

China's Accession to the WTO and the Collapse That Never Was

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Abstract

This article examines the application of neoclassical economics to the discussion of China's transition to the market in the 1990s and its accession to the World Trade Organization (WTO) in 2001. It shows how this theory shaped, and misled, forecasts of the impact of that accession and of China's subsequent economic performance. It discusses the debate between mini-bang and big-bang transition policies in the 1990s and shows the two sides shared far more in common than separated them. Both sides misestimated, in fact grossly underestimated, the dynamism of China's economy. It shows how widely anticipated predictions of crisis and collapse with China's WTO accession were the natural result of the assumptions of the neoclassical model. It suggests that a rival model of market transition based on Bukharin and Kuznets has much to offer.

JEL Classification: P22, P26, P21, B24

Keywords

China, transition, GDP, trade war, WTO, national income, Sinologists

1. Introduction

In *Markets over Mao* (2014) Nicholas Lardy, who was, in the early 1990s, director of the School of International Studies, named after arch anticommunist Henry M. Jackson at Washington University, claimed that “China achieved extraordinarily rapid economic growth after 1978 primarily because market forces came to play an ever larger role in resource allocation” (Lardy 2014: 16). The ideological underpinnings of this argument are naked. In 2000, anticipating China's entry into the World Trade Organization (WTO), President Bill Clinton described China's market potential as an “opportunity that comes along once in a generation” (Lardy 2002: 4). Clinton considered that “by forcing China to slash subsidies and tariffs that protect inefficient industries, which the Communist Party has long used to exercise day-to-day control, by letting our high-tech companies in to bring the Internet and information revolution to China, we will be unleashing forces that no totalitarian operation rooted in last century's industrial society can

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control” (US Congress 2002: 60). Charlene Barshefsky, the US Trade Representative, said the US and China trade agreement incorporated into China’s accession deal “will open the world’s largest nation to our goods, our products and services in a way we have not seen in the modern era” (Lardy 2002: 4). Later President Bush observed that “WTO membership for example, will require China to strengthen the rule of law and introduce certain civil reforms, such as the publication of rules” (US Congress 2002: 61). Certainly, China did publish rules. Neoconservative sociologists like Gilley (2004), Glassman (1991), White (1994), and Rowen (1996) considered that the creation of a market economy would inevitably lead to the creation of the social force—a capitalist class—that would campaign for liberal democracy (Tsai 2005: 2). The creation of a capitalist market would stir an uncontrollable desire for democracy and freedom through traditional media and the internet. Gary Jefferson explained that “China’s leadership denounces the concept of ‘peaceful evolution’ (*heping yanbian*), the idea that China’s authoritarian system will evolve into a pluralistic democracy with the withering away of the Chinese Communist Party (CCP). Yet, this is precisely what is happening” (Jefferson 1997: 588). Thankfully:

the most likely scenario for China over the next 25 years is one of continued evolution to a rule-based society that is increasingly characterized by markets, private ownership, and plural political institutions. . . in place of the ideological cement of communism, a new generation of Chinese is creating a new political culture founded on the tenets of participatory democracy. (Jefferson 1997: 589)

These freedom-promoting market forces would be consolidated and accelerated by the eventual accession of China into the WTO in 2001. The national security implications of a “more economically prosperous China governed by an authoritarian regime” were “very serious,” and there was “no guarantee” prosperity will “necessarily be more democratic” (US Congress 2002: 83). But many members of the US Congress believed that “political freedom will follow economic freedom” as the “economic forces that would be released by free trade, and commerce would overwhelm the forces in China seeking to maintain socialism, repression, and totalitarianism” (US Congress 2006: 20). The free market would root out the legacy of communism from Chinese society. But what is distinctive about China’s developmental model is not the freedom of the market, but the limitations on it. It has been the combination of market incentives and state-directed investment that has transformed Chinese society so thoroughly over the last decades. Neoclassical China economists, and the politicians they advised, opposed the role of the state in China’s development from the outset. They predicted that ongoing state investment would cause the Chinese economy to break down under the weight of unsustainable misdirected, worthless indeed, infrastructure overaccumulation. They insisted that the market must be freed, without any limits on its pursuit of profit, never mind the social turmoil and misery it would inflict on China’s population. Neoclassical economists overwhelmingly believed that China’s accession to the WTO would expose the rotten core of China’s state-directed economy. WTO membership would, in the words of World Bank economists, take a wrecking ball to the remnants of the closed economy, which faced collapse with Western competition. They embraced the catastrophe to come, often fatalistically reveling in the suffering it would inflict. The pain to come was no incidental misestimation but the necessary consequence of the neoclassical welfare economics they championed.

2. Big Bangs versus Mini Bangs

By the early 1990s China’s transition to the market was almost complete. Flush from the victory of capitalism over the communist states of the Former Soviet Union (FSU) and Central and Eastern Europe (CEE), the International Monetary Fund (IMF) dryly commented “ideally, a path of gradual reform could be laid out which would minimize economic disturbance and lead to an early harvesting of the fruits of increased economic efficiency. But we know of no such path”

(IMF 1990: 2). Neoclassical economists involved in the restoration of capitalism in the CEE and FSU insisted that “price liberalization and the dismantling of central coordination can be accomplished overnight” (Dhanji 1991: 323). David Lipton from the IMF and Jeffrey Sachs from Harvard University were the architects of Poland’s big-bang transition to the market. Stanley Fischer was the World Bank chief economist, while János Kornai was a Hungarian economist who worked at Harvard from the late 1980s. They argued that excess demand should be ended at a stroke, combined with an austerity program, the promotion of market competition, deregulation of prices, free trade, full liberalization of the private sector, and the demonopolization of the public sector (Lipton et al. 1990: 100). The collapse of communist rule was the “sine qua non for an effective transition to a market economy” (Lipton et al. 1990: 87). The microeconomic and macroeconomic case against price controls was “unassailable” (van Wijnbergen 1991: 1), so “decontrol immediately,” the total abandonment of the central plan, was necessary and desirable (van Wijnbergen 1991: 27). Nobel Laureate Ronald Coase’s theorem showed, according to the noted US China specialists Gary Jefferson and Thomas Rawski, “how the delineation and protection of property rights permit interested parties to negotiate efficient solutions to market failures without direct state action” (Jefferson and Rawski 2002: 588). This meant, Coase later explained, that all traces of one-party communist rule would be “wiped out first” as a market economy could be constructed “only if the traces of socialism were thoroughly erased” (Coase and Wang 2012: 154, 155). The “dismantling of the plan” to create a market economy did “not necessarily require *less* government, just *different* government” (World Bank 1993: 52). Anders Åslund, who worked with Lipton and Sachs as an adviser to the Yeltsin government, argued that government should not deliver public goods, but enable the market to do so, and as soon as possible (Åslund 1994). Coase’s theorem provided the economic justification for the state enacting the total privatization of all economic activity (Jefferson and Rawski 2002: 588). After the big-bang implosion of the Russian centrally planned economy in the early 1990s, output declined by around half (Cockshott 2020). In 1998 the World Health Organization commented,

There has been a dramatic rise in mortality, which is both unprecedented in a twentieth century industrial nation and exceptionally costly in human terms. Since 1990 Russian male life expectancy at birth has declined by seven years and in 1994 was 57.3, on a par with Pakistan. (World Health Organization 1998: 7)

Excess deaths across the restoration period were in the region of 12 million (Cockshott 2020). China’s crisis would be deeper. Jeffrey Sachs remarked that the transition to the market meant that: “China’s long-term political crisis is likely to be more grave than Russia’s... in authoritarian China, struggling with rapid change, macroeconomic tensions, and widening income disparities by regions and sector, the path to long-term political stability seems even less clear” (Sachs and Woo 1994: 131). How grave is more grave than the grave?

John McMillan and Barry Naughton were China experts at the University of California, San Diego. Naughton would go on to be “one of the world’s most highly respected economists working on China” (UC San Diego 2020). They advocated mini bangs not big ones, considering that “China’s experience suggests that privatization is a red herring” (McMillan and Naughton 1992: 132). They observed that China’s market reforms had not been “conceived as a grand plan”; they were “small, step-by-step changes” that had “no ultimate goal” or “timetable for the transition” (McMillan and Naughton 1992: 130). This was an “evolutionary reform”—a process of economic but not political transformation “perestroika *without* glasnost” (McMillan and Naughton 1992: 131). But for the “dominant school of thought among economists” the pace and scale of reforms were not nearly enough. The overwhelming majority of neoclassical economists favored a “big-bang’ policy” as “partial reforms” were considered “useless” (McMillan and Naughton

1992: 130) even though “a ‘big bang’ is not necessary for economic reasons” (Gelb, Jefferson, and Singh 1993: 23).

Yet the differences between the mini- and big-bangers was one of pace, not direction. There was “little debate on the need for centrally planned economies to be transformed into market-oriented ones” (Shang-Jin 1997: 1234). Nor was there much disagreement over the nature of the reforms deemed necessary: “a big-bang or shock therapy approach implements various reforms (on monetary policy, privatization, trade and exchange rates, and so on) quickly, in a concentrated time frame, whereas a gradualist approach spreads various reforms over an extended period” (Shang-Jin 1997: 1235). The steps were more or less identical, apart from the role, or more fundamentally necessity, of wholesale privatization. Stanley Fischer was a pragmatist over the sequence and rate of change (Gelb and Fischer 1991). He considered that China’s prospects were “not bad” notwithstanding the gradualist nature of the reform process, and that by any absolute standard, the state-owned enterprises (SOEs) had made progress in undertaking promarket restructuring (Fischer comment on Sachs and Woo 1994: 133). The big-bangers disagreed; centrally planned output included much negative value added and so overstated welfare gains (Åslund comment on McKinnon 1994: 96). Why then did the FSU collapse when it followed the demands of welfare economics, while China grew so rapidly when it defied them? The collapse of the FSU trading bloc the CMEA (Council for Mutual Economic Assistance) or Comecon delivered a one-off shock with unavoidable implications for trade and output. China’s lack of development meant that workers could move from the countryside to the market (Blanchard and Kremer 1997: 1122). Poverty and backwardness were an economic advantage. Sachs and Woo observed that the bulk, around 80 percent, of the Chinese workforce were employed outside the state sector, whereas the FSU was over industrialized (Sachs and Woo 1994).

By the mid-1990s China’s market reforms ensured managers of SOEs operated according to profit-maximizing criteria (Jefferson and Rawski 1994). Industrial market reforms had achieved significant success with enterprise autonomy increasing competition (Groves et al. 1994). Jonathan Portes, later chief economist at the UK Cabinet Office, expressed bemusement at the dispute as the consideration over the rate and extent of reform “fall under tactics rather than strategy” (Portes 1994: 1180). Lardy insisted that gradualism was “unsustainable” (Lardy 1998a: 5), but the difference between mini-bangers and big-bangers was one of degree. All sides supported a free market unlimited by any barriers. The gradualist Thomas Rawski accepted that the correctness of the big-bang argument, “that slow change gives conservatives an opportunity to organize blocking coalitions” was “surely relevant for China” (Rawski 1995: 1163). Meanwhile Barry Naughton applied the example of East Germany to conclude that the command economy produced “the wrong kind of wealth” that had “little value once real marketization” was complete. He commented,

For the past ten years, in spite of the overall improvement in the incentive environment, China has been building and expanding factories that will ultimately turn out to be unviable and will have to be closed. That is, the very gradualness of the transition path on which China has embarked has implied the maintenance for many years of the set of incentives that lead to wrong and wasteful investment choices. How much of the economic growth of the last decade will turn out to be useless, with conversion costs merely deferred until a later date? (Naughton 1995: 322)

Dwight Perkins, a China specialist at Harvard University, thought that “the question is whether these continuing state interventions in an essentially market oriented economy will slow growth markedly, or whether growth will continue at the torrid pace of the first 15 years of reform” (Perkins 1994: 44). And if that was the question, then the answer was that it would slow markedly. The introduction of a MITI-style (Japanese Ministry of International Trade and Industry) industrial policy “will frequently lead to investment and other economic decisions” far “below

the optimum.” Economic growth “would probably slow down, and rent seeking would undermine the very credibility of the government” (Perkins 2001: 263).

After the East Asian crisis of 1997–98 the two strategies converged. Neoclassical economists attributed that financial crisis to a deregulated banking system and external trade shocks, drawing parallels between the former tiger economies and China. On the one hand, the steady progress of market reform meant that the creation of a fully privatized economy appeared inevitable, while on the other hand, as Barry Naughton observed, “the Chinese banking system is no better off, and probably worse off, than banking systems in the rest of East Asia” (Naughton 1995: 206). China was deemed to be particularly vulnerable to the very factors used to explain, or rather excuse, the crisis. Paradoxically while the deregulated financial sector of the East Asian economies had led to the financial meltdown, the policy prescription advocated to avoid a financial meltdown in China was the deregulation of the financial sector. By 1999 Thomas Rawski concluded, “We are all gradualists now. It is time to abandon the heated but fruitless debate about ‘big bang’ vs. ‘gradualism.’ Even the most ardent enthusiasts of rapid transition now recognize that the road from plan to market must be long and tortuous” (Rawski 1999: 153). Notwithstanding their differences all neoclassical China economists agreed that their purpose and method were identical—the creation of a free-market noncommunist China. They both failed to recognize it was the combination of public investment and private enterprise that underpinned China’s rapid development, not their counterposition. It was not China that would have to adapt to Western competition, but Western competition that would have to adapt (or fail to adapt) to China.

3. China’s Entry to the WTO

China was one of the twenty-three original Contracting Parties to the General Agreement on Tariffs and Trade (GATT) in 1948, or at least a part of China was (Gertler 2003: 56). The Kuomintang (KMT) government who signed the treaty fled the mainland to Taiwan in 1949, after being chased off by Mao’s victorious People’s Liberation Army. Then in 1950 the KMT determined to leave GATT. The mainland Chinese government did not recognize the withdrawal, but nonetheless its membership expired. In 1983 in anticipation of full GATT membership, China joined the Multifiber Arrangement (MFA), an international textile agreement and attained GATT observer status. In 1986 it applied for GATT membership. In March 1987 a GATT Working Party was established to determine membership conditions. The GATT had experience of nonmarket economies (NMEs) like Yugoslavia, which joined in 1966, and Poland, in 1967 (Grzybowski 1980). GATT’s role was in any respect limited to the external relations between states, not the internal relations of them, but talks stalled after the Tiananmen Square crisis of 1989 and did not restart in earnest until 1993 (Wu 2016: 284). In the meantime, the communist world had ended. The “*annus mirabilis*” (Naughton 1995: 4) of 1989 saw the reunification of Germany and the collapse of the Warsaw Pact. In 1990 US negotiators informed China that it would be subject to special periodic compliance reviews and other additional conditions for their accession to WTO membership, a set of measures that were to eventually become known as WTO plus (Lardy 2002: 64). By 1991 big-bang privatization in the FSU and CEE had destroyed Soviet communism. Nicholas Lardy wanted a flexible US policy to accelerate China’s WTO membership, to “lock in” China’s “market opening measures” and give a “time certain schedule of future reforms.” If membership was delayed then “China could raise tariffs and nontariff barriers with impunity” (Lardy 1992: 218, 219). Lardy’s concerns were ignored; with US world hegemony restored, any compromise was dismissed.

Unsurprisingly “the demise of other centrally planned economies” may have increased “the hesitancy of GATT/WTO Contracting Parties to make special concessions for China” (Feinerman 1996: 405). The World Bank explained that although China “has already made significant effort

in trying to conform to the expectations of the international community in general and the United States in particular” the “requirements for GATT membership are not precise and are a matter for some negotiation. If the treatment of recent applications to the GATT is any guide, China is likely to be called upon to go further in relaxing its import regime” (World Bank 1993: 58). Developing nation GATT members were eligible for Generalized System of Preference (GSP) tariff benefits, but not China, as “many developed countries may prove resistant to granting China preferential terms, fearing a flood of cheap Chinese goods in their domestic markets” (Feinerman 1996: 403). China’s accession reforms were to be based on the five basic principles of GATT and the WTO: (1) nondiscrimination, (2) market opening, (3) transparency and predictability, (4) undistorted trade, and (5) preferential treatment for developing countries (Basu and Bandara 2009: 2).

The WTO accession protocol merely requires that entry conditions are “to be agreed between” the applicant state “and the WTO” (Gertler 2003: 56). The WTO Uruguay Round and subsequent negotiations extended entry conditions to include many previously excluded sectors: intellectual property, parts of foreign investment, agriculture and services, information technology, parts of telecommunication services, and finance. “Compared with GATT, WTO membership requires liberalization of a much broader range of domestic economic activity, including areas traditionally regarded by most countries as among the most sensitive” (Lardy 2002: 10). China’s accession documents were unprecedented in terms of their complexity, range of specific commitments, and number of deviations permitted at the time of accession (US Congress 2002: 70). China agreed to cut average tariffs, abolish others, and bind them. It agreed to eliminate all quotas, licenses, tendering requirements, and other nontariff barriers to imports no later than 2005 (Lardy 2003: 65). Article VI of the GATT 1994 and the Anti-Dumping Agreement meant China agreed to protect intellectual property rights (IPR), to limit the use of trade-distorting domestic subsidies, and to make other changes to bring its legal and regulatory system in line with those of other WTO members. Michael Lennard, who prepared treaty interpretations for the WTO, observed that the Accession Protocol contradicted the legal principle of *in dubio mitius*, that states are sovereign over their own territory, and was “inherently one sided in that it imposes special burdens on one side (China) as the ‘price of admission’ to the WTO” (Lennard 2003: 402). If China’s prices were lower than those of a comparable market competitor, such as India, this was deemed to be unfair competition and so subject to possible sanction. Lennard noted that for fifteen years after accession Chinese exporters of goods imported by a WTO member were required to show that “market economy conditions prevail in the industry producing the like product” (Lennard 2003: 397). The Working Party Report explained possible methodologies for determining if an economy was market or nonmarket. According to Mark Wu’s (2016) “seminal” article (Setser 2018) China does not fit well into definitions or the “ill-defined” category of state capitalism (an ambiguity Wu expresses by placing China in another undefined category, “China Inc.”). Lennard explained that the disputed definition was not part of the accession treaty:

Paragraphs 150–1 are not commitments by China, they are not picked up in the Protocol. These procedure ‘requirements’ therefore do not form part of the text of the China Accession Protocol (as the adopted provisions do) and at most may form part of the context. (Lennard 2003: 404)

China was nonetheless considered to be violating an undefined definition such that in 2016 the United States and European Union determined to ignore the fifteen-year limit and refused to lift China’s designation as an NME. Yet at the point of China’s WTO accession this ambiguity was not supposed to matter. Neoclassical China economists understood that the allocation of productive resources by any other than the ideal of profit maximization reduced economic efficiency and lowered productivity and profits. Why argue about the definition of something that was a competitive disadvantage? Nonmarket status was something to be escaped, a barrier to be overcome, a contradiction that would bring down the Chinese communists.

US corporations had a far more sanguine and accurate assessment of the impact of China's WTO accession. The dislocation of trade due to Most Favored Nation (MFN) withdrawal ranged from "dramatic to the disastrous," although the associated high costs for both parties meant that this was unlikely (World Bank 1993: 66). The elimination of the MFA quotas and the replacement of the annual approval with automatic MFN status was a business opportunity for Western corporations. As a result, US corporations wanted to relocate manufacturing abroad. A letter to President Clinton from the CEOs of 340 firms, including General Motors, IBM, Boeing, McDonnell Douglas, and Caterpillar, stated:

The persistent threat of MFN withdrawal does little more than create an unstable and excessively risky environment for US companies considering trade and investment in China, and leaves China's booming economy to our competitors. (Pierce and Schott 2012: 1635)

China acceded to the WTO on December 11, 2001. It wanted to ensure its continued access to export markets and to consolidate and accelerate the market-oriented reforms. The United States wanted a trade deal that would ensure the transformation of China's economy into a fully fledged neoliberal one, in which capitalist property was sacrosanct, protected by the rule of law, not communist laws.

4. The Collapse about to Happen

By the late 1990s China's ongoing reform path and the recent experience of the 1997–98 East Asian, but not Chinese, financial crash shaped the thinking of neoclassical economists. David Lampton considered that China would "not necessarily" (Lampton 1998: 18) be the next domino to fall, but the "key to avoiding a meltdown" was to "to accelerate reform of the banking and state enterprise sectors" (Lampton 1998: 19). Nicholas Lardy concurred that "China's financial and banking system, like others in Asia, suffers from inadequate central bank independence and lax regulation of commercial banks" (Lardy 1998b: 79). There was "excess capacity" in "more than 900 major industrial products." This was a direct consequence of unprofitable investment by local authorities, banks, and state industry, such that by "the mid-1990s, far too much had been built" (Lardy 1998b: 81, 82). Like the rest of Asia China's banks shared an "enormous buildup of nonperforming loans" (Lardy 1998b: 82). China was "unlikely to catch the Asian flu" (Lardy 1998b: 83), as the renminbi was protected by the absence of capital account convertibility, but the "longer the banks continue to support money-losing state-owned enterprises, the greater the risk that savers will lose confidence in the banking system, triggering a crisis" (Lardy 1998b 85). The tardy pace of reform meant that the necessary privatization of the state sector "will reduce the incomes of a significant portion of the population, at least on a transitory basis" (Lardy 1998a: 20). The short-term growth of Chinese unemployment was the "cost of postponing" the "rapid privatization overnight price reform and the immediate dismantling of trade barriers" (Lardy 1998a: 2). These reforms were necessary to "reverse the buildup of nonperforming loans to state owned enterprises, the drain of poor lending decision will reduce economic growth" and would mean "slower job creation and heightened potential for social unrest" (Lardy 1998a: viii). It would be necessary to separate employment from the provision of "subsidized housing and a broad range of social services" (Lardy 1998a: 53).

Even those economists who took account of China's strong financial reserves and the state support for the banking system considered that "growth could slow sharply" so that "though an economic crisis is not inevitable, clear risks remain" (Fernald and Babson 1999: 2). The "inefficient, non-market financial system" had overinvested in "property development, excess production capacity and a massive inventory buildup" (Lardy 2000: 3). Thomas Rawski considered that "China's economy is in trouble, and it is these socialist legacies, and not the Asian financial

crisis, which underlie China's current economic difficulties" as the growth rate had "fallen sharply" (Rawski 2000: 75). In contrast, US manufacturing trade unions warned about the hollowing out of US industry. The loss of jobs to Chinese competition meant exports were unlikely to compensate for increased imports as China's average tariff rates were relatively low, after sharp cuts in the 1990s (Ahearne, Fernald, and Loungani 2001: 48). Dynamic stochastic general equilibrium (DGSE) models, practically of necessity, assumed continued Chinese growth (Ianchovichina and Martin 2001: 432). Elena Ianchovichina and Will Martin of the World Bank considered that "the overall effects of WTO accession on China's economy are generally positive" (Ianchovichina and Martin 2004: 223). Faithful implementation of WTO obligations would reduce the ability of nonmarket forces, including government policies and officials, to intervene in the market to direct or restrain trade flows (USTR 2003: 4). Sectors with a particularly high labor content, like clothing, would grow and China's foreign surplus likely increase (Hertel, Zhai, and Wang 2004). Will Martin and Deepak Bhattasali, also of the World Bank, and Shantong Li, the director of a State Council organization, explained that: "for us, perhaps the most compelling aspect is one identified by Woo (2001): WTO accession as a key component in the restructuring of the Chinese economy. [This would] accelerate the process of domestic reform—with the WTO acting, in the colorful words of Jin (2002) 'as a wrecking ball for what remains of the earlier closed economy' (Jin 2002)" (Bhattasali, Li, and Martin 2004: 1). Heavily industrial and agricultural sectors suffered from fragmentation, low productivity, and a low technical base. There were too many small, inefficient, often state-run firms, which would decline faced with foreign competition: "trade liberalization and foreign competition may worsen unemployment and put downward pressure on the wages of unskilled workers in the short run" (Ianchovichina and Martin 2004: 226). Ianchovichina and Martin affirmed the results of Joseph Francois and Dean Spinanger (2002), who, in a paper written for the World Bank, estimated that employment in China's auto industry would decline by between 3 and 40 percent under the impact of Western competition. In the decade after joining the WTO China's unreformed auto market grew tenfold while "the market share of Chinese brands in passenger cars increased from 29 percent in 2010 to 40 percent in 2017" (PWC 2018: 3).

Even where commentators provided a more accurate assessment of China's banking sector, they were qualified: if crisis was not now, without the deregulation of banks and SOEs, it was just around the corner. The problems "of China's banking system are primarily a fiscal issue, and as long as government guarantees are credible, the financial sector weaknesses are unlikely to lead to a short-term credit crunch" (Fernald, Edison, and Loungani 2001: 532). However, although "China has remained insulated from the crisis so far, it remains susceptible in the future" due to a decline in export markets, a fall in private sector investment and of course the "vulnerabilities" of its state banking system (Fernald, Edison, and Loungani 2001: 533). The fiscal costs of resolving the banks' bad loans, reforming the state enterprises, and financing a new social welfare system raised "concerns about whether the reform process is fiscally sustainable. China faced the very difficult task of sequencing, that is, of trying to move from a non-commercial banking system where market mechanisms do not fully work to a viable commercial banking system where incentives are appropriate" (Ahearne, Fernald, and Loungani 2001: 49). The commercialization of China's financial institutions would increase lending to more competitive nonstate firms, while to "overhaul the enterprise system requires imposing hard budget constraints on SOEs and forcing insolvent SOEs into bankruptcy" (Wang 1999: 545). The deregulation of the finance sector and privatization of the SOEs would ensure efficient markets could efficiently allocate investment to maximize profitability. Yiping Huang, Wing Thye Woo, and Ron Duncan, researchers at the Australian National University (ANU), concluded, "SOE reform in China has been a failure," productivity performance had not improved, falling profits were not due to increased competition, employees were overcompensated, and there was asset stripping and inefficiency. They concluded

that the “impressive annual GDP growth rate of 9.9 percent in the 1978–96 period does not imply the superiority of China’s reform measures in every aspect over those in Eastern Europe and Russia” (Huang, Woo, and Duncan 1999: 2). James Dean considered that “admission to the World Trade Organization will strip that shield” from the market discipline of global trade and finance “away” (Dean 2000: 62). Not only was China’s infrastructure investment misallocated and useless, most fundamentally, it was unprofitable. Lardy considered that there was “over investment and excess capacity in the steel industry” (Lardy 2000: 38), noting that although China’s output had reached 116 million metric tons (mmt) in 1998, annual capacity was 190 mmt, with significant additional investment ongoing. Lardy observed that if “Chinese banks and other financial institutions were operating on a commercial basis” then “lending officers... would be very unlikely to extend credit to firms seeking to build additional productive capacity” (Lardy 2000: 39). This was, paradoxically, a very clear statement of the advantages of China’s development model. Rawski complained that “the investment system represents a major obstacle to China’s future growth and offers specific measures to track the progress of reform” (Rawski 2002: 361). After Lardy and Rawski complained about China’s overinvestment in steel its output grew a further 858 percent: “China’s crude steel production in 2019 reached 996.3 mmt, up by 8.3 percent on 2018. China’s share of global crude steel production increased from 50.9 percent in 2018 to 53.3 percent in 2019. India’s crude steel production for 2019 was 111.2 mmt, up by 1.8 percent on 2018” (WSO 2020). In 2019 China produced more steel than in the 1990s, the decade in which it had built “too much.” The allocation of investment resources according to the strictures of neoclassical profit maximization would have precluded China’s thirty-year infrastructure boom.

The axis of neoclassical criticism of Chinese development and trade policy revolved around the theory of comparative advantage. Factors of production were endowed, that is, finite and so not produced, and so scarce and not susceptible to change. As China had abundant labor and scarce capital, if “investments had been guided by market forces, profit incentives would have induced entrepreneurs to adopt capital-saving and labor-using technologies and to allocate more resources to labor-intensive industries. China would have exported labor-intensive products and imported capital-intensive products” (Lin 2000: 34, 5). WTO accession would free market competition to correct this barrier to growth, until “the government” abandons the “attempt to accelerate the growth of capital-intensive industry in a capital-scarce economy”; until then “reform in China will remain incomplete” (Lin 2000: 52). China was growing rapidly but it had a “potentially unstable economy burdened with significant fiscal and structural problems”—China’s economy could stagnate “or even collapse under the weight of its WTO commitments” (US Congress 2002: 83). As a result, “China’s WTO accession likely will result in large scale unemployment in certain sectors, particularly rural areas” and “unchecked social unrest could lead to a breakdown in the current political system and an accompanying period of instability” (US Congress 2002: 69). Trade and investment liberalization alone were unlikely to restore dynamism to China’s industry (OECD 2002: 17), as “the slowdown is not fundamentally cyclical. Rather the growth slowdown is more plausibly viewed as the result of the drag on aggregate demand engendered by the problems of banks and enterprises, together with structural problems in the rural economy” (OECD 2002: 24, 25). Gordon Chang observed “accession will rock China’s economy, and the resulting problems will be apparent before the benefits are felt. As had been predicted, SOEs will fail not by the thousands but by the tens of thousands. A government running out of money and constrained by WTO rules will not be able to save them” (Chang 2001: 360). Jeffrey Gertler from the WTO legal team lamented that it was “hard to overstate the difficulties” to be faced by “Chinese society” in the months and years “following accession.” The impact on loss-making state industries, less developed agricultural communities, and government financed projects “will be dramatic.” The “so called ‘adjustment’ to new, more competitive market conditions” will mean for many millions of individuals and families, “unemployment and

significant ‘displacement.’” Many citizens would face “considerable hardship” (Gertler 2003: 66). The pain was necessary, unavoidable, and inevitable in order to increase welfare. Hence, “we can do little more than wish China and its people ‘bon courage’ as they venture down the extremely challenging and tortuous path that stretches before them” (Gertler 2003: 67). According to Ligang Song, China had to: “navigate between Scylla and Charybdis. Scylla is the prospect of pushing ahead with more dramatic reform so fast as to go beyond socially accepted limits” while “Charybdis is the prospect of China drawing back from its WTO commitments when faced with insurmountable difficulties in tackling the hardest part of the system” (Song 2003: 91). In 2002 Rawski summarized these themes:

The evidence surveyed here shows that China’s investment mechanism is riddled with shortcomings that exert strong negative effects on important indicators of economic performance. Substantial portions of the nation’s vast investment outlays quite literally produce no beneficial results: no output, no sales, no jobs, no profits. Many of China’s economic ills—including slow employment growth, high levels of formal and implicit government debt, vast excess production capacity, slow but persistent deflation, mountains of unrepayable loans, and insolvent banks, are strongly and directly tied to defects in the investment system. (Rawski 2002: 370)

China’s state-guided investment was a misallocation of resources that provided few if any tangible or intangible benefits for China’s development. The state that directed those resources was a barrier to be overcome. There was no upside to China’s developmental model.

5. The Collapse That Did Not Happen

After WTO accession Chinese output and exports soared. Rising productivity meant that profits grew even faster than wages, so consumption as a proportion of national income fell, even as absolute consumption increased rapidly. Employment in China’s secondary, or manufacturing, sector reached 160 million in 2000 and 206 million in 2008, peaked at 232 million in 2012, before falling to 214 million in 2018 (Chinese Ministry of Human Resources and Social Security 2019). In 2016 European manufacturing employment was 30 million (Eurostat 2019). It is estimated that from 1999 to 2011, 560,000 US manufacturing jobs were lost due to direct competition with imports from China (Feenstra and Sasahara 2018). The establishment of a new low China price meant that a 1 percent increase in the share of imports from China led to at least a 3 percent fall in US consumer prices (Jaravel and Sager 2019). Peter Navarro, the US nationalist and subsequently China trade adviser to President Trump, warned about the threat posed by China’s growth in books like *The Coming China Wars: Where They Will Be Fought, How They Can Be Won* (2006). His words had no immediate policy impact as many of these imports, between a third and a half, were from US-owned companies with manufacturing relocated to China. Consequently, while the US trade deficit grew from \$81 billion (2001) to \$331 billion (2017), this was dismissed as “not a meaningful yardstick for assessing the health of the relation or its impact on US employment” (Meltzer and Shenai 2019).

The robust, and more importantly unanticipated, strength of China’s economy provided the context in which Thomas Rawski began to question the accuracy of China’s national income statistics. In 1993 World Bank economists considered that “unlike the historical data for some other communist countries, Chinese output estimates are believed to be generally free from deliberate over-reporting” (Gelb, Jefferson, and Singh 1993: 3). By 2002 Rawski believed things had changed. In testimony to the US Congress he considered China’s actual growth rate “from 1997–2001 was in the range of 2 to 4 percent annually at best” (US Congress 2002: 66). Rawski questioned the rate of expansion of various physical outputs considering that the communist authorities exaggerated the growth of output for political reasons. Rawski argued that:

official Chinese statistics contain major exaggerations of real output growth beginning in 1998. The standard data contain numerous inconsistencies. Chinese commentaries castigate widespread falsification at lower levels and question the authenticity of figures emanating from the central statistical authorities. The author speculates that cumulative GDP growth during 1997/2001 was no more than one-third of official claims, and possibly much smaller. (Rawski 2001: 347)

Rawski's criticism focused on three matters: "quantitative inconsistencies, qualitative information from Chinese commentaries, and suggestions about the possible magnitude of overstatement" (Rawski 2001: 347). Rawski coined the term "'wind of falsification and embellishment' in the neoclassical literature on Chinese statistics" (Holz 2014: 311), as researchers and publications like the *Economist* and *Asian Wall Street Journal* picked up the theme (Holz 2003). In 2014 Holz reassessed the controversy. He found that on "reviewing past and ongoing suspicions of the quality of Chinese GDP data, one is hard pressed to find evidence of data falsification" (Holz 2014: 335). This was confirmed in 2017 by Plekhanov, who concluded a similar review with the comment, "from an academic point of view it is almost impossible to prove that official data has been deliberately manipulated and falsified" (Plekhanov 2017: 97).

By 2002 Nicholas Lardy had begun to qualify his forecasts noting that "some studies forecast that China will incur significant restructuring costs in meeting its sweeping WTO commitments"; he considered these projections "almost certainly overstated" the challenge China faced: "The reason is simple. The projections were based on conditions that existed in the mid-1990s and thus do not take into account the huge economic restructuring that occurred in China in the years immediately before its entry into the World Trade Organization" (Lardy 2002: 22). The gradual convergence of China's domestic prices toward international levels, even in the most sensitive sectors, "will also help ease the adjustment process" (Lardy 2002: 24), but even this understated the true state of affairs, as the world was adjusting to China, not China to the world. Predicted "significant restructuring costs" on WTO entry did not occur as restructuring was "already underway prior to formal accession" (Branstetter and Lardy 2006: 26, 27). Lardy commented, as many had already observed, that notwithstanding state ownership:

the main objective of state enterprises is no longer to provide employment; rather profitability is the main indicator for evaluating firm performance. Enterprise managers in recent years have had the authority to reduce the number of workers, so production for inventory has gone down. Secondly, the banks, under pressure to increase the return on the funds that they lend, are apparently less willing to provide state-owned companies with seemingly unlimited lines of working capital credit. Thus firms are both less willing and less able to finance the buildup of inventories. (Lardy 2003: 12)

In 2005 Carsten Holz produced estimates for Chinese growth that decisively broke with the already weakening consensus of neoclassical China economists (Holz [2005] 2008). Holz dryly noted that "while some believe that the collapse of China is inevitable, others see the emergence of a new superpower that increasingly poses a threat to the US" (Holz 2006). Assuming there was no collapse (Holz 2006: 3) then "extrapolating past real GDP growth rates into the future, the size of the Chinese economy surpasses that of the United States in purchasing power terms between 2012 and 2015; by 2025, China is likely to be the world's largest economic power by almost any measure" (Holz 2006: 1). This was based on a comparison of China with the growth of other similar economies, namely Japan, Korea, and Taiwan. The transition of the agricultural population into an urban one transforms labor productivity while "catching up means that production techniques and technologies that have already been invented and implemented can be copied" (Holz 2006: 7), inadvertently restating Trotsky's theory of uneven and combined development (Day and Gaido 2011). Consequently "China's potential for economic growth from relatively

low labor costs will continue to exist for another thirty years” (Holz 2006: 8). Holz’s extremely accurate forecasts suggest economic growth between 2005 and 2015 in the range of 7 to 9 percent (Holz 2006: 9). Thomas Rawski was more skeptical; with Lauren Brandt he continued to assert:

Despite these benefits and the rapid decline in the state sector’s share in economic activity, it is increasingly evident that state ownership acts as a major drag on China’s economy. Both national and provincial data link state ownership with retarded growth, low capital productivity, slow transfer of labor out of farming, and many other undesirable phenomena. (Brandt and Rawski 2008: 22)

Rawski and Dwight Perkins produced figures that superficially echoed Holz. They noted that their calculations “assumed annual GDP growth of 9 percent. . . or 6 percent. . . throughout 2005–2025” but “these are not predictions, but simply the starting point for our analysis” (Rawski and Perkins 2008: 854).

Opponents of China’s WTO accession had suggested that China would use discriminatory product standards to keep out imports of industrial products; “however, there is no evidence that these practices have become a major constraint to trade in the affected categories” (USTR 2004). China was “in full compliance with its WTO commitments on trading rights for all Chinese-foreign joint ventures, wholly foreign-owned enterprises, and foreign individuals” (USTR 2005: 75). By 2005, in advance of proposed WTO deadlines, China had eliminated all quotas, licenses, tendering requirements, and other nontariff barriers to imports of manufactured goods (Branstetter and Lardy 2006: 20). Reality contradicted “the notion that large swathes of the Chinese economy were effectively closed off to foreign competition provided the intellectual foundation for the belief that credible implementation of China’s WTO commitments would generate destabilizing shocks” (Branstetter and Lardy 2006: 5).

The combination of free or low-cost state infrastructure provided by state investment financed through leased state land or retained SOE profits kept the burden of private taxes low, while enabling the rapid transfer of farmers to reemployment in industry. The absence of well-defined private property rights, far from being the disadvantage Coase anticipated, vastly reduced unproductive expenditures on legal and technical services, which amount to around 7 percent of US national income and was the prerequisite for the rapid improvement of China’s infrastructure. It dramatically reduced the cost and delivery time for major infrastructure projects; the Chinese highspeed railway network cost on average \$17 million to \$21 million per kilometer—about two-thirds of the cost in other countries (Lawrence, Bullock, and Liu 2019: 4). From 1990 to 2017 China added over 120,000 kilometers of railways, 130,000 kilometers of expressways, 3.7 million kilometers of road, and 740,000 kilometers of coastal quay lines to its national transport system (Lawrence, Bullock, and Liu 2019: vii). India, a country of similar size, and a private property system in keeping with neoclassical requirements, added 4,320 kilometers of railways from 1990 to 2016 (World Bank 2017).

In 2014 Rawski sought to explain China’s lack of failure. He reviewed the record of American neoclassical China economists and conceded that the “two prominent China specialists” who had expressed “doubts about the system’s viability” were mistaken (Brandt, Ma, and Rawski 2014: 112). Barry Naughton, Rawski explained, had wrongly believed that “the political system is simply not adequate to cope with the challenges that confront it” (Naughton 1995: 310), while Nicholas Lardy had erroneously considered that any “delay” in the pace of economic reform would “almost certain path to a lower pace of economic growth, a declining rate of job creation, and thus an even greater challenge to political stability” (Lardy 1998a: 221–22). Rawski continued: “these deeply knowledgeable authors (and many others) underestimated the strength of China’s unconventional system” (Brandt, Ma, and Rawski 2014: 112). These authors had “failed to comprehend China’s dynamic potential” (Brandt, Ma, and Rawski 2014: 112, 113). Conceding the mistakes of his colleagues Rawski concluded that it “is painfully evident from Japan’s recent

history, past success cannot guarantee the future efficacy of institutional structures” (Brandt, Ma, and Rawski 2014: 112, 113). Japan’s growth was stymied by the end of the Cold War, which meant its favored position in the world trading system was lost, and by its demographics, as its population is only around 100 million (Jefferies 2017). China is no Japan, as Jefferies noted,

Starting from the present, and at an accelerating tempo, China will begin to compete with the most technologically advanced sectors of Western multinationals. The “inefficiency” or “uncompetitiveness” of Chinese industry is not due to the continuance of state ownership or to any inherent cultural disadvantage of China, but results simply from a technological gap, which will be closed in the next decade. (Jefferies 2017: 46)

6. The Misestimation of China’s Transition to the Market

In 1934 Simon Kuznets explained the National Income Concept, Scope, and Method in the United States System of National Accounts (SNA):

If all commodities produced and all personal services rendered during the year are added at their market value, and from the resulting total we subtract the value of that part of the nation’s stock of goods which was expended (both as raw materials and as capital equipment) in producing this total, then the remainder constitutes the net product of the national economy during the year. (Kuznets 1934: 1)

National income is a measure of “market value” as it aggregates sales of commodities. It does not include nonmarket production such as household services and so on, which is output that produces useful goods, but which are not sold. Kuznets was a member of the pre-revolutionary Bund and follower of Georgi Plekhanov, the founder of Russian Marxism; he did not define value in the SNA. It remains undefined to this day. Marginal economics has no absolute standard of value, notwithstanding the attempts of marginalists to measure welfare in objective monetary terms (Sachs and Woo 1994). Kuznets was no marginalist. His reason was more prosaic: he needed to conceal that the SNA was built on foundations provided by the Russian Legal Marxist Sergei Prokopovich and the Soviet Balance of 1923–24. Prokopovich developed the first national income estimates in 1912. Prokopovich’s method was developed in the Soviet Balance of 1923–24 from an application of Marx’s schemes of reproduction in volume 2 of *Capital*. National income was defined as the total of new value added in a given year, where value was the amount of socially necessary labor time necessary to produce a given commodity (Jefferies 2015), where commodities are useful things (or products) that are bought and sold. The prerequisite for national income is sales or markets. National income is a measure of output in a market economy.

Abram Bergson developed the CIA’s adjusted factor cost (AFC) (under the supervision of Kuznets and Leontief, who were by no means consistent in their use of categories) after World War II to systematize this confusion (Jefferies 2014). The AFC used the categories of the SNA to impute estimates of market prices, rents, profits and even interest to the plan (Maddison 1998: 311). CIA analysts of the Soviet Union and China considered there was no qualitative distinction between market and nonmarket production for measurement purposes (Maddison 1998: 311; Wu 2006; Maddison and Wu 2007). Even then their estimates for Chinese centrally planned national income were based on a wholly inadequate dataset:

For China, the CIA offered no measures for these other sectors. Its surrogate GNP measure was simply an amalgam of its estimates for agriculture and industry, with agriculture given twice the weight of industry. (Maddison 1998: 310)

The transition from the plan to the market, from imputed to real national income, was not reflected in the official figures of the Chinese authorities or the neoclassical China economists. There were

various modifications that allowed for new products and special cases (Holz 2014: 326), but no account was made of the transformation of the mode of production from central planning to the market. By 1999 around 88 percent of total output sold at market prices; notwithstanding the existence of Communist Party rule, this was a market economy. It was the creation of real national income, aggregates of real output sold at market prices, where previously, under the centrally planned economy, there had been none (Jefferies 2014).

Private property is a social relationship that entitles its owner to receive a profit or surplus commensurate with its size. Social property has no such entitlement; it is not owned by anyone as such. Investment in social property does not require a return, and in that sense it is not capital. It is effectively depreciated 100 percent on installation. The assets of the state-owned Assets Supervision and Administration Commission of the State Council (SASAC) pay no dividends, while surplus is reinvested according to state development priorities. Although local authorities benefited by increased tax revenues, and the managers of SOEs certainly saw their own rewards rise as their firms expanded, they were not subordinate to shareholders demanding higher returns. Profit maximization for SOEs is an administrative target rather than a social law, and this permits them to sell output below profit maximizing price. Prices might be market prices, insofar as they respond to market signals and are no longer centrally planned or guided, but they remain subordinate to the developmental objectives of their state owners. Losses on some lesser used railway lines occur due to state “pricing policy” (Lawrence, Bullock, and Liu 2019: 4). Industry surveys consistently show state profit rates below private ones. This is not because state industry is inherently less efficient than private industry (Qi and Kotz 2019). Holz (2002) considered that the profitability gap “can be explained by just two factors, namely a higher rate of circulation taxes for SOEs, and higher SOE capital intensity. Both can be traced to historical and policy factors” (Holz 2002: 494). Holz’s “preferred profitability indicator in the following is the return on equity (profit per unit of equity)” (Holz 2002: 496), but what is a unit of equity in an SOE where there are no shares? SOEs pay higher taxes than private enterprises, so if profit is measured per unit of sales then the difference disappears as SOEs have a “relatively large volume of assets compared to sales revenue (high capital intensity)” (Holz 2002: 501).

The price of state goods was set lower than market goods from the outset of the market reforms in 1978 (McKinnon 1994: 79). Lower state profits mean lower prices for the consumers of state outputs, notably manufacturing industry, which productively consumes state intermediate inputs. Low state prices reduce private industry costs and so increase private industry profits. It was this symbiotic relationship that guaranteed the rapid development of China’s economy. Who would pay for the privatization of state industry? The private entrepreneurs whose profits depended on the cheap prices determined by policy (Perkins 1994: 36) of inputs (like steel, concrete, and infrastructure) provided by the state. The coalition of social interests between the state and the private sector precisely explains why there never was, or has been, or will be in the foreseeable future, demands to overthrow the present social arrangements by a capitalist class (Tsai 2005). The interests of private capitalists are expressed through and by the CCP. This combined with a low waged but relatively well-educated and increasingly skilled workforce meant that China’s industry had a decisive competitive advantage.

Neoclassical economics was incapable of making a proper distinction between market and nonmarket production. It could not explain how the state could articulate the private interest of the capitalist. Rawski noted that neoclassical economists could only vaguely answer the question “what is a market system?” (Rawski 1997: 1). Economists had “no good answers” to the question of how much competition was required to make a market system (Rawski 1997: 2). Although China appeared to have become a “(heavily regulated) market economy, property rights remain ill-defined, transaction costs are high, and the share of private ownership remains modest, especially in industry” (Rawski 1997: 6). Even Ronald Coase would later confess that “resource allocation in the real world is categorically different from the paradigmatic choice problem

defined in textbook economics as allocating limited means to satisfy given ends” (Coase and Wang 2012: 137). He admitted (without naming any names, including his own) that “the rise of the Chinese market economy did not follow the path suggested by some property rights economists” (Coase and Wang 2012: 171). Coase’s big bang was avoided only “by accident” (Coase and Wang 2012: 155). Stiglitz, a World Bank chief economist and future Nobel Laureate, considered that “part of the problem was reliance on textbook neoclassical models of economics” (Stiglitz 2000: 4). The Coase theorem was refuted by experience: the privatization of state assets and the private ownership of the means of production were not, it transpired, a necessary prerequisite for capitalism. Those who “advocated shock therapy, with its focus on privatization, failed because they failed to understand modern capitalism” (Stiglitz 2000: 30).

Some of the answers can be found in an earlier experience of market transition, Soviet Russia in the 1920s. A market is where commodities are bought and sold. A market system is a society in which the economy is dominated by the exchange of commodities. From 1921 to 1928 the Soviet Union’s New Economic Policy (NEP) was a form of managed market economy of a similar type to that presently found in China. Nikolai Bukharin, its chief advocate, explained “we will reach socialism only through market relations” (Bukharin in Ball 1987: 45). In 1925 Bukharin insisted, “If in the process of competition in the marketplace state industry and trade and the cooperatives gradually drive out the private entrepreneur—this is a victory in the class struggle.” Investment in state industry, economies of scale, and technological advance meant SOEs would “produce and to sell cheaper and better” than private-sector rivals, so that success would be determined through the choices of consumers in the marketplace (Bukharin in Ball 1987: 47). The parallels with contemporary Chinese policy are self-evident. In November 1993, the CCP’s “Decision on Issues Concerning the Establishment of a Socialist Market Economic Structure” justified the transition of the economy from planned regulation to a planned commodity economy and then to a socialist market economy.

7. Conclusion

China’s accession to the WTO in 2001 was a turning point in globalization. It marked the final step in China’s transition from a centrally planned economy into one dominated by market prices. China would become the center of a system of integrated production that would transform world manufacturing and trade over the next two decades. US neoclassical China economists had advocated its accession as a means to destroy CCP rule. Applying the neoclassical version of the theory of comparative advantage, they believed that Chinese industry would be unable to compete with Western manufactures, just as East Germany was unable to compete with West German manufacturers. They were wrong. China did not have to adjust to the world; the world has to adjust to China. The misallocation of resources in the West to unproductive sectors loads costs onto Western manufacturing that mean it is utterly unable to compete. Far from being a disadvantage, the nonmarket distortions, SOEs, and state investment and direction meant, as Bukharin had anticipated years before, unrestricted private enterprise was the inefficient social system.

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References

- Adhikari, Ramesh, and Yongzheng Yang. 2002. What will WTO membership mean for China and its trading partners? *IMF Finance and Development* 39 (3). Accessed at: <https://www.imf.org/external/pubs/ft/fandd/2002/09/adhikari.htm>.
- Ahearne, Alan, John Fernald, and Prakash Loungani. 2001. Countering contagion: Does China's experience offer a blueprint? *Economic Perspectives* 24 (4): 38–52.
- Åslund, Anders. 1994. The case for radical reform. *Journal of Democracy* 5 (4): 63–74.
- Ball, Alan. 1987. *Russia's Last Capitalists: The Nepmen, 1921–1929*. Berkeley: University of California Press.
- Basu, Parikshit, and Yapa Bandara, eds. 2009. *WTO Accession and Socio-Economic Development in China*. Oxford: Chandos.
- Bergson, Abram. 1961. *The Real National Income of Russia since 1928*. Cambridge, MA: Harvard University Press.
- Bhattasali, Deepak, Shantong Li, and Will Martin, eds. 2004. *China and the WTO: Accession, Policy Reform, and Poverty Reduction Strategies*. Washington, DC: Oxford University Press, International Bank for Reconstruction and Development, World Bank.
- Blanchard, Olivier, and Michael Kremer. 1997. Disorganization. *Quarterly Journal of Economics* 112 (4): 1091–126.
- Borensztein, Eduardo, and Jonathan Ostry. 1996. Accounting for china's growth performance. Papers and proceedings of the Hundredth and Eighth Annual Meeting of the American Economic Association San Francisco January 5–7. *American Economic Review* 86 (2): 224–28.
- Brandt, Lauren, Debin Ma, and Thomas Rawski. 2014. From divergence to convergence: Reevaluating the history behind China's economic boom. *Journal of Economic Literature* 52 (1): 45–123.
- Brandt, Lauren, and Thomas Rawski. 2008. *China's Great Economic Transformation*. Cambridge: Cambridge University Press.
- Branstetter, Lee, and Nicholas Lardy. 2006. China's embrace of globalization. In *China's Economic Transition: Origins, Mechanisms, and Consequences*, eds. Loren Brandt and Thomas Rawski, 1–71. Cambridge: Cambridge University Press.
- Chang, Gordon. 2001. *The Coming Collapse of China*. London: Random House.
- Chinese Ministry of Human Resources and Social Security. 2019. China employment: Secondary industry. Accessed at: <https://www.ceicdata.com/en/china/employment/employment-secondary-industry>.
- Coase, Ronald, and Ning Wang. 2012. *How China Became Capitalist*. New York: Palgrave Macmillan.
- Cockshott, Paul. 2020. *How the World Works: The Story of Human Labor from Prehistory to the Modern Day*. New York: Monthly Review Press.
- Day, Richard, and Daniel Gaido. 2011. *Witnesses to Permanent Revolution: The Documentary Record*. Chicago: Haymarket.
- Dean, James. 2000. Can China avert crisis? *Challenge* 43 (4): 62–76.
- Dhanji, Farid. 1991. Transformation programs: Content and sequencing source. Papers and proceedings of the Hundred and Third Annual Meeting of the American Economic Association. *American Economic Review* 81 (2): 323–28.
- Drysdale, Peter. 2000. The implications of China's membership of the WTO. In *China's Entry to the WTO: Strategic Issues and Quantitative Assessments*, eds. Peter Drysdale and Song Ligang, 99–119. London: RoutledgeCurzon.
- Eurostat. 2019. Manufacturing statistics—NACE Revision 2. Accessed at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Manufacturing_statistics_-_NACE_Rev._2.
- Feenstra, Robert and Akira Sasahara. 2018. The “China shock,” exports and US employment: A global input-output analysis. *Review of International Economics* 26 (5): 1053–83.
- Feinerman, James. 1996. China's quest to enter the GATT/WTO. Are international institutions doing their job? *Proceedings of the Annual Meeting American Society of International Law* 90 (March 27–30): 401–7.

- Fernald, John, and Oliver Babson. 1999. Why has China survived the Asian crisis so well? What risks remain? Board of Governors of the Federal Reserve System International Finance Discussion Paper no. 633. Accessed at: <https://www.federalreserve.gov/pubs/ifdp/1999/633/ifdp633.pdf>.
- Fernald, John, Hali Edison, and Prakash Loungani. 1999. Was China the first domino? Assessing links between China and other Asian economies. *Journal of International Money and Finance* 18 (4): 515–35.
- Francois, Joseph, and Dean Spinanger. 2002. Regulated efficiency, World Trade Organization accession, and the motor vehicle sector in China. Tinbergen Institute Discussion Paper no. TI 2004-049/2. Accessed at: <https://papers.tinbergen.nl/04049.pdf>.
- Gelb, Alan, and Stanley Fischer. 1991. The progress of socialist economic transformation. *Journal of Economic Perspectives* 5 (4): 91–105.
- Gelb, Alan, Gary Jefferson, and Inderjit Singh. 1993. Can communist economies transform incrementally? China's experience. *World Bank Working Paper Series* 1189. Accessed at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/758251468746794379/can-communist-economies-transform-incrementally-chinas-experience>.
- Gertler, Jeffrey. 2002. What China's WTO accession is all about. *WTO Secretariat* 14.
- . 2003. China's WTO accession—the final countdown. In *China and the World Trading System*, eds. Deborah Cass, Brett G. Williams, and George Barker, 55–66. Cambridge: Cambridge University Press.
- Gilley, Bruce. 2004. *China's Democratic Future: How It Will Happen and Where It Will Lead*. New York: Columbia University Press.
- Glassman, Ronald. 1991. *China in transition: Communism, Capitalism, and Democracy*. New York: Praeger.
- Groves, Theodore, Yongmiao Hong, John McMillan, and Barry Naughton. 1994. Autonomy and incentives in Chinese state enterprises. *Quarterly Journal of Economics* 109 (1): 183–209.
- Grzybowski, Kazimierz. 1980. Social countries in GATT. *American Journal of Comparative Law* 28 (4): 539–54.
- Hertel, Thomas, Fan Zhai, and Zhi Wang. 2004. Implications of WTO accession for poverty in China. In *China and the WTO: Accession, Policy Reform, and Poverty Reduction Strategies*, eds. Deepak Bhattachali, Shantong Li, and Will Martin, 282–303. Washington, DC: Oxford University Press, International Bank for Reconstruction and Development, World Bank.
- Holz, Carsten. 2002. Long live China's state-owned enterprises: Deflating the myth of poor financial performance. *Journal of Asian Economics* 13 (4): 493–529.
- . 2003. "Fast, clear and accurate": How reliable are Chinese output and economic growth statistics. *China Quarterly* 173: 122–63.
- . 2006. *China's Economic Growth 1978–2025: What We Know Today About China's Economic Growth Tomorrow*. Accessed at: <https://ssrn.com/abstract=756044> or <http://dx.doi.org/10.2139/ssrn.756044>
- . 2014. The quality of China's GDP statistics. *China Economic Review* 30: 309–38.
- Huang, Yiping, Wing Thyee Woo, and Ron Duncan. 1999. Understanding the decline of China's state sector. *MOCT-MOST: Economic Policy in Transitional Economies* 9 (1): 1–15.
- Ianchovichina, Elena, and Will Martin. 2001. Trade liberalization in China's accession to WTO. *Journal of Economic Integration* 16 (4): 421–45.
- . 2004. Economic impacts of China's accession to the WTO. In *China and the WTO: Accession, Policy Reform, and Poverty Reduction Strategies*, eds. Deepak Bhattachali, Shantong Li, and Will Martin, 211–37. Washington, DC: Oxford University Press, International Bank for Reconstruction and Development, World Bank.
- IMF. 1990. *The Economy of the USSR: Summary and Recommendations*. New York: International Monetary Fund.
- Jaravel, Xavier, and Erick Sager. 2019. What are the price effects of trade? Evidence from the United States and implications for quantitative trade models. Center for Economic Performance Discussion Paper no. 1642. Accessed at: <http://cep.lse.ac.uk/pubs/download/dp1642.pdf>.
- Jefferies, William. 2014. *Measuring National Income in the Centrally Planned Economies: Why the West Underestimated Transition*. London: Routledge.
- . 2015. On the alleged stagnation of capitalism. *Review of Radical Political Economics* 47 (4): 588–607.
- . 2017. China's challenge to the West. *International Critical Thought* 7 (1): 32–50.

- Jefferson, Gary. 1997. China's economic future: A discussion paper. *Journal of Asian Economics* 8 (4): 581–95.
- Jefferson, Gary, and Thomas Rawski. 1994. Enterprise reform in Chinese industry. *Journal of Economic Perspectives* 8 (2): 47–70.
- . 2002. China's emerging market for property rights: Theoretical and empirical perspectives. *Economics of Transition* 10 (3): 585–617.
- Jin, Liqun. 2002. China: One year into the WTO process. Paper presented at the World Bank. Accessed at: http://www.worldbank.org/wbi/B-SPAN/docs/IMF-WB_address_final.pdf.
- Kuznets, Simon. 1934. National income, 1929–32. Senate Committee on Finance. Accessed at: https://fraser.stlouisfed.org/files/docs/publications/natincome_1934/19340104_nationalinc.pdf.
- Lampton, David. 1998. China. *Foreign Policy* 110 (Spring): 13–27.
- Lardy, Nicholas. 1992. *Foreign Trade and Economic Reform in China, 1978–1990*. Cambridge: Cambridge University Press.
- . 1998a. *China's Unfinished Revolution*. Washington, DC: Brookings Institution Press.
- . 1998b. China and the Asian contagion: Council on foreign relations. *Foreign Affairs* 77 (4): 78–88.
- . 2000. When will China's financial system meet China's needs? Stanford King Center on Global Development Working Paper no. 55. Accessed at: <https://siepr.stanford.edu/research/publications/when-will-chinas-financial-system-meet-chinas-needs>.
- . 2002. *Integrating China into the Global Economy*. Washington, DC: Brookings Institution Press.
- . 2003. Trade liberalization and its role in Chinese economic growth. Prepared for an International Monetary Fund and National Council of Applied Economic Research Conference, New Delhi. Accessed at: <https://www.imf.org/external/np/apd/seminars/2003/newdelhi/lardy.pdf>.
- . 2014. *Markets over Mao: The Rise of Private Business in China*. Washington, DC: Peterson Institute for International Economics.
- Lawrence Martha, Richard Bullock, and Ziming Liu. 2019. *China's High-Speed Rail Development: International Development in Focus*. Washington, DC: World Bank.
- Lennard, Michael. 2003. Interpreting China's accession protocol: A case study in anti-dumping. In *China and the World Trading System*, eds. Deborah Cass, Brett G. Williams, and George Barker, 387–412. Cambridge: Cambridge University Press.
- Lin, Justin. 2000. Economic reform and development strategy in China. In *China's Entry to the WTO: Strategic Issues and Quantitative Assessments*, eds. Peter Drysdale and Ligang Song, 35–52. London: RoutledgeCurzon.
- Lipton, David, Jeffery Sachs, Stanley Fischer, and Janos Kornai. 1990. Creating a Market Economy in Eastern Europe: The Case of Poland. *Brookings Papers on Economic Activity* 1: 75–147. Accessed at: <https://www.brookings.edu/bpea-articles/creating-a-market-economy-in-eastern-europe-the-case-of-poland/>.
- Maddison, Angus. 1998. Measuring the performance of a communist command economy: An assessment of the CIA estimates for the USSR. *Review of Income and Wealth* 44 (3): 307–43.
- . 2009. Measuring the economic performance of transition economies: Some lessons from Chinese experience. *Review of Income and Wealth* 55 (1): 423–41.
- Maddison, Angus, and Harry Wu. 2007. Measuring China's Economic Performance: How Fast Has Its Economy Grown and How Big Is It Compared with the USA? Accessed at: https://www.rug.nl/ggdc/productivity/pwt/related-research-papers/maddison-wu_draft_jan07.pdf.
- McKinnon, Ronald. 1994. Gradual versus rapid liberalization in socialist economies the problem of macroeconomic control. In *Proceedings of the World Bank Annual Conference on Development Economics 1993*, 63–112. Washington, DC: International Bank for Reconstruction and Development, World Bank.
- McMillan, John, and Barry Naughton. 1992. How to reform a planned economy: Lessons from China. *Oxford Review of Economic Policy* 8 (1): 130–43.
- Meltzer, Joshua, and Neena Shenai. 2019. The US-China economic relationship: A comprehensive approach. Brookings Global Development and Economy Policy Brief. Accessed at: <https://www.brookings.edu/research/the-us-china-economic-relationship-a-comprehensive-approach/>.
- Naughton, Barry. 1995. *Growing Out of the Plan: Chinese Economic Reform, 1978–1993*. Cambridge: Cambridge University Press.

- . 2007. *The Chinese Economy: Transitions and Growth*. Cambridge, MA: MIT Press.
- Navarro, Peter. 2006. *The Coming China Wars: Where They Will Be Fought, How They Can Be Won*. London: FT Press.
- OECD. 2002. *China in the World Economy: The Domestic Policy Challenges*. *OECD Synthesis Report*. Paris: Organization for Economic Co-operation and Development.
- . 2005. *OECD Economic Surveys China*. Paris: Organization for Economic Co-operation and Development.
- Perkins, Dwight. 1994. Completing China's move to the market. *Journal of Economic Perspectives* 8 (2): 23–46.
- . 2001. Industrial and financial policy in China and Vietnam: A new model or a replay of the East Asian experience? In *Rethinking the East Asian Miracle*, eds. Joseph Stiglitz and Shahid Yusuf, 247–95. Washington, DC: Oxford University Press/World Bank.
- Pierce, Justin, and Peter Schott. 2012. The surprisingly swift decline of US manufacturing employment. *American Economic Review* 106 (7): 1632–62.
- Plekhanov, Dmitriy. 2017. Quality of China's official statistics: A brief review of academic perspectives. *Copenhagen Journal of Asian Studies* 35 (1): 76–101.
- Portes, Richard. 1994. Transformation traps. *Economic Journal* 104 (426): 1178–89.
- PWC. 2018. The opening up of Chinese automotive industry and its impact. Accessed at: <https://www.pwccn.com/en/automotive/chinese-automotive-industry-opening-up-impact.pdf>.
- Qi, Hao, and David Kotz. 2019. The impact of state-owned enterprises on China's economic growth. *Review of Radical Political Economics* 52 (1): 6–114.
- Rawski, Thomas. 1995. China's reform experience. Special issue: China's transitional economy. *China Quarterly* 144 (December): 1150–73.
- . 1997. China and the idea of economic reform. University of Michigan Business School Davidson Institute Working Paper Series no. 91. Accessed at: <https://deepblue.lib.umich.edu/bitstream/handle/2027.42/39481/wp91.pdf>.
- . 1999. Reforming China's economy: What have we learned? *China Journal* 41 (January): 139–56.
- . 2000. China's economy after fifty years: Retrospect and prospect. *International Journal* 55 (1): 62–79.
- . 2001. What is happening to China's GDP statistics? *China Economic Review* 12 (4): 347–54.
- . 2002. Will investment behavior constrain China's growth? *China Economic Review* 13 (4): 361–72.
- Rawski, Thomas, and Dwight Perkins. 2008. Forecasting China's economic growth to 2025. In *China's Great Economic Transformation*, eds. Lauren Brandt and Thomas Rawski, 829–86. Cambridge: Cambridge University Press.
- Rowen, Henry. 1996. The short march: China's road to democracy. *National Interest* 61: 68–69.
- Sachs, Jeffrey, and Wing Thye Woo. 1994. Structural factors in the economic reforms of China, Eastern Europe, and the former Soviet Union. *Economic Policy* 9 (18): 102–45.
- Setser, Brad. 2018. US-China trade war: How we got here. In *Follow the Money and Asia's Challenge to the Global Economy*. Council for Foreign Relations. Accessed at: <https://www.cfr.org/blog/us-china-trade-war-how-we-got-here>.
- Shang-Jin, Wei. 1997. Gradualism versus big bang: Speed and sustainability of reforms. *Canadian Journal of Economics / Revue Canadienne d'Économique* 30 (4b): 1234–47.
- Song, Ligang. 2003. The state of the Chinese economy—Structural changes, impacts and implications. In *China and the World Trading System*, eds. Deborah Cass, Brett G. Williams, and George Barker, 83–92. Cambridge: Cambridge University Press.
- Stiglitz, Joseph. 2000. Keynote address: Whither reform? Ten years of the transition. In *Annual World Bank Conference on Development Economics*, eds. Joseph Stiglitz and Boris Pleskovic, 1–35. Washington, DC: World Bank.
- Tsai, Kellee. 2005. Capitalists without a class: Political diversity among private entrepreneurs in China. *Comparative Political Studies* 38 (9): 1130–58.
- . 2007. *Capitalism without Democracy: The Private Sector in Contemporary China*. Ithaca, NY: Cornell University Press.

- UC San Diego. 2020. Barry Naughton Sokwanlok Chair of Chinese International Affairs. Accessed at: <https://gps.ucsd.edu/faculty-directory/barry-naughton.html>.
- US Congress. 2002. The National Security Implications of the Economic Relationship between the United States and China 2002. Report to Congress of the US-China Security Review Commission. Accessed at: <https://china.usc.edu/us-china-economic-and-security-review-commission-2002-annual-report-congress-july-15-2002>.
- . 2006. The National Security Implications of the Economic Relationship between the United States and China 2006. Report to Congress of the US-China Security Review Commission. Accessed at: <http://china.usc.edu/us-china-economic-and-security-review-commission-annual-report-2006>
- USTR. 2003. *Report to Congress on China's WTO Ccompliance*. US Trade Representative December 11. Accessed at: https://ustr.gov/archive/assets/Document_Library/Reports_Publications/2003/asset_upload_file425_4313.pdf
- . 2004. *Report to Congress on China's WTO Compliance*. US Trade Representative December 11. Washington, D.C.: US Congress. Accessed at: https://ustr.gov/archive/assets/Document_Library/Reports_Publications/2004/asset_upload_file281_6986.pdf.
- . 2005. *Report to Congress on China's WTO Compliance*. US Trade Representative December 11. Washington, D.C.: US Congress. Accessed at: <https://china.usc.edu/sites/default/files/article/attachments/2005%20China%20Report%20to%20Congress.pdf>.
- Wang, Hongying. 1999. The Asian financial crisis and financial reforms in China. *Pacific Review* 12 (4): 537–56.
- White, Gordon. 1994. Democratization and economic reform in China. *Australian Journal of Chinese Affairs* 31: 73–92.
- Wijnbergen, Sweder van. 1991. Should price reform proceed gradually or in a “big bang”? World Bank Working Paper Series no. 0702. Accessed at: <http://documents1.worldbank.org/curated/en/128881468742459670/pdf/multi0page.pdf>.
- Woo, Wing. 2001. Recent claims of China's economic exceptionalism: Reflections inspired by WTO accession. *China Economic Review* 12 (2–3): 107–36.
- World Bank. 1993. China—Updating economic memorandum: Managing rapid growth and transition. World Bank Country Operations Division China and Mongolia Department, East Asia and Pacific Regional Office Report no. 11932-CHA. Accessed at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/741161468024535577/china-updating-economic-memorandum-managing-rapid-growth-and-transition>.
- . 2017. *Indian Railways, a Case Study: Railway Reform: Toolkit for Improving Rail Sector Performance*. Washington, DC: World Bank.
- . 2019. World Bank open data. Accessed at: <https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS>.
- World Health Organization. 1998. *Health Care Systems in Transition: Russian Federation*. Copenhagen: WHO Regional Office for Europe.
- WSO. 2020. Global crude steel output increases by 3.4 percent in 2019. World Steel Organization. Accessed at: <https://www.worldsteel.org/media-centre/press-releases/2020/Global-crude-steel-output-increases-by-3.4--in-2019.html>.
- Wu, Harry. 2006. The Chinese GDP growth rate puzzle: How fast has the Chinese economy grown? *Asian Economic Papers* 6 (1): 1–23.
- Wu, Mark. 2016. The China, Inc. Challenge to global trade governance. *Harvard International Law Journal* 57 (2): 261–324.

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