household “responsibility land” use rights over the land (granted to them at the beginning of the Reform period under the “decollectivization of agriculture”) could net 300 yuan a year from one mu (one-sixth of an acre) of land (under grain) (as had been the case before the formal termination of the agricultural tax and fees at the beginning of 2006 and the sustained rise in crop yields in the past ten years), the state needed to put up only that sum times the number of years of responsibility use rights held by the peasant to make up a “reasonable” compensation for the land. Those rights had been granted at first for fifteen years in 1984, with periodic readjustments from deaths, births, and migration out of and into the village and then later, in 1998, were extended for another thirty years. If we take the multiple of thirty years, that would mean a measly sum of less than 10,000 yuan for one mu of requisitioned “raw land” 毛地 (i.e., without the necessary developmental infrastructure). But it would come to be worth, in schematized terms, about ten times that much once the needed infrastructural support (roads, water, power, transport, and such) was in place, and a hundred times that much when fully developed with residential condos or factories.² Historically, one dramatic illustration of the rise in land values with development is the case of Shanghai: one mu of land in Shanghai in

1843 was worth just 6 to 10 silver taels; by 1902, land on the Bund had come to be worth 30,000 taels per mu, 100,000 taels by 1906, 175,000 taels in 1925, and 360,000 taels in 1933 (Zhao Qizheng, 2007: 195).

Of course, as the extent of appreciated value to come became clear to peasants, resistance to the simple and easy requisitioning of the land grew, to account for the largest proportion of the tens of thousands of “group protests” 群体事件 against the state in recent years (more than 90,000 cases in the years 2007, 2008, and 2009—Yu Jianrong, 2010). And the needed “compensation” for requisitioned land has steadily gone up, varying from tier one cities (just a handful) to tier two cities (about 60), and tiers three and four cities (about 200), and also depending on the proximity to the centers of business.³

Nevertheless, the (local) governments have gained hugely from their land requisitions. Typically, the state would “assign” or “yield” 出让 the “ripe land” (熟地, i.e., with infrastructural support) to private (domestic and international) developers once its infrastructure had been built, usually at a large multiple of its initial requisition cost. Those rates of appreciation in land value, of course, are consequences of the tremendously rapid development of the cities during the Reform period—something no one could have been certain about until the whole thing had been tried and done, first in “special economic zones” like Shenzhen, then in spearheading cities like Shanghai, Beijing, and Guangzhou, and finally in other major cities like Chongqing, and radiating out from those first-tier cities to second-, third-, and fourth-tier cities.

Once that pattern was established, banks were typically willing to extend credit to local governments with the land as security, based on the anticipated appreciation. For the local communist party-states, that meant a ready source of funding for infrastructural construction, often with earnings to spare, without which those governments would not have been able to undertake the necessary development. Revenues from land development, in fact, came to account for the bulk (as much as 60%—Tianze jingji yanjiusuo, 2007: 10) of the “extra budgetary” 预算外 revenues (beyond salaries and routine maintenance expenses of the government) of almost all local governments. Dubbed “land financing” 土地财政 or “the second finance” 第二财政, this has been the key to the solvency of local governments and their capacity for infrastructural development in the Reform period, without which nothing like the urban development that has taken place could have been carried out.

To use Chongqing city’s relatively well-documented case as an example, its “storage” of requisitioned development land (under the leadership of Mayor Huang Qifan, who had acquired experience for such earlier in Shanghai) of a total of 300,000 mu (50,000 acres) was the key to the city’s subsequent

dramatic development. First, it was what enabled Chongqing to overcome the “troubled assets”—troubled from corruption and abuses in state-owned assets, with bad debts totaling 15.7 billion yuan (as a result of embezzlement, mismanagement, and the like). The large amount of accumulated land and its potential market value enabled Huang Qifan to take over in one fell swoop those bad debts and acquire ownership of no fewer than 1,160 state enterprises, in 2003, for a deeply discounted (22.5%) sum of 174.6 billion yuan. And then, to revive and reorganize those thousand plus enterprises by further massive infusion of the land and land-based capital. The state firms were consolidated and remade into the “eight big investment” firms of the Chongqing government, mainly for infrastructural development: for urban development, freeways, major roads, transportation, energy, land, water supply, and water resources. With the city’s subsequent vigorous infrastructural development, the market value of the state firms jumped to 1,050 billion yuan by 2009, in the short span of six years. (For details, see Huang, 2011b: 578–80.)

Those state-owned enterprises (SOEs) and their earned profits, in turn, enabled Chongqing to develop also a so-called third finance (in addition to the “first finance” of the official budget for salaries and maintenance, and the extra-budgetary “second finance,” mainly revenues from land development and profits from assignment of land to private developers), based on profits from its SOEs (Huang, 2011b: 578–80). That third finance contributed greatly to a GDP growth rate of 16% a year in Chongqing in the five years before 2011, the year Chongqing was selected by *Fortune* magazine as one of the fifteen new cities worldwide deemed best for business (Qu Hongbin, 2012; “Caifu” [Fortune], 2011).

In Chongqing, the “second” and “third” finances together were what made possible exemplary policies and actions with regard to the problem of the huge numbers of “peasant migrant workers” 农民工 that so afflicts China today (more below), the centerpiece of which was the building of large numbers of inexpensive rental housing by the government’s own Urban Development Company, of 40 million square meters of affordable rental housing, to house 2–3 million migrant peasant workers and new college graduates, at a low rent of 10 yuan per square meter, or 500–600 yuan for a typical apartment of 50–60 square meters. Tenants would earn the right to purchase the units after five years of rental—a clear path to a dignified life in the city (Huang, 2011b: 591). Implicit in that and other measures to benefit migrant peasant workers is a strategy to drive development by expanding consumption (by peasant families becoming permanent residents in the cities), and also one that might be termed social equity for the sake of development and development for the sake of social equity, very different from that of “equity in poverty” of the planned-economy era.

The key to the financing of that construction was, instead of settling for just the profit from the “primary housing market” 初级市场 to the “secondary housing market” 二级市场, from the appreciation in value from the originally requisitioned raw land to the assignment to private developers of the ripe land with infrastructural requirements, the government itself entered into the tertiary market of building completed residential units. In reality, what the government put in was just the original raw land; bank loans based on the added appreciation in value of that land made up the largest portion of the government’s investment in the project. That was what covered most of the building costs. The interest on the bank loans are being paid by the rents received. And the principal is to be repaid from the sale of the units to qualified residents.

This Chongqing experience has now been adopted as the nation’s model, though the extent to which it will actually be replicated elsewhere remains to be seen. For now, this part of the story and its scale is unique to Chongqing. It shows not the typical pattern but what is possible.

The more typical story is the large governmental revenues from land in the “second finance.” That is what has enabled local governments to take on necessary infrastructural development for the cities. The whole thing has been predicated on rapid appreciation of land values, in turn dependent on the rapid rate of urbanization, and further predicated on a vast urbanizing population undergirding the strong demand for housing.

To date, with still just 53% of its population in the cities after some 35 years of rapid urbanization at an average rate of about 1% of the population a year (counting peasant migrant workers, most of whom will not remain permanently) (Zhongguo tongji nianjian, 2013: table 3-1), China still has quite a long way to go yet along the path of urbanization, which means continued rapidly expanding values for land used for urban development. That is one very important reason for a strikingly long period of sustained rapid economic development for China, with years more to come if things continue at the same rate.

The land story, however, does not stop here, for it has been important also in the local governments’ aggressive pursuit of domestic and international investment to power the kind of development that made the above story possible.

Capital: “Drawing in Businesses and Investments” and the Chinese Communist Party-State

The party-state apparatus that mobilized land resources for development had been elaborated and consolidated through “socialist transformation” and planned control of the economy, but in Reform China it has since the

mid-1990s set itself the goal of “drawing in businesses and investments” 招商引资 to help power China’s development. It has set success in drawing in such businesses and investments as the main standard by which local party officials are regularly evaluated—by an elaborate, quantified system of measuring performance according to “targeted responsibilities” 目标责任制, with GDP growth as the key item (Wang and Wang, 2009). Here, once again, we find the unthinkable paradox: of a communist party-state setting for itself the goal of drawing in (capitalist) businesses and investments.

Once again, how can an authoritarian party-state that is so clearly obstructive to free enterprise play the role of attracting it to particular localities? Would not the elaborate bureaucratic machinery prove to be an insurmountable obstacle for profit-seeking enterprises? Would not the requirement of dozens of official “stamps” (of approval) from a maze of government organs for even the smallest tasks—the most frequent complaint of everyone in China—make “transaction costs” impossibly high when compared to the contract- and law-based Western market economies?

While it is most certainly true even today that almost nothing can be done without the endorsement of the all-intrusive party-state bureaucracy, that the difficulties of getting official approval are immense even for projects that are explicitly condoned by law, it is also true, just as the above two-sided characterization of the party-state vis-à-vis urban development suggested, that conventional wisdom about the Chinese party-state simply does not apply when the party-state itself is the entity undertaking the task. In that event, it has shown that it and it alone can make things happen even more smoothly and quickly than in a liberal-democratic country. It is not just that the state can overcome, skip over, circumvent its own bureaucratic barriers, but also that the state can mobilize resources, bend laws and rules, provide unusual incentives, and so on, to accomplish its goal—in this case, of drawing in businesses and capital investments.

We come here to yet one more surprising fact—paradox—about the Chinese Communist party-state. It is, to be sure, highly centralized and bureaucratized. Officials at each layer of the bureaucracy behave like slaves or children before their immediate superiors, who wield immense powers over their subordinates’ careers and even day-to-day lives. The center sets and calls the tune for the entire governmental apparatus. Under the dictates of “democratic-centralism” (with open discussion until a decision is reached, which then demands unconditional obedience), the center wields dictatorial powers over the entire apparatus, most dramatically demonstrated by the exclusive powers of appointment of its Organization Department and also by the power to discipline party members through its Discipline Commission—by which even the highest level officials can be subjected to the “double

fixed” *shuanggui* 双规 system, through which an official to be investigated would be completely isolated at a fixed location for a fixed period, without recourse to any legal counsel, and unable to contact anyone, not even family members. It is an extra-legal system that originated in 1990 with the party’s Discipline Commission’s dealings with mounting numbers of corruption and abuse cases, but it has deep roots in the party’s history—in its dealings with suspected traitors.

Yet, this very same party-state has established as one of its own organizing aims the principle of “initiative from two sources” 两个积极性 (going back to Mao Zedong’s 1956 “Ten Great Relationships,” and employed by Deng Xiaoping for reform purposes), calling for the combining of centralism with local initiative. It is that principle, and its paradoxical combination of centralism with decentralized initiative, that provides a unique institutional environment for competition among local governments to draw in businesses and investments. In that latter endeavor, local governments in fact exercise considerable latitude and initiative.

Some observers have pointed to this aspect of the Chinese Communist party-state as the main dynamic driving China’s vigorous and rapid development. This system is operationalized in the form of local government competition in economic performance measured in terms of GDP growth, the key to the measurement and promotion of local officials. And the key to that is, in turn, the relative success of each in drawing in businesses and capital investments.

To give just one example for illustration, of the competition between Beijing and Chongqing cities to become the site for the planned automobile plant of the Chang’an Auto Company (the fourth largest auto company in China), along with its joint venture with Ford Motor Company. Beijing Municipality, through Mayor (and Politburo member) Liu Qi 刘淇, had offered Chang’an 5,000 mu of discounted land as an inducement to set up its plant in Beijing, announced already in 2010. Chongqing’s Mayor Huang Qifan, however, topped that with an offer of 10,000 mu of land, at just 50,000 yuan per mu, about one-fourth to one-sixth of the market price at the time of such centrally located land. And this offer was made part of a grander plan to develop a “100 billion [yuan] auto city,” offering to Chang’an-Ford the prospects of the advantages of industry aggregation. We do not know about the other inducements, such as tax benefits, low interest loans, or other assurances that were likely part of the unannounced terms of the deal (“Chang’an qiche,” 2011; Huang, 2011b: 574).

That kind of competition sets the background for the drive that took China to the top of the world by 2005 as the most desirable destination for investment in the eyes of global capital, according to a survey of multinational

corporations and specialists conducted by the United Nations Conference on Trade and Development (UNCTAD) (Gao Bai, 2006: table 7). As additional examples, in Zhejiang and other coastal areas, local governments typically provided land at discounts of 20% or so less than what it cost the local governments themselves to develop the land, and in one of every four cases even at just half the cost (this in anticipation not only of the GDP development to come, but also of tax revenues) (Tao and Wang, 2010; Tao et al., 2009; cf. Huang, 2011a: 17–19). Again, this does not include clear and systematic data on tax benefits and bank loan deals and the like. And, perhaps, even includes tacit understandings with respect to relatively relaxed environmental pollution control. Regardless, such competition among local governments, and the special incentives they offer to businesses, have made China of special appeal to major investors. Among Chongqing's other major coups in drawing in businesses are big investments from Hewlett Packard, with Chongqing now already turning out 100 million notebook computers a year. This is tied to an imaginative scheme initiated by Chongqing with the participation of five other countries (Kazakhstan, Belarus, Russia, Poland, and Germany) for fast shipping to Europe: once customs has been cleared in Chongqing, it takes only 14 days for containers to reach Duisburg in Germany, cutting the time required for transporting goods to the European market via ocean shipping from eastern and southeastern Chinese ports (28 days) by half ("Yu-Xin-Ou tielu," 2012; cf. Huang, 2012: 616–17).

It is not surprising, therefore, that a study of the Brookings Institution should have found returns to investment in China to be in the neighborhood of 25% per annum in the years 1979–1992, and of 20% per annum in 1993–1998 and after (Bai, Hsieh, and Qian, 2012; cf. Huang, 2011a: 21–22). That has been the key to China and its local governments' ability to draw in vast amounts of foreign capital and, by the same methods, major domestic capital.

Needless to say, foreign trade (exports + imports), standing at 64% of China's GDP by 2005 (Naughton, 2007: 377), has been a major factor in China's rapid growth. Behind that are the large amounts of foreign capital invested in China, behind which in turn is the paradoxical role played by the Chinese Communist party-state, central and local, in its success in attracting such investments. The tremendous power and capacities to mobilize resources of the Chinese state, shown perhaps most dramatically by its relatively easy access to land, has been the key factor. But all that would have amounted to nothing had it not been the historical coincidence of globalization with the Chinese Communist party-state's resolve to draw on world capitalism and world markets for purposes of Chinese development.⁴

Could all this have been foreseen and planned? Not likely, because there are too many pieces that happen to fit together, without any one or another of

which (access to land, rapid urbanization, all-powerful party-state shaped through socialist revolution but determined to draw in capital investments, globalized trade, global capital in search of high returns) the above could not have happened. Even so, we have not yet examined what is perhaps the most crucial element of all that made up the new compound of rapid Chinese development: burdensome surplus labor that became a major dynamic for rapid growth, when given the coincidence with the above conditions.

Labor: Labor Use and the Chinese Communist Party-State

Underemployed surplus labor had plagued China since the eighteenth century, as was grasped and expressed clearly by Hong Liangji, “China’s Malthus” (Hong Liangji, 1877 [1793]). Mounting population, and the exhaustion of sources of new land after the settlement of China’s last frontiers (mainly hillside land and the northeast frontier) in the fourteenth to the twentieth centuries, had become a major cause of late imperial and modern China’s social crises (Huang, 2002: 528–31; Huang Zongzhi, 2014a: 3.49–52). By the twentieth century, each Chinese peasant family averaged less than two acres (12 mu) of land to farm (compared with the average farm size of 447 acres in the United States in 2007). For the majority, there were simply too many mouths to be fed and too little land to be worked. Ever increasing pressures on land pushed Chinese agricultural production to highly intensified extremes that were accompanied by declining marginal returns to labor. Single-cropped land became double and then even triple cropped, with each additional crop yielding less and less relative to inputs of labor and fertilizer. Pressures on land drove also “subsidiary production” 副业 (handicrafts 手工业—cotton spinning and weaving, silk reeling, straw basket weaving, and the like), each yielding less and less per workday than the main occupation of farming, and most of them absorbed by the auxiliary production units 辅助劳动力 of the peasant household—the women, the young, and the elderly. Cotton spinning took up the most labor, yielding only about a third as much as a day’s work in the fields, but it was sustained by auxiliary household labor and by demand from a cotton revolution in which, in the space of five centuries, almost all Chinese came to wear cotton cloth, whereas before that, very few did (Huang, 1990: 44–46). The result was to bind together tightly household industry and farming, which precluded the separation of the two into “protoindustry” in town and farming in the countryside, such as occurred in eighteenth- and nineteenth-century England and Western Europe (Huang, 2011c).

That created an agricultural economy that was powerfully resistant to labor-saving mechanization, even to more animal use in farming, or

labor-saving technological improvements in handicrafts (e.g., the three spool, foot-pedaled spindle 三个锭子的脚踏纺车—Huang Zongzhi, 2014a: 3.37–39; cf. Huang, 2002: 516–17), until, that is, cotton mills with mechanized spindles came to replace household handicraft reeling (because they could operate at a labor productivity ratio of 40 to 1 against household hand spinning), driving prices of yarn down almost to the level of raw cotton. And there was little incentive for mechanization of farming, until it was found in the 1960s that tractors could in some areas help raise double-cropping to triple cropping (by shortening the required plowing period during the rush between crops to allow for the third cropping). What it all meant was that returns to labor remained abysmally low, since mechanization to raise labor productivity could not make much headway.

But all that changed with the flood of off-farm employment for peasants that came with the party's taking up the drive for, first, "rural industrialization." The groundwork had been laid by the planned economy's "forced draft" industrialization (i.e., driven by state investments, mainly in heavy industry) of the preceding 30 years. The economy was now in a position to supply the needed energy, steel, machinery, and the like for rural industry. Urban state factories were now able to help small rural industrial enterprises ("the big fish help the little fish" 大鱼帮小鱼), by sending down old equipment to help jumpstart brigade (village) and commune (township) industry, or contracting with cheaper village labor to assemble urban manufactured products. The groundwork had also been laid by the party-state and collectivization: large numbers of able cadres had been trained at the village and township levels, and the party apparatus (down to the branch committee 支部 in each and every village) had the capacity to organize—to redistribute resources and labor from farming to off-farm production—and lead in the drive for rural industrialization, once that decision had been reached at the center (Huang, 1990: chap. 12).

The combination of rural surplus labor (underemployed farm labor), leadership of capable rural cadres, and access to old machinery was enough to drive a stunningly rapid development of rural industry at the rural village and township commune levels—in what might be called, paradoxically, industrialization without urbanization. Liberalization toward a marketized economy provided the demand and the outlet for a myriad of what were at first junkyard products (e.g., wash basins, cheap clothing, locks, recycled-plastic products, and so on) and inexpensive processing for the larger factories of what became, in time, higher quality and larger scale products. The housing construction boom, in rural towns and villages, provided another off-farm outlet for hitherto underemployed farm labor (Huang, 1990: chap. 12).

The result was stunning growth of rural industry, the lead-off for China's rapid economic development of the past thirty-five years. Within the space of

a decade, the new rural township and village industries came to employ no fewer than 92 million peasants (14% of the total national labor force of 647 million) (Huang, 2011a: table 3, p. 13; see also Huang Zongzhi, 2014a: 3.table 11.3, p. 228, and table 11.4, p. 233). Rural industry had grown at the rate of more than 20% per year, such that rural industrial output came by the end of the decade to account for roughly 20% of total industrial output in the country (Zhongguo tongji nianjian, 1991: table 10-1).

Even so, the amount of underemployed labor absorbed into rural industry was still less than the new labor added from the very high rate of population growth that had come with the great improvement in China's health services from the 1950s on. The next wave of expanded urban employment came in the mid-1990s with the influx of globalized outside capital and newly emergent domestic private capital. Urban employment in new enterprises built with joint Chinese-foreign capital and domestic capital drove expanded employment for rapidly increasing numbers of peasant migrant workers, who in turn generated demand for small urban services—low-cost food and clothing stalls, repair shops, carpenters, tailors, cobblers, eateries, and the like—to serve the needs of the new migrants, who often congregated to form sizable migrant worker communities or “villages” in the big cities. Manufacturing, including processing of goods from outside for export, and construction (especially for the booming housing industry) remain the big two industries, accounting for more than half of the total peasant migrant work force (Huang Zongzhi, 2014b: 3.311–12). Soon, the numbers of peasant migrant workers who “leave both the land and the village” 离土又离乡 topped 166 million, and those who “leave the land but not the village” 离土不离乡, 103 million (“2013 nian quanguo nongmingong jiance diaocha baogao,” 2013).

For peasant households, off-farm employment meant, first, the removal of surplus labor from farming. Underemployed households could now send off one or more workers into off-farm employment, resulting in fuller employment for those who remain in farming. The greatly increased employment meant dramatic increases in labor productivity, especially if measured in terms of the entire household.

At the same time, the confluence of three broad historic tendencies served to revolutionize Chinese farming: off-farm employment and the tight birth-control policies begun about 1980 finally resulted by the mid-1990s in shrinking numbers of new people entering the workforce each year. At the same time, rapid economic growth and rising incomes brought a fundamental restructuring of Chinese food consumption patterns, from the traditional grain:meat:vegetables ratio of 8:1:1 to a new pattern approaching that of Taiwan and the food consumption patterns of the urban upper-middle and middle classes, a ratio of 4:3:3. The result was a restructuring of Chinese

agriculture itself, shifting toward higher and higher proportions of high-value-added products, from grain toward more and more meat, poultry, and fish, and higher value vegetables and fruits (Huang Zongzhi, 2014a: 3.chap. 5; cf. Huang Zongzhi and Peng Yusheng, 2007). Those broad tendencies, in turn, drove a “hidden agricultural revolution” (“hidden” because it is so different from traditional agricultural revolutions powered mainly by increased output per unit area in given crops) in which output value (at constant prices) rose by about 6% each year from 1990 to 2010, doubling every twelve years (Huang Zongzhi, 2014a: 3.104–7), dwarfing the dimensions of traditional agricultural revolutions, like the English agricultural revolution of the eighteenth century, during which output increased by only about 0.7% a year, to double in a hundred years, or the more recent “green revolution” of the 1960s and 1970s, in which output rose about 2% to 4% a year, driven by increased use of chemical fertilizer, scientific seed selection, and tractors. That “green revolution” had happened also in China, but its effects for increased per capita output were largely whittled down by an ever-expanding agricultural labor force and ever-intensifying labor input on land. It was the later “hidden agricultural revolution” that truly drove the increase in per capita output value in agriculture, resulting in substantial increases in peasant per capita incomes (although the costs of production have also risen greatly with the increased use of chemical fertilizer, improved seeds, and tractors).

Those increases, along with off-farm peasant migrant worker incomes, went a long way toward funding significant expansions in capital inputs (fertilizer, improved seeds, tractor use) per unit of land and of labor in farming. Contrary to what one might expect, peasant incomes accounted for those investments more than state investments and subsidies in agriculture or capital investments by agricultural enterprises (for detailed documentation, see Huang Zongzhi, 2014a: 3.chap. 8). Off-farm peasant incomes, we might say, have gone to fund a great deal of the capitalization/modernization of small-scale Chinese agriculture. At the same time, the self-employed family farm has remained the mainstay of Chinese agriculture: as of 2006 (the latest reliable data available, pending the next decennial survey to be done in 2016), hired agricultural workers still accounted for only a meager 3% of the total agricultural labor force. Even most of the farming of large agricultural enterprises remains under small-scale family farming, by contract or agreement to purchase (Huang, Gao, and Peng, 2012).

These paradoxical and extraordinary coincidences—of abundant surplus labor with the coming of capital investments—made up another of the “secrets” to China’s impressive development. Surplus labor and global capital drew each together like magnets: for the peasants, the need for fuller employment, and for capital, the need for cheap labor that would provide

higher returns to capital. This combination was the last critical factor that brought global capital and the Chinese economy together: cheap (and rapidly appreciating) land, special incentives from Chinese local governments, relatively lax environmental control, and vast numbers of cheap labor together made up an almost irresistible attraction for capital from outside China. The coming of those, in turn, drove the rapid rise of domestic Chinese capital, not least by jointly owned enterprises, as well as enterprises to serve the needs of the giant multinationals investing in China. The bigger and more successful of the Chinese firms, like Chang'an Auto Company, in turn, could even command local government inducements that exceeded those extended to the foreign multinationals—because they were Chinese, and not foreign. The result was the powerful three-way combination of the distinctive and paradoxical conditions for the crucial productive factors of land, labor, and capital, each feeding on the others to drive rapid, spiraling economic development.

Could it all have been planned and foreseen? Surely not. For there was no available prior experience for the combining of a communist party-state with capital, and capitalized land, much less any available theory. The entire experience was as new for China as it was in the eyes of the West. Nor was there any prior experience with the new global phenomenon of “outsourcing,” now powered by the altogether unexpected solicitation of the Chinese party-state. Earlier, it would all have been seen as “exploitation” of Chinese labor by foreign capital. Who could have imagined that arranging for such a combination would become the most important criterion for Communist Party official advancement?

Seen from the Chinese government side, all this could not have been much more than practical, incremental choices made during the course of implementing a strategic decision to drive Chinese development by “opening up” to, then aggressively competing for, outside investments and businesses through different means and methods. Even the tide of peasant migrant workers was unexpected and unplanned: in its first decade, local governments typically obstructed, even forbade and drove out, such migrant workers. To this day, they continue to allow, but not encourage, much less provide necessary public services and housing for such workers (excepting a city like Chongqing). Standardized laws and regulations continue to discriminate against such workers in terms of labor protection and benefits (more below), and of schooling for the workers’ children: peasant migrant workers are not eligible to enroll in public schools at their places of employment, unless they pay hefty fees for “selecting a school” 择校; free or low-cost education is available to them only in their home villages and towns by their household registration—a major cause of the painful phenomenon of 61 million “children left behind” in the home village 留守儿童 while their parents work and

live in the cities away from home (“Liushou ertong,” 2014). The governments have shown that they only tolerate such labor because they must.

Entrepreneurship and the Chinese Communist Party-State

What about entrepreneurial talent, that other crucial ingredient for economic development? The above discussion should have made clear that China’s development experience is highly paradoxical from that point of view as well. To be sure, there has been no shortage of private entrepreneurs, since the private sector has come to account for more than half of the total non-agricultural GDP in China (Szamosszegi and Kyle, 2011). All the media hype in September of 2014 surrounding the IPO (initial public offering) of Alibaba and its chairman Jack Ma has surely lodged the associated images firmly in the minds of the global business community as symbols of extraordinary Chinese entrepreneurial talent. If we go back to the start of China’s reforms at the beginning of the Chinese Communist Party’s decision to allow coexistence with capitalism, when a big step in 1987 was to allow private “self-employed” entities 个体工商户 hiring no more than eight workers (“Chengxiang geti gongshanghu guanli tiaoli,” 1987—above that number would be considered “exploitation” of labor by capital), all this would seem quite mind-boggling, and surely unexpected and not planned for. But it is the present reality.

But what is truly easy to ignore and misunderstand is the paradoxical role that millions of Chinese Communist party-state cadres have played in planning for, searching out, setting up, and often managing themselves, first the rural industrial enterprises and later the millions of privatized small- and medium-scale SOEs, to adapt them to the newly marketized environment and to operate by the rules of profit-seeking. In addition, it is easy to overlook the fact that SOEs (completely or by majority shares) continue to account for 40% or more of the total non-agricultural domestic product. To be sure, after the “grasp the big and let go of the small” 抓大放小 policy to privatize small and medium-sized state enterprises of the late 1990s and early 2000s, something like only 120 odd of the largest SOEs remain, but those, in fact, come with perhaps 100 or so subsidiaries on average each, to make up a total of 12,000 firms, plus another 100,000 or so local SOEs (Szamosszegi and Kyle, 2011: 26; Huang, 2012: 594). Among these SOEs, in 2011, are 59 of the 61 Chinese firms of the Fortune Global 500 firms (“61 Chinese companies make the Fortune 500 list,” 2011). In 2014, the number of Chinese firms included went up to 95 (73 in 2012, 89 in 2013), of which only 5 were privately owned rather than state-owned (“2014 nian shijie caifu 500 qiang,” 2014; “Shijie 500 qiang,” 2014).

As an example of a state-owned firm, the Bank of China has as its chairman (from 2003 to 2013) of the board a government appointed high-level Communist Party cadre, Xiao Gang, plus 100,000 party members among its total of 280,000 employees, complete with the standardized party apparatuses of such an entity, with 6,000 plus “small groups” and “branch committees,” led by a party committee, along with its departments for propaganda, discipline, organization, and the like (Xiao Gang, 2011: 75, 95). Despite all that, however, the bank is partly owned by four capitalistic entities, totaling 16.85% ownership: the Royal Bank of Scotland, Swiss Bank, Asian Development Bank, and (Singapore’s) Temasek Holdings, dating back to before its IPO in 2006 in Hong Kong. The involvement of those banks helped greatly in the Bank of China’s IPO (Xiao Gang, 2011: 75–77; Huang, 2012: 609).

This is yet another of the major paradoxes and coincidental combinations—paradoxical coincidences—that have formed over time without early planning and only through incremental choices and changes that have come with changing realities on the ground. Put simply, we must not ignore the role played by the entrepreneurship of the Chinese Communist Party and its cadres in driving China’s remarkable development.

Technology and Globalization

We come finally to the issue of technology. Where have the technological advances necessary for the above-described changes come from?

People in the United States are usually quick to assume that Asians in general and Chinese in particular make good students, especially in mathematics and engineering. After all, in the top educational institutions in the United States, the number of Asian students typically far exceeds their proportions of the general population, leading even to thinly veiled efforts at rebalancing via other criteria than just traditional academic achievement. People, therefore, can be quick to assume: Well, sure, Asians make the best students, do they not? Surely, they excel also as “human capital”?

The Chinese education system, however, as many commentators have observed, remains highly authoritarian. It is an intensely competitive system in which striving to get into the best schools, by examination, begins very early on, and continues up to the nationally standardized tests for college admissions, in which schools like Beida, Qinghua, and Renda in Beijing, and Fudan in Shanghai, Zhongshan in Guangzhou, and so on, rank at the very top of a tremendously competitive hierarchy. It is an educational system that is keyed to examination-taking, as many have pointed out, in which memorization has been emphasized far more than problem-solving and independent and creative thinking.

Then there is the issue of excessive bureaucratization in the current Chinese education system. Much remains of the planning mentality among school administrators and bureaucrats. They categorize rigidly, dividing fields of learning into strict disciplinary lines (and also sub-disciplinary lines, such as legal history vs. legal theory, that do not have much to do with one another), allowing for little cross-disciplinary interaction. They subject graduate students to large numbers of bureaucratically set course requirements. The administrators quantify relentlessly, relying on quantifiable measures far more than peer review and qualitative judgments to evaluate research. They are also in a big rush for “efficiency and productivity,” to stuff graduate education for the Ph.D. as much as possible into just three years, with penalties (no more state allowance for living expenses) for extra years added. They establish endless lists of what are deemed to be the best research journals, usually with those operated by central-level entities ranking the very top, to make up the “core” list of publishing avenues that matter the most and count the most for reviews and promotion. More recently, they have used “project grants,” with monies provided for research to try to encourage creative and important “world class” research to go along with the long-standing drive to create “world class” universities. (On “governance by project grants” in general, see Huang Zongzhi, Gong Weigang, and Gao Yuan, 2014.) In practice, however, those selection processes have tended to emphasize form rather than substance, often guided by a crude “scientism”—the belief that all social science research must imitate natural science in its pursuit of universal, deterministic laws and mathematical precision (Huang and Gao, 2015).

On the whole, the quality of research and of publications has a long way to go to reach international standards. Social science PhD dissertations are often written—thrown together—in the short span of a few months. Professors often compete not for quality but for quantity, churning out hundreds of articles and dozens of books within the short span of a few years, mostly still in first-draft form, and rarely with substantial empirical research, still less with genuinely innovative thinking. Such research has been driven in part by the system of *gaofei*, payments for academic articles by the thousand words, a not insignificant subsidy for still relatively low academic salaries (though *gaofei* pales by comparison with what can be gained through funding for “projects”), but even more important, by the general atmosphere of rushed publications for appearances rather than real substance, produced under the pressures of education bureaucrats obsessed with quantified measures of “output.” For outside critics, one manifestation of this is that of the 95 Chinese firms included in the Fortune Global 500 list in 2014, not one has made it on the Forbes World’s Most Innovative Companies list (“World’s 500 Largest Corporations in 2013,” 2014).

If one were to look only at these characteristics of the higher education system, one would guess that it is not compatible with creativity and genuine quality, and might draw the conclusion that scientific research and development, and technological innovation, would be the Achilles' heel of Chinese development, until the higher education system is reoriented toward quality not quantity, creativity not rote learning.

Still, thus far at least, China's economic development has not been hampered too much by this weakness in its technical "human capital." This is, in large measure, because of the coincidence of the globalized economy, in which capital and along with it technology flow with little restraint. Economic historian Alexander Gerschenkron's classic concept of "the advantage of backwardness"—advanced machinery can be imported, allowing the backward country to skip over earlier stages of technological development—applies to China, but with a difference. Gerschenkron wrote before the age of the globalized economy, and could not have imagined the ease with which technologies have been able to travel across national boundaries with capital investments. To use Chongqing's development experience again as an example, it did not have to worry about closing technological gaps, once it was able to draw in Chang'an, along with its joint venture with Ford Motor Company for automobiles, Hewlett Packard for notebook computers, Taiwan's Foxconn for computer components, and the German giant BASF for polyurethane (Huang, 2011b: 573). For now, all that is required is that the Chinese personnel of these entities be good learners even if not good creators, and there can be no question of that given the years of training in memorization and examination-taking.

Perhaps the best example of the importing of advanced technology by China is high-speed rails: after relying on Japanese and other technicians to build China's own initial high-speed rail system, China is now poised to become possibly the world's major exporter of this technology to other countries, in Eastern Europe, Turkey, and other Asian, African, and Latin American countries, to the extent that the premier, Li Keqiang 李克强, was dubbed in 2013 "the best salesman for China's high-speed rail industry" ("Li Keqiang," 2013). This innovation by importing and, after a learning period, by exporting that same knowhow along with China's relatively inexpensive personnel, is an "advantage of backwardness" that the Chinese economy can likely count on for some time to come yet.

Further on the positive side is the Chinese intellectual bent that I have termed "practical moralism" (Huang, 1996: chap. 9; Huang, 2010a: 246–51). There is, first of all, the pragmatic bent: researchers tend to emphasize practical usefulness more than abstract theorizing or logical deductions. We saw that even under the far more ideological Maoist periods: somehow, the excesses of scientific Marxism were held in check by the concern for what

works, shown perhaps most forcefully in the early period of China's revolutionary history, when Marxist-Leninist dogma coming via the Communist International (Comintern) had to be reinterpreted (represented most especially by Mao Zedong) to fit Chinese realities. The same applies to the importation of neoliberalism today: China has not gone to the total acceptance of the Western theories-cum-ideals of liberal democracy + capitalism in the manner of much of Eastern Europe, and to a lesser extent also Russia, with the dismantling of the communist party-states and (nearly) complete privatization. Instead, the Chinese Communist Party adopted the far more practical motto of "feeling for stones while crossing the river." The fact that SOEs still account for 40% or more of the non-agricultural GDP 35 years after marketizing and privatizing reforms attests to the gradualist and practical approach to reform. Chinese innovations and creations have been more evident in practice than in formalized theory.

In addition, the moralism part of the "practical moralism" has provided incentives that non-Chinese often find surprising and incomprehensible. The moral commitments of Chinese intellectuals to "the (greater) good" have been powered not only by a deep, civilizational emphasis on the moral value of public service, but also by the experiences of profound national humiliation and human suffering at the hands both of foreign invasion and domestic crises in China's modern times. Regardless, thus far at least, there has been sufficient technical capabilities to power the past three and a half decades of very rapid development and reform. (On moral values in law, see Huang, 2015; on moral values in scholarship, see Huang and Gao, 2015.)

So here, once again, we have the extraordinary and paradoxical coincidence of relative weakness in technological innovation that is made up for by advanced technologies that have come with the globalization of capital, and by the practical bent and practical inventiveness of Chinese personnel, even given the dearth of more dramatic, innovative theoretical advances favored by the Western world. That paradoxical coincidence, of course, is not unlike the combination of a communist party that still identifies itself at the level of theory with imported Marxism-Leninism but manages remarkably to wed that to Reformist neoliberalism, all the while taking great departures in practice from both.

The Concurrence of the Five Paradoxical Coincidences

The biggest coincidence of all in China's rapid economic development, of course, is not any one of the five above-listed coincidences, but rather the concurrence and confluence of all five. None could have really happened

without the others. The globalizing economy, the Chinese Communist party-state's aggressively unified will to join up with that economy and draw on it for China's development, that party-state's special advantages in capitalizing upon its theoretical and practical ownership of all land, its method to draw in foreign investments with the lure of inexpensive land along with inexpensive labor, tax and other incentives, and relatively lax environmental controls, the availability not only of private entrepreneurial talent but, surprisingly, also Communist Party and Communist cadres' entrepreneurship, and, finally, the ready availability of advanced foreign technology with foreign capital investments, coupled with Chinese practical inventiveness—all needed to happen concurrently for the whole thing to work. Not just cheap land, and its rapid appreciation in value during rapid urbanization, along with cheap labor. And not just those two but the aggressive solicitation by local governments competing with one another. Of course, also the ready availability of global capital in search of the best returns, which local Chinese governments were competing to offer, to make up the best possible terms for capital investment available anywhere in the world. And not just the proliferation of domestic Chinese private enterprise, but also the conversion of SOEs and state-appointed managers into entities that pursue market profit aggressively and effectively. Finally, not just all of the above but also the availability of advanced technology ready to be drawn to China and put to Chinese use along with globalized capital.

Could anyone or any existing theory have foreseen, or even explain after the fact, the concurrence and confluence of these different coincidences?

Existing Theoretical Interpretations

Our available theoretical interpretations of the roots of Reform-period Chinese development are mainly three. First, the simple neoclassical economics thesis, predicated on the axiom that a freely competitive market mechanism is the most efficient allocator of resources. One influential application of that doctrine has it that earlier Chinese planning violated that “fundamental law” by artificially emphasizing capital-intensive heavy industry, to the neglect of labor-intensive light industry, until the coming of reforms, which finally acted by market principles and gave top priority to light industry, thereby making full use of China's “comparative advantage” in its abundance of labor (Lin, Cai, and Li, 2003 [1996]).

This, of course, is a theoretical model that has no room for any but a negative role for the Chinese Communist party-state's interferences in the workings of the market, in land and capital use, or in SOEs. Nor anything but a negative role for the planned and collective era, which had laid the

groundwork for the subsequent Reform-period development. It is a construct that cannot begin to capture the multiple operational realities outlined above.

Second, the “new institutional economics” explanation, even more influential than the first: China adopted privatization and marketization, thereby benefitting from the incentives for innovation and profit-making that come with private ownership, and the lower transaction costs that have come through institutional changes (including especially property laws) that have come with privatization and marketization. According to its analysis, the state’s interference in the economy can only be negative in its consequences. The state sector of the economy can only lag far behind and be a drag on economic development; what is needed is still more thorough privatization and marketization, to include the strategic industries and, for some, even public services. It would be best, the theory goes on to insist, if those come with liberal-democratic reforms that would provide effective checks on widespread corruption stemming from excessive state authority.⁵

Needless to say, this scheme too has no room for any positive role for unclear and insecure property rights, or the Chinese Communist party-state, nor for the Chinese SOEs, which account today for 90 of the 95 Chinese firms on the Fortune Global 500 list (compared with 128 U.S. firms). Nor can it explain why the economies of Russia and Eastern Europe, which came much closer to “doing the right thing” by the constructs of this theory, should have performed not nearly as well as China. And the negative side of the party-state and its bureaucratic apparatus does not seem something that can be easily overcome by liberal democracy in the sense of elections, a multi-party system, and guarantees of individual liberties (more below).

Third, the local governments-as-firms explanation. By that theory, everything began with China’s rural industrialization, which was powered by “local” (township and village) Chinese “governments” coming to behave like firms under the “hard budget constraints” of private firms operating in a market environment. That pattern, of the “corporatization of [Chinese] local governments” continued into local government competitions for economic development, lending market-based competition and discipline to the whole system, thereby powering China’s economic development. The key to the whole thing is the local governments’ coming to behave like capitalist firms (Oi, 1992, 1999; Walder, 1995; Montinola, Qian, and Weingast, 1995; Qian and Weingast, 1997; Qian and Roland, 1998; for a detailed discussion, see Huang, 2011a).

This scheme, while it captures the nature of the rural enterprises of the early Reform period and the important role that township governments and village authorities and cadres played, cannot begin to capture the special role that aggressive upper level local governments (county and province) played

in the 1990s and after in soliciting businesses and investments, or the role that land and underemployed labor have played in Chinese development, or the nature of the 90 Fortune Global 500 Chinese state-owned firms today that are not just a matter of governments coming to behave like marketized firms, but novel entities that have combined communist party-state organizational and resource prowess with profit-seeking-firm organization, and are not understandable as either just one or the other, but only in terms of their distinctive combination. One side of the picture is that government monopolies can become trapped in bureaucratic compartmentalism and corruption, along with environmental abuse (e.g., the petroleum industry). The other side is that, given the global environment dominated by advanced multinational corporations, Chinese entities that can compete effectively in the global market are mainly those that can draw on the immense organizational and resource prowess of the Chinese Communist party-state, not just simple private firms.

It should be clear that all of the three explanatory schema above hold basically to the same neoclassical economic axiom: that only market mechanisms can promote economic development. And all emphasize only the negative sides of the Chinese Communist party-state, unless it comes to behave like a marketized-privatized corporation. None grants any role at all to the Chinese Communist party-state's effective use of all of the major factors of production for development purposes: land, labor, and capital. All, of course, are committed to trying to explain Chinese phenomena in terms of the established "laws" of conventional economics based on the Western capitalist experience. None begins to capture what is distinctive and special about the extraordinary historical phenomenon of a communist party-state, formed through centralized planning, pursuing and leading marketized and profit-seeking development.

What the three influential theories all miss, in addition, are the operational realities that have been truly crucial for Chinese development: easy government access to land and its tremendous rise in value that has gone to fund local government drives for development; aggressive methods to give capital the highest return rates available in the world, by hook or crook; allowing capitalist enterprises to take full advantage of China's cheap labor with little constraint, often without having to provide for the kinds of benefits required by Chinese labor laws and without strict environmental controls, which together greatly augmented the rates of return to capital investments in China; advanced technologies and a globalized market for Chinese products, and their practical use by China for its own development.

That the three theoretical views summarized above, all of which are rather removed from on-the-ground Chinese economic realities and operations, have been the dominant voices in the academic literature on Chinese

development, both outside China and inside China, tells of course about the hegemonic powers of neoliberal economic theory and discourse in the academic discipline of economics.

They also tell about the immense power and influence of formalist economic theory—formalist in its reliance on deductive logic and mathematicization, much as in Euclidean geometry: beginning with the axioms of “rational economic man” and “perfectly competitive markets,” deriving deductively the theorems of the importance of private property and its legal protections, as per institutional economics, or the consideration that local-level states could come to behave like marketized firms, as per the third view. It is not surprising that operative Chinese economic realities seem completely absent from the content and reasoning of such theoretical perspectives. (For a more detailed discussion, see Huang and Gao, 2015.)

Those interpretations, of course, tell also about the extent to which conventional economics has been a theory-driven and theory-dominated discipline—that begins with theoretical axioms, derives theorems therefrom logically, gathers together some supportive evidence, and then returns back to the original theoretical axioms. We see no real attempt to start with Chinese realities and then to engage in abstracting therefrom, including the allowance for concepts that go against existing theoretical wisdom, followed by the use of deductive logic to make the concepts more precise, by the use of induction before deduction in other words, and then to return once more to practice/empirical evidence to examine the validity of the “theory.” (For a detailed discussion of the problems with such theorizing, see Huang and Gao, 2015; cf. Huang Zongzhi, n.d.)

That, in my view, makes for what is really a counterfactual approach to a historically unprecedented phenomenon: of a communist state deciding to take up the drive toward marketization, to resort to market mechanisms and to profit incentives, and to retain state ownership in key strategic industries such as energy, banking, transport, and urban development, all the while maintaining and even strengthening the party-state’s existing apparatus and modes of administration. Instead of insisting on fitting those paradoxical phenomena into existing theoretical presuppositions, we need to ask instead: Is it not probable that under those circumstances something very different from what we have known in the past has taken shape? Is it not likely that it is something that requires different conceptual tools to capture?

Once we turn the tables on conventional thinking (from theory to evidence and back to theory), and instead start by noting the anomalies and paradoxes, we begin to see an entirely different picture. Instead of trying to force everything into a customary scheme, we begin to see the novelties of what has happened. From there, it becomes possible to grasp the fact that since no

existing theories can encompass the phenomena we have outlined, the best and simplest explanation for the confluence of these phenomena is that it has happened at least as much by incremental choice, and chance and coincidence, as by deliberate strategizing and planning. (For a more detailed discussion, see Huang Zongzhi, n.d.: esp. chap. 1)

Surely, it is not going too far to say that conventional economics, while useful as a tool of analysis, has never been much good at prediction (e.g., the Great Depression of 1929–1933 and the Financial Tsunami of 2008), much less at explaining paradoxical phenomena that run counter to its expectations. That is why this essay has adopted as its explanation for what has happened “the confluence of five paradoxical coincidences”—“paradoxical” because the sets of unexpected empirical realities run counter to existing theoretical expectations, and “coincidences” because those happened largely as contingent historical phenomena, not by any grand design or deliberate choice, or theory. That understanding, I believe, goes farther to explain China’s extraordinary development than any of the existing explanations we have seen.

The other advantage of the confluence of coincidences interpretation is that it avoids the triumphalist interpretations advanced after the fact by some Chinese theorists. Those accounts, some of which are more in tune with Chinese operational realities such as those noted above, suffer from the wish to attribute to the party-state’s incremental and experimental choices and decisions the full benefits of hindsight, as if all had been planned and intended, as if all had been part of the intrinsic superiorities of a deliberate and emergent “Chinese model” of “market socialism.” Of course, some of the extravagance of those claims can and needs to be understood as springing from the deeply felt sense of humiliation from China’s modern century, and also from the search for a new ideology centering on the officialized term “market socialism.”

How, we need to ask, can anyone have foreseen these complex workings from hitherto unknown experiences? How can one explain the evident surprise of the Chinese government itself by what has happened? For example, despite the realities of the striking role played by small-scale farming in China’s new agriculture, the Chinese government remains obviously committed to a neoliberal (and also Marxist) vision of large farms enjoying economies of scale, and has long favored with its subsidies, bank loans, and grants first the large “dragon head [agricultural] enterprises” in the 1990s and 2000s and, more recently, the largest “family farms,” but never the self-employed small family farms that have actually driven the rise of the new agriculture and the hidden agricultural revolution. (For detailed documentation, see Huang, 2014.) And, how can we explain why, despite evident awareness and acknowledgment of the problems of widening gulfs between the majority

population and the elite minority who have been the main beneficiaries of the above developments, and repeated and protracted declarations of policies intended to address those problems, things have remained much the same? To those problems we now turn.

Three Major Problems

Rising Inequality

Despite the rise of the new high-value-added agriculture, agricultural incomes have lagged far behind those in the new sectors of urban employment, especially cutting-edge sectors like real estate, information technology, entertainment, manufacturing, and the like, as they have in almost all economies, even those graced with the extraordinary resource endowment of abundant land as in the case of the United States. In China, quite a number of those at the apex of the new urban wealthy are developers and party officials who have profited from the real estate industry with its high appreciation in values. Also, the party-state has opted to pay its employees, newly dubbed “civil servants” 公务员 rather than “cadres” 干部, at rates that are superior to average private firms, and with far superior benefits, originally intended for the “proletariat,” who had been the “leading class” of the new revolutionary China, this at the same time as placing the vast majority of the 270 million peasant migrant workers outside the protection of China’s labor laws and benefits system. (For detailed documentation, see Huang Zongzhi, 2014b, 3.appendix 3; cf. Huang, 2013.)

The result has been widening gaps between, on the one hand, the elite classes of newly rich entrepreneurs, government officials, and a cosmopolitan “middle class” (especially the new professional classes), whose needs and tastes are very much similar to the global urban middle class and, on the other hand, the peasants, peasant migrant workers, others employed in rural off-farm pursuits, urban workers who were disemployed 下岗 during the massive reorganization of state firms in the late 1990s, and so on, who live in an almost entirely different world. The former totals at most only 17% of the population, the latter, 83% (Huang Zongzhi, 2014a: 3.chap. 11, see esp. table 11.4, p. 233). The result is the growing inequality, as measured by the Gini coefficient employed by the World Bank and the American CIA, among others. From one of the most equal nations in the world (0.32) before the coming of the reforms, China has become one of the most unequal today, with a Gini coefficient above 0.45,⁶ generally considered indicative of dangerously mounting social tensions heading toward crisis (World Bank, 2009: 34, and figure 2, p. 36; Huang Zongzhi, 2014a: 3.354).

These social realities are as contrary to neoliberal theories as the economic realities of China's development. Mainstream Chinese sociologists have latched onto C. Wright Mills' scheme of the new white-collared "middle classes" (describing their rise to a majority proportion of the population in the United States during the first half of the twentieth century) as a universal pattern upon which China is already well launched, describing China's social structure as already "olive shaped," with a bulging middle (Lu Xueyi ed., 2002). The fact, however, is that the Chinese so-called middle classes (which may be roughly defined as those who own an urban condominium home and a car), amount at most to 17% of the population, with the vast majority well below that level who are not in the position of being able to own modern urban housing and maintain a car (Huang, 2009; Huang, 2011a; Huang Zongzhi 2014a: 3.chap. 11; Huang Zongzhi, 2014b: appendix 3).⁷

The dramatic Chinese economic growth, in other words, has come with equally dramatic inequality. That is because the two stem finally from the same root: namely, the use ("exploitation") of cheap labor, above all of the peasants, for development (Huang, 2010b). The 900 million Chinese (registered as) peasants have remained second-class citizens, second class first for working in a second-class sector (agriculture) that generally develops more slowly than the industrial sector. And second class also because the peasant migrant workers working in manufacturing, construction, and so on in the cities have continued to this day to have to labor without the protection of the nation's labor laws, hence for longer hours and sharply lower pay, and under the stigma/disadvantage of being "peasants" by legal classification/household registration rather than urban, outsiders and migrants rather than local.

Under the Chinese household registration system, social welfare benefits, like health insurance, retirement, and even death benefits, differ greatly between "peasants" and "urbanites." The revolution had closed the "urban-rural gap" to some extent in its early years—when peasants had been classed together with workers as worker-peasants who make up the "laboring people" 劳动人民, "masters" of the new socialist state. Until, that is, it became clear that there were not enough urban jobs to go around, and the rigid household registration system (in which a child follows its mother's registration, not the father's, the better to limit the numbers of privileged urban residents) was implemented beginning in 1958. That system remains largely intact today. Death benefits from auto accidents illustrate well the urban-rural gulf in China: a peasant dying from such is entitled to just 80,000 to 100,000 yuan in compensation, but an urban resident gets 200,000 to 300,000 (Huang Qifan, 2010). According to the World Bank, the income differential between rural and urban as of 2007 was 3.3:1 (World Bank, 2009: 34, and figure 2, p. 36).

A moment's thought will show how this is a natural consequence of the great resort to such "informal" labor (informal in the sense of not being qualified for protection under the nation's tradition of labor laws) (Huang, 2014b: 3.appendix 3): it has made China doubly attractive to capital seeking the highest rates of return, but has also ensured that such laborers remain very much the lower class, far removed from the new minority middle classes that are becoming increasingly cosmopolitan in lifestyles, values, and outlook like similar middle classes worldwide. The two really make up two very different worlds today, almost like that between a richer colonial country and the poorer colonized one. This reality is anomalous in terms of established neoliberal economic and sociological theory, in that the "middle classes" in China constitute not a growing majority of the population, but rather a relatively small minority, and with gaps between them and the majority population that have been steadily widening, now up to the alarming levels by the measures of the Gini coefficient. Even so, of course, given the gigantic size of the Chinese population (1.37 billion), 17% of it amounts to 233 million people, enough to satisfy the visions for a vast Chinese market for middle-class goods.

It should be clear from the above that our "paradoxical coincidences" explanation for Chinese development has also the advantage of explaining not just the success side of the Chinese development experience with its 9%-plus rates over a 35-year period, but also the underbelly and problematic side of that experience. Gross inequality, and mounting dissatisfaction of those below, is an economic problem in limiting domestic consumption demand; it is also a political problem with potentially dire consequences for the nation as a whole. This is an issue that ranks as the foremost problem confronting the Chinese economy-polity today.

Despite repeated top-level references to and acknowledgment of the problem, and despite repeated well-meaning attempts to mitigate it, little progress has been made. The fact is that changes to the existing structure and patterns threaten too many entrenched interests, of local governments as well as the capital they draw in, and of the enterprises that have grown accustomed to larger profit margins predicated on such inexpensive informal labor.

Separating talk from actions, the big new development of the Chinese labor market since 2005 has been an explosion in the resort to "ad hoc labor" 劳务派遣, a new formula for the use of informal labor via a third, generally very poorly funded intermediating firm ("ad hoc labor firms" 劳务派遣公司), such that the workers have no practical legal resort for gaining security of employment or benefits against their actual employer. By 2010, the numbers of such ad hoc workers had reached 25 million (Huang Zongzhi, 2014b: 3.307), and are expected to reach 60 million in 2015 ("Laowu paiqian," 2015). This development has added greatly to the preexisting informal urban

economy, consisting not only of the peasant migrant workers and the disemployed urban workers. The new wave of the use of ad hoc (informal) labor, ironically, has been the doing mainly of China's state-run entities such as universities 事业单位 and the remaining big SOEs 国有企业. The informal economy is in fact continuing to expand, not contract. How to enact reforms of the informal economy is arguably the single most daunting problem facing the Chinese Communist party-state today.

Bureaucracy

The bureaucratic machinery of the party-state, it must be pointed out, despite its striking achievements in economic development, retains its oppressive, obstructive, and stifling side. In fact, in popular consciousness, that "system" 体制 ranks together with the huge size of the population as China's two "basic national conditions" 基本国情. The typical response of most Chinese people, when confronted with the horrific wastes of time and effort to satisfy rigidly defined bureaucratic requirements (for documentation, for control, for guarding against the eventuality of fraud, and for satisfying all entities remotely concerned and involved, all designed and imposed by bureaucrats who seem to have nothing better to do), is a deep sigh of resignation—just a sad fact of life, with little or no hope of reform. In fact, the new profit-seeking ethic has if anything made it worse even than the hugely burdensome party bureaucracy of the old planned economy. For most people, the conclusion has been drawn that the only effective way for coping with such an oppressive monster is to try to work through connections, gifts, and even bribes—a major underlying cause of rampant corruption.

This other side of the party-state remains real and looms very large even in day-to-day living. It takes Herculean efforts for businesses not big and powerful enough to be courted by the government to start up, operate, and expand. That imposes very high operating and transaction costs on almost all private business just to stay on the right side of stifling bureaucratic control. This systemic problem underscores how difficult it is for small- and medium-sized private businesses to thrive; it also serves to underscore, of course, how crucially important state involvement has been for doing business in China. It is a problem that, while permitting government solicited enterprises to operate with special advantages, also imposes severe constraints on the private sector of the Chinese economy. For now, no clearly viable way of reforming the system at its roots has yet appeared. It involves ultimately the sensitive issue of political reform, though not necessarily in any simple form of adoption of liberal democracy, as has been tried in Eastern Europe and (to a more limited extent in) Russia with very mixed results.

Environmental Crisis

Over the long term, the environmental crisis in China is perhaps the most severe and intractable problem of all; it involves not just much talked about haze-smog 雾霾, but also severe pollution of rivers and lakes and underground water from industrial waste, human garbage, and excessive agricultural use of chemical fertilizers, insecticides, and weed killers. An estimated two-thirds of all rivers are severely polluted. The drinking water of the majority of the population (82% of the population relies on shallow wells and rivers for their drinking water, and the water of 75% of those wells and rivers) is below acceptable (categories I to III) health standards. Only an estimated 23% of the residents of major cities have drinking water up to health standards. And so on (“Shui wuran,” 2015). But we will focus here just on the issue of air quality, which has caused even greater alarm because of the high intensity and frequency of haze-smog evident to almost all residents of major cities.

The haze-smog is likely the cause of the rising incidence of lung cancer. A fairly rigorous study in 2009 of Guangzhou city in south China showed that, despite the decline in number of smokers in the past decade, the incidence of lung cancer had risen substantially, not declined. In the 1960s, there had been just 7 lung cancer cases per 100,000 people. That rose 10 times by 2005, to 70 cases per 100,000 people. That rise, it was found, paralleled closely the rapid deterioration in air quality measured in terms of fine particulate matter (PM) of less than 2.5 microns in diameter (PM 2.5), with a time lag of seven years (“Zhendui PM2.5 de jiankang baoweizhan,” 2014). To be sure, such evidence is not direct laboratory evidence and can only be suggestive, not conclusive, evidence of a causal connection between the two. But we must be realistic and practical: direct laboratory evidence, with a time lag of such length, is very difficult indeed to generate.

Another study, in 2003, done jointly by scientists from the United States, Israel, and China, compared life expectancies data from 90 cities between 1981 and 2000, and further compared those with data from 145 localities between 1991 and 2000. The data were divided between “north” and “south” China, according to the divide employed in state regulations about winter heating: “north” China (north of the Huai River) is thought to be generally cold enough to justify the use of coal for heating in the winter months, whereas “south” China (south of the Huai River) is not. The PM 2.5 count is generally about 200 micrograms per cubic meter higher north of the Huai than south of it. The difference between the two areas was found to be 5.5 years in life expectancy, affecting a total population of 500 million in the north. For every increase of 100 micrograms of PM 2.5 per cubic meter, the

data show, there was a 14% increase in mortality, or loss of three years in life expectancy, the majority of the cases being due to cardiac or lung related diseases (“Woguo wumai zhili,” 2013).

Still more alarming are the research data on Health Adjusted Life Expectancy (HALE, to be distinguished from conventionally used life expectancy data) released recently by Beijing’s Center for Disease Control (CDC). HALE measures the number of years one can expect to be healthy, distinguished from just being alive. In the developed nations, the difference between the two is commonly 8 to 12 years. In Japan, for example, life expectancy of males in 2010 was 79.3 years, compared to a HALE of 70.9 years, and for females, 85.9 and 75.5 (Minter, 2014). For Beijing, according to the city’s CDC’s research, for residents aged 18 in 2012, the male life expectancy was 80 but the HALE was only 61.4 and, for females, 85 and a HALE of only 56.06 (Beijing shi jibing kongzhi zhongxin, 2014). That means that though the life expectancy in Beijing is comparable to Japan’s, the healthy-life expectancy of males is almost ten years lower and, of females, almost twenty years lower. Put another way, for those 18 years old in Beijing today, the males can expect to suffer from ill-health before they die for nearly 20 years and the females nearly 30 years, even though the Beijing CDC in its announcement only emphasized that females should pay attention to exercising more, like the men (Beijing shi jibing kongzhi zhongxin, 2014). To be sure, research and the gathering of HALE data are only just beginning in China, but what such data point to is that haze-smog reduces not just life expectancy, but also the span of one’s healthy years, adding greatly to the period of time one would be troubled by ill-health and disease.

In the histories of developed countries, London and Los Angeles had both experienced severe problems of air pollution in the 1950s. In the former, 12,000 people died of respiratory illnesses during a two-month period; in the latter, 800 perished. In the United Kingdom’s case, successful control of air pollution required 50 years; in the United States, 30 years (“Woguo wumai zhili,” 2013).

Quite aside from such evidence, residents of Beijing and other major cities in China know how bad the air quality has been in recent years. Measured by the standard international AQI (air quality index), days with measures of less than 100 (considered healthy and acceptable) have become rarer and rarer, as have clear blue skies; days measuring “unhealthy” (101–200) (101–150 “unhealthy for sensitive groups” and 151–200 “unhealthy” in general) are very common; days measuring 201–300, which are considered “very unhealthy,” are common, and days measuring 301–500, considered “hazardous,” are frequent. There are quite a number of days that are simply “off the charts.” That means few days on which one can safely exercise or labor

outdoors. That has affected profoundly the quality of life of everyone. The word for PM 2.5 pollution, 雾霾 (haze-smog), by 2013–2014 became one of the most used and discussed keywords among college students, who have now become fully aware of the problem, after years of lack of accessible and dependable data. This problem, too, is the other side of the stunningly successful story of rapid development; the two go together.

The above problems, of gross inequalities, an oppressive bureaucracy, and an environmental crisis that has made life in north China hazardous and life in south China unhealthy, become a part of our picture of China's dramatic economic development when we take the "paradoxically coincidental" view outlined above, but would be obscured if we resort only to conventionally accepted theories and models of development and try to stuff Chinese experience into theoretical constructs based on U.S. and West European experiences. That is another strong reason for seeing just how paradoxically coincidental China's extraordinary economic development of the past 35 years has been, revealing new dynamics that had not been seen before, as well as old and new problems that plague that same Chinese party-state that has been so instrumental in leading and implementing China's startling economic development.

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Author's Note

The empirical information for this article comes mainly from my three recent books, on contemporary Chinese civil justice (Huang, 2010a), on Chinese agriculture and the general economy in the Reform period (Huang Zongzhi, 2014a), and on the theories and methodologies of research on contemporary Chinese law and economy (Huang Zongzhi, n.d.). This is a think-piece, and also something of a summary of portions of the three books, written for a wider audience. There are English versions for about half of the material in the three books; where no English version exists, the Chinese texts will be cited.

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Notes

1. There are no precise and completely reliable figures in the existing literature. One figure used is that up to 2007, perhaps 40 to 50 million peasants' land had been requisitioned (Tianze jingji yanjiusuo, 2007: 7); another is that between 1987 and 2001, a total of 33 million mu had been requisitioned (Zhang Chuanjiu, 2004). If we take the figure of an average of 3 million mu of land requisitioned per year, we would come close to 100 million mu. In addition, the Chinese government announced that, in 1996, there was a total of 1.951 billion mu of cultivated land in the country and that that figure declined by 2005 to 1.835 billion mu, which means a total of 0.116 billion mu lost in that decade, from land requisitioning and other causes. By 2011, according to official figures, the total cultivated land had declined to 1.825 billion mu ("Gengdi," Baidu baike). As is well known, the Chinese government has set 1.8 billion mu as the absolute "red line" for total cultivated acreage. This means little margin remains for land requisitioning. However, the latest satellite (as opposed to human) count in 2012 revealed that there was actually 2.02 billion mu of cultivated acreage (Chen Xiwen, 2014). In addition, local governments may, under the policy of "linking increases and decreases in rural and urban development land," increase their quota of urban development land by restoring rural residential land to cultivation. In Chongqing, for example, a peasant household, once it obtains certification that its residential land had been restored to cultivation, can obtain a land certificate 地票 that it could sell on the government-established land exchange 地票交易所 to the government or private developers, who would then be entitled to use an equivalent amount of land for development purposes (Huang Zongzhi, 2014a: 3.337–38). These latter facts would suggest that land requisitioning can continue for some years to come yet.
2. In Chongqing at the end of 2010 and the beginning of 2011, the market price for one mu of raw land was typically 11,000 yuan and, for ripe land, 100,000 yuan (Huang Zongzhi, 2014a: 3.337–38). In the Yangzi delta, the price was higher: 25,000–30,000 per mu of raw land in 2007, and 140,000–350,000 for land "yielded" to developers, and 750,000 to 1,500,000 when the structures were completed (Tianze jingji yanjiusuo, 2007: 8).
3. On the classification of cities by four tiers, see Yukon Huang and Bosler, 2014: figure 14.
4. And beginning first with investments from overseas Chinese, which the party deliberately uses as a bridge to the outside world and global capital.
5. There is a large theoretical and empirical literature arguing this point of view. The most influential are North 1981, 1993; Coase, 1990 [1988], 1991; Kornai, 1980, 1992. Within China, the most consistent advocate of this point of view is the Tianze jingji yanjiusuo 天则经济研究所 (Unirule [literally, "heavenly principle"] Institute of Economics). For a detailed discussion of the theoretical and practical issues, see Huang, 2011a.
6. In 2009 it was 0.48, according to the estimate of the CIA (CIA, 2012), and 0.47 in 2014, according to China's own State Statistical Bureau ("Zhongguo 2014 nian," 2015).

7. A 2005 study by the Chinese State Statistical Bureau defined “middle class” 中产阶级 as families earning 60,000 yuan to 500,000 yuan per year, and found that 5.04% of the population met that definition. In 2007, this figure rose to 6.15% (“Guojia tongjiju cheng,” 2007). No comparable data have been released since. The actual size of China’s middle class is a politically sensitive problem. I am using here the distinction between those in the “formal” economy with security of employment, legal protections, and benefits, from those in the “informal” economy without such or with only much reduced benefits.

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