

Ang, Yuen Yuen

Working Paper

Industrial transfer and the remaking of the People's Republic of China's competitive advantage

ADB Working Paper, No. 762

Provided in Cooperation with:

Asian Development Bank Institute (ADBI), Tokyo

Suggested Citation: Ang, Yuen Yuen (2017) : Industrial transfer and the remaking of the People's Republic of China's competitive advantage, ADB Working Paper, No. 762, Asian Development Bank Institute (ADBI), Tokyo

This Version is available at:

<https://hdl.handle.net/10419/179218>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/3.0/igo/>



ADB Working Paper Series

**INDUSTRIAL TRANSFER AND THE REMAKING
OF THE PEOPLE'S REPUBLIC OF CHINA'S
COMPETITIVE ADVANTAGE**

Yuen Yuen Ang

No. 762
July 2017

Asian Development Bank Institute

Yuen Yuen Ang is an assistant professor at the Department of Political Science, University of Michigan.

The views expressed in this paper are the views of the author and do not necessarily reflect the views or policies of ADBI, ADB, its Board of Directors, or the governments they represent. ADBI does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequences of their use. Terminology used may not necessarily be consistent with ADB official terms.

Working papers are subject to formal revision and correction before they are finalized and considered published.

The Working Paper series is a continuation of the formerly named Discussion Paper series; the numbering of the papers continued without interruption or change. ADBI's working papers reflect initial ideas on a topic and are posted online for discussion. ADBI encourages readers to post their comments on the main page for each working paper (given in the citation below). Some working papers may develop into other forms of publication.

ADB recognizes "China" as the People's Republic of China; "Hong Kong" as Hong Kong, China; and "Korea" as the Republic of Korea.

In this publication, "\$" refers to US dollars.

Suggested citation:

Ang, Y. Y. 2017. Industrial Transfer and the Remaking of the People's Republic of China's Competitive Advantage. ADBI Working Paper 762. Tokyo: Asian Development Bank Institute. Available: <https://www.adbi.org/publications/industrial-transfer-and-remaking-prc-competitive-advantage>

Please contact the authors for information about this paper.

Email: yuenang@umich.edu

Paper prepared for the conference on "The Impact of a Possible Growth Slowdown in the PRC on Asia." The author thanks Nicole Wu and Zhang Wen for their excellent research assistance. The final version of this paper is forthcoming in *The China Quarterly* as "Domestic Flying Geese: Industrial Transfer and Delayed Policy Diffusion in China."

Asian Development Bank Institute
Kasumigaseki Building, 8th Floor
3-2-5 Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan

Tel: +81-3-3593-5500
Fax: +81-3-3593-5571
URL: www.adbi.org
E-mail: info@adbi.org

© 2017 Asian Development Bank Institute

Abstract

The recent economic slowdown in the People's Republic of China (PRC) has triggered fear and even panic among global investors. In particular, observers are worried that manufacturing—the engine of the PRC's hypergrowth over the past decades—has hit the doldrums. This article shows that low-end, labor-intensive export manufacturers on the coast have indeed been hit by rising costs and tougher local state regulations. However, it goes further to stress that some coastal manufacturers have begun relocating into, and investing in, the inland provinces of the PRC to take advantage of lower costs and policy concessions. By 2015, the value of domestic investment in five central provinces alone was 2.5 times that of foreign investment in the PRC. This phenomenon of industrial transfer, which began in the 2000s, plays a critical role in sparking economic growth in the interior regions, in economic restructuring on the coast, and in the remaking of the PRC's national competitive advantage.

Keywords: industrial transfer, competitive advantage, regional development, flying geese, PRC

JEL Classification: E60; R10; O38

Contents

1.	INTRODUCTION	1
2.	THE SCALE OF INDUSTRIAL TRANSFER.....	3
3.	HISTORICAL PROCESSES LEADING UP TO INDUSTRIAL TRANSFER.....	6
4.	A CLOSER LOOK AT COST PRESSURES.....	9
5.	A CLOSER LOOK AT POLICY PRESSURES	11
6.	CONCLUSION	15
	REFERENCES	17

1. INTRODUCTION

The People's Republic of China (PRC)'s stock market meltdown made headline news around the world in the summer of 2015. Its impact reverberated across the globe, putting a dent in the stock markets in Asia, Europe, and America. While the causes of the panic are complex and multiple, one of the deepest fears behind the sell-off is the impression that export manufacturing—the engine of the PRC's hypergrowth over the past three decades—has hit the doldrums. Indeed, manufacturing output fell worryingly to a three-year low in August of 2015.¹

Is the PRC's manufacturing really in trouble?

To address this question, it is essential to stress that the PRC is not a monolith. Export manufacturing is overwhelmingly concentrated in a thin geographic slice of the country: the coastal cities. In 2006, the five coastal provinces of Guangdong, Jiangsu, Zhejiang, Shanghai, and Shandong accounted for 76% of the value of the PRC's total exports.² Hence, restating the earlier question, we should instead ask: Is manufacturing in *coastal* PRC really in trouble?

My answer is unequivocally yes. Factor and labor costs are rapidly rising in coastal locations like Shenzhen and Shanghai, eroding profits and competitiveness among export manufacturers. Moreover, local governments in coastal cities are increasingly unfriendly toward low-end manufacturers, preferring instead to attract investment in high-tech production and services. Pressured by a combination of higher costs and regulatory burden, low-end producers are forced to scale back production or even to shut down. This dire situation, reflected in gloomy statistics and amplified in pessimistic media reports, has fanned worries about the weakening of the Chinese economy.

Yet while there is much hype about the PRC's impending economic doom, there is surprisingly little discussion about how traditional manufacturers on the coast are coping with recent challenges. While some producers have given up altogether, others have sought—and are still seeking—ways to cut costs and to tap into new markets. In this article, I highlight an important mode of adaptation among coastal businesses: the migration of capital and industries into the PRC's own neglected backward—the inland provinces.

From the early 2000s, waves of manufacturers on the coast began migrating inland to the central and western provinces, a phenomenon termed “industrial transfer” (*chanye zhuan yi*) in Chinese. Industrial transfer is much harder to define and quantify than industrial output because transfer (or relocation) is a dynamic and multifaceted phenomenon. Nevertheless, official statistics on “domestic investment,” a relatively new term, point to a steady surge of investment from the wealthier coastal areas into the poorer central and western regions. To illustrate this, in 2008, the combined value of domestic investment that flowed into five central provinces of Jiangxi, Henan, Hunan, Hubei, and Anhui was CNY836 billion. In 2015, seven years later, it ballooned to CNY3,760 billion.³ This was 2.5 times the amount of foreign direct investment (FDI) that flowed into the PRC in the same year. Furthermore, this comparison only includes

¹ “Stocks Dive As Worries About Asia Reverberate,” *The New York Times*, 1 September 2015.

² Author's calculation using statistics from China Data Online.

³ Figures are from the annual work reports of the respective provincial governments. The reported figure under-counts the actual amount of domestic investment because only investment projects above a certain size were included in the statistics of Anhui and Jiangxi province.

domestic investment in five central provinces, excluding the Western provinces and industrial transfer within the coastal region.⁴

The transfer of industries is not unique to the PRC. Following market liberalization in 1978, scores of factories from wealthier regional economies, especially in East Asia (including Hong Kong, China and Taipei, China), relocated to the coast of the PRC to exploit the region's competitive advantage in low-cost, labor-intensive, export-oriented manufacturing.⁵ An abundant supply of cheap labor poured from the countryside and into factories on the coast, fueling the PRC's rapid industrialization and trade expansion. As is well known, however, the benefits of feverish growth were unevenly distributed across regions. While coastal provinces like Guangdong and Jiangsu grew wealthier by leaps and bounds, central and western provinces lagged behind by several orders of magnitude.⁶ Compared to East Asia, the PRC is distinguished not only by its large size but also by its high degree of regional inequality. Industrial transfer in present-day PRC is distinctive in that industries migrate *within* a country, rather than from country to country.

In addition, whereas cross-national industrial transfer involved only the transfer of capital and technology, the PRC's present-day domestic transfer entails the transfer of government policies and practices across regions, in addition to the migration of industries. While coastal locales today can afford to pick winners and resolve to expel low-end industries, inland governments have little choice but to welcome virtually all investment projects, regardless of quality. Interestingly, the latter has also belatedly adopted aggressive investment promotion tactics that were earlier practiced but abandoned on the coast ten to twenty years ago.⁷ In other words, within the PRC, we see a delay in the diffusion of government practices across regions. This lagged pattern has not been picked up in the existing literature on policy diffusion, which assumes that any experiment, once proven successful, can be replicated across the country simultaneously.⁸

Industrial transfer plays a critical role in sparking economic growth in the interior regions, in economic restructuring on the coast, and in the remaking of the PRC's national competitive advantage. For the coast, the migration of labor-intensive, low-end manufacturing inland frees up room for higher-end production and tertiary economic activities, a strategy that Chinese policymakers term "emptying the cage to change the bird" (*tenglong huanniao*). For inland economies, the domestic migration of industries brings an unprecedented flow of investment and growth opportunities.⁹ And for the PRC, if an effective division of labor according to regional comparative advantages emerges, then it could command a powerful edge over other national competitors. After all, few nations boast of having the lowest to highest ends of production within a single market. In my earlier research, I termed the movement of industries and technology from the coastal to interior regions of the PRC *domestic flying geese*,¹⁰ a domestic twist

⁴ Industrial transfer also occurs within coastal provinces, such as from Southern Jiangsu to poorer parts of Northern Jiangsu.

⁵ Leng 2013; Naughton 1997.

⁶ On regional inequality, see Kanbur and Zhang (2005) and Li, Satō, and Sicular (2013).

⁷ Ang, 2016.

⁸ Florini, Lai, and Tan, 2012; Heilmann, 2008; Teets and Hurst, 2015.

⁹ See Ang 2016.

¹⁰ Ang 2016, Chap 6.

on the term “flying geese,” coined by Akamatsu to describe the tiered system of development in Asia.¹¹

However, the above scenario projects only an ideal. Actualizing it is far from easy, much less assured. Although the PRC is a top-down hierarchy, the central leadership cannot command regional governments to specialize in particular manufacturing sectors. Nor can state authorities compel private- and foreign-owned businesses to move to desired locations. Thus far, industrial transfer within the PRC has been a largely bottom-up, market-driven process that resists precise state planning, whether by central or local authorities.

In connection with the theme of this conference, “The Impact of a Possible Growth Slowdown in the PRC on Asia,” my essay estimates the scale of industrial transfer and traces the historical processes leading up to this phenomenon in the present period, focusing on the market and policy forces that have accelerated this process. Taken as a whole, the PRC’s economy has reached a middle-income stage; its heyday of continuous double-digit growth is over.¹² Yet not all of the PRC has escaped poverty. Many parts of the central and western regions remain economically and institutionally backward. To understand the current slowdown and the remaking of the PRC’s national competitive advantage, we must also examine the inequalities and potential complementarities among its diverse regions.

2. THE SCALE OF INDUSTRIAL TRANSFER

Estimating the scale of industrial transfer is tricky because, according to officials at the National Development and Reform Commission (NDRC), there is no consensus, even among central planners and policy experts, on the definition of “transfer.”¹³ Compared to output, transfer is a dynamic, multi-faceted concept, which makes measurement difficult. Transfer can take many forms at the firm level, including the establishment of new production facilities, creation of new distribution chains and research and development (R&D) facilities, outward investment, and physical relocation of corporate headquarters to another province or city within the home province.¹⁴ Relocation is only one aspect of transfer.

Constrained by the dynamic, multi-faceted nature of industrial transfer, systematic and consistent data is lacking in the PRC’s official yearbooks. Nevertheless, multiple sources and case studies point to a dramatic movement of investments from the coast to the interior. One indicator is “beyond-province investment,” i.e., investment from beyond a given province but within national borders and excluding Hong Kong, China; Taipei, China; and Macau, China. More simply, this term measures domestic investment.

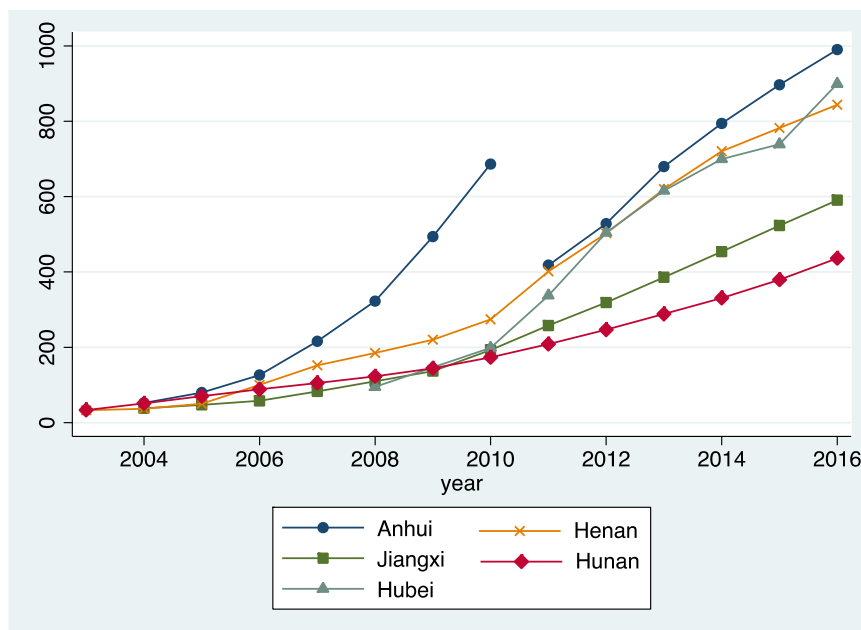
¹¹ Akamatsu 1962.

¹² World Bank and State Council 2013.

¹³ Author’s interviews with officials at the NDRC, 2015.

¹⁴ NDRC Industrial Economy Research Center, 2013, 212.

Figure 1: Domestic Investment in Five Central Provinces (CNY billion), 2003–2016



Source: Figures tabulated from provincial government work reports (starting 2003). Note that figures from Jiangxi only include investment projects over 50 million and Anhui, from 2010 onward, only counts investment projects over 100 million. Therefore, the reported figures undercount the total amount of domestic investment in these provinces.

Since 2004, the central provinces have seen a steady rise in domestic investment, as illustrated in Figure 1. Domestic investment only appeared in the annual work reports of these provinces from the early 2000s onward, as early as 2003, indicating that it is a new occurrence. In Hubei province, this terminology appeared later, in 2008. In terms of the total volume of domestic investment, Anhui Province held the top spot in the central region.

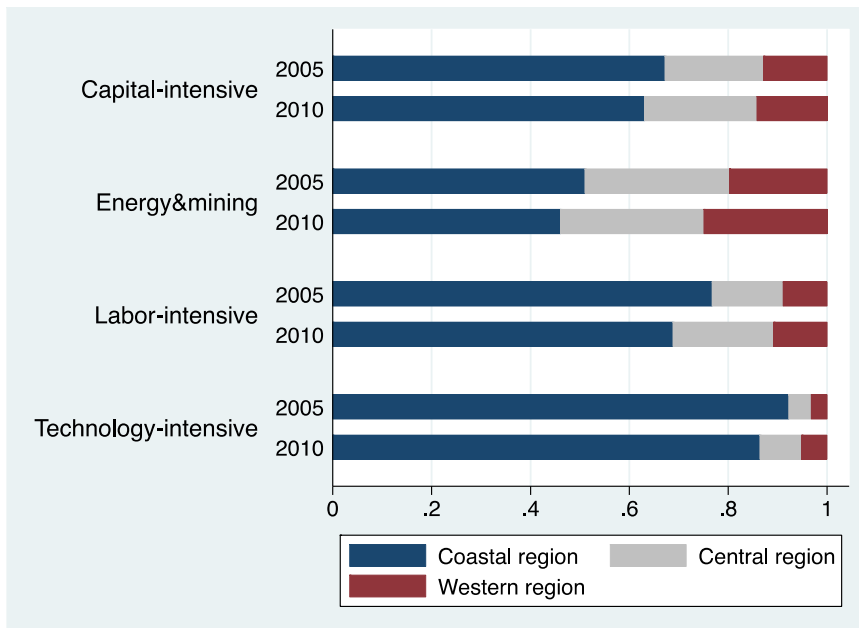
Temporal shifts in the geographic distribution of manufacturing provide another indication of industrial transfer. Drawing on a study by the National Development and Reform Commission (NDRC), Table 1 shows a consistent decline of the coastal region’s geographic share of manufacturing vis-à-vis central and western regions. This decline occurred from 2005 to 2010 across all four major industries: energy and mining, labor-intensive, capital intensive, and even technology-intensive sectors (such as telecommunication products and electronics).

Figure 2 illustrates the temporal and geographic patterns in Table 1. As the coastal region’s share of manufacturing declined, it was gradually taken over by central and western regions. In 2010, central provinces registered a larger share of manufacturing in labor-, capital-, and technology-intensive industries than Western provinces. Coastal provinces accounted for less than half of production in energy and mining. Though they continue to dominate in technology-intensive industries, even this share has declined over time.

Table 1: Geographic Share of Manufacturing in 2005 vs. 2010

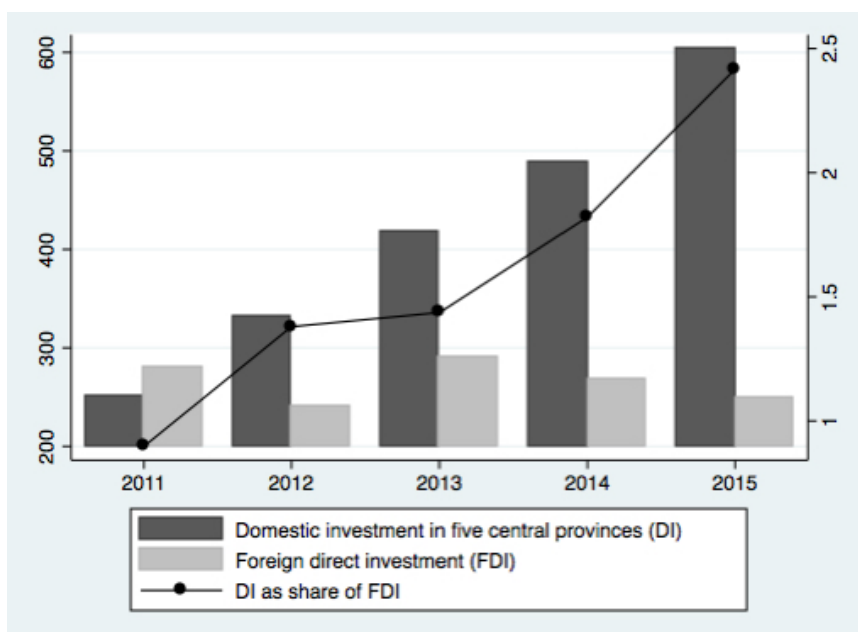
Type of Industry	Year		Coastal Region	Central Region	Western Region
Energy and mining	2005	Total output (CNY billion)	1,723.7	987.11	667.57
		Share of total (%)	51.02	29.22	19.76
	2010	Total output (CNY billion)	4,101.88	2,577.26	2,216.29
		Share of total (%)	46.11	28.97	24.91
Labor-intensive (e.g., food processing, textiles, paper, furniture)	2005	Total output (CNY billion)	5,759.38	1,077.07	666.32
		Share of total (%)	76.76	14.36	8.88
	2010	Total output (CNY billion)	14,835.33	4,394.45	2,319.20
		Share of total (%)	68.84	20.39	10.76
Capital-intensive (e.g., chemicals, smelting, heavy equipment)	2005	Total output (CNY billion)	6,506.52	1,934.41	1,239.34
		Share of total (%)	67.21	19.98	12.80
	2010	Total output (CNY billion)	17,729.62	6,386.94	3,984.04
		Share of total (%)	63.09	22.73	14.18
Technology-intensive (e.g., telecommunications, electronics, machinery)	2005	Total output (CNY billion)	4,028.86	199.56	139.26
		Share of total (%)	92.24	4.57	3.19
	2010	Total output (CNY billion)	9,052.44	889.85	529.12
		Share of total (%)	86.45	8.50	5.05

Figure 2: Geographic Share of Manufacturing in 2005 vs. 2010



Importantly, the scale of domestic investment has far outstripped that of FDI in the PRC, a fact that has received surprisingly little attention. Figure 3 compares the volume of domestic investment in five central provinces (Anhui, Jiangxi, Hebei, Hunan, Henan) to that of FDI that entered the PRC from 2011 to 2015. During this period, FDI fluctuated within a narrow band of \$240 and \$300 billion, whereas domestic investment in the central region surged from \$251 to \$603 billion. By 2015, domestic investment in this region was almost 2.5 times that of FDI in all of the PRC combined. Clearly, the role of domestic investment in the PRC's current and future economic development demands attention.

Figure 3: Domestic Investment in Five Central Provinces vs. Foreign Direct Investment in the People's Republic of China (\$ billion), 2011–2015



Source: Figures on domestic investment are obtained from annual provincial government work reports. It under-counts the actual amount of domestic investment, as only projects of a sufficiently large scale were counted in Anhui and Jiangxi. FDI figures are from World Bank Indicators.¹⁵

3. HISTORICAL PROCESSES LEADING UP TO INDUSTRIAL TRANSFER

To trace the processes leading up to industrial transfer, it is useful to begin with central policies toward regional development since 1978. Upon taking over the reins of power, Deng Xiaoping reversed many of Mao's policies. Instead of propping up heavy industrialization in the interior through centrally funded investment, as Mao did,¹⁶ Deng encouraged the coastal regions to leverage their geographic proximity to global export markets to attract foreign investment and thereby stimulate industrialization. During the early 1980s, the central leadership approved the establishment of special economic zones (SEZs) in several coastal cities, such as Shenzhen, Xiamen, and Zhuhai. The SEZs and their surrounding areas attracted the first waves of FDI (foreign direct

¹⁵ Data on FDI was accessed at <http://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD>.

¹⁶ Yang 1997, 19.

investment), primarily in the manufacturing sector, and predominantly from the East Asian economies of Hong Kong, China; Taipei, China; Macau, China; and later Singapore; the Republic of Korea; and Japan.¹⁷

During the 1980s, central planners in Beijing urged the regional governments to develop economic specializations according to their factor endowments, dictated primarily by location and natural resources. During the Seventh Five-Year Plan (1986–1990), the central government stated that the coastal regions should engage in “the restructuring of traditional industries, new industries, and consumer goods production”; the central regions should focus on energy, construction, and mining; and the western regions should specialize in agriculture production and processing. At the time, central planners envisioned a static geographic distribution of industries based on factor endowments, rather than a dynamic transfer of production and capabilities. Also, central policies were overtly biased toward letting the coastal region “get rich first,” to use Deng’s phrase.

The interior regions were of course unwilling to accept a disadvantageous arrangement. All the provinces fought to stem the outflow of underpriced raw materials from their borders and to maximize the production and export of valuable manufactured goods to other provinces.¹⁸ As a result, during the 1980s, the provinces broke out in “commodity war,” marked by local protectionism, duplicative industries, and overcapacity.¹⁹

The year of 1993 marked a watershed in the PRC’s reforms. The post-Deng leadership under President Jiang Zemin and Premier Zhu Rongji announced the party’s historic decision to shift from partial to full-fledged market liberalization. From the 1990s on, the leadership advanced comprehensive market reforms on multiple fronts, including the restructuring and closure of state-owned enterprises (SOEs) throughout the country. Further market liberalization forced uncompetitive enterprises protected by local governments to eventually shut down, ushering in a wave of industrial consolidation.²⁰ Soon after, the coastal region consolidated its advantage in processing industries and services,²¹ while the less developed central and western regions were relegated to supplying raw materials and cheap labor to factories on the coast. Consequently, the economic gaps between the coast and the interior widened even further.

During the Ninth Five-Year Plan in 1996, the new central leadership under President Hu Jintao and Premier Wen Jiabao expressed serious concerns about widening regional disparities. In 2000, the central party state announced the “Great Western Development” campaign to stimulate economic growth in the western provinces. This was followed by massive fiscal transfers to finance infrastructure projects in the west. Then, in 2004, Premier Wen Jiabao inaugurated “The Rise of the Central Regions,” another campaign to address the regional imbalance in development between the coastal and central regions.

¹⁷ One distinctive feature of the PRC’s FDI is that it came primarily from the Chinese diasporic community and neighboring East Asian countries, rather than from Western multinational companies (Naughton 2007, 413–419).

¹⁸ Wedeman 2003.

¹⁹ Young 2000.

²⁰ Naughton 2003, 223; Wedeman 2003.

²¹ Bai, Du, Tao, and Tong 2004; Naughton 2003; Xu and Liang 2004.

When these campaigns were formulated in the early 2000s, the focus was to help the central and western regions catch up economically by providing fiscal grants and building infrastructure, not by promoting industrial transfer. At that time, industrial transfer had not yet been elevated to the highest policy agenda. The infrastructure investment made during this period, however, created the physical foundation for subsequent industrial migration by connecting inland and coastal economies through the construction of highways, high-speed railways, bridges, and other facilities.²²

Meanwhile, as the central authorities adjusted their policies in response to widening disparities, changes in market conditions were unfolding in the coastal cities. As the coast industrialized and prospered, factor inputs (e.g., electricity, land, and manufacturing facilities) spiked in costs. Most significantly, labor, which used to be abundant and cheap, became costlier as the pool of young labor shrank.²³ At the same time, local governments in the coastal regions grew increasingly hostile toward low-end, labor-intensive manufacturing, as they sought to make room for valuable and nonpolluting investments (more in the next section). In other words, by the 2000s, low-end manufacturers on the coast had begun to feel the same market and policy pressures that had driven factories to relocate from East Asia to coastal PRC in the wake of market liberalization.

Central planners in Beijing did not plan in advance, much less engineer, this ongoing wave of domestic investment and industrial migration. Instead, they reacted belatedly to it. In 2010, the State Council (the highest organ of the administrative hierarchy) issued a circular titled “Guiding Principles on Industrial Transfer to the Central and Western Regions.” This was followed by a host of concrete ministerial-level policies to promote industrial transfer. In contrast to earlier policies that favored only the coast, the 2010 circular underscored room for mutual gain among coastal and inland regions: “The enthusiastic transfer of industries would not only accelerate the process of new industrialization and urbanization in the interior, enhance harmonious regional development, but would also promote economic restructuring and upgrading on the coast.”

Additionally, central policymakers felt an urgent need to evolve the PRC’s niche in the international market. The 2008 global financial crisis inflicted a painful lesson. After the crisis broke out, manufacturing orders from the United States and other developed economies abruptly declined, hitting export manufacturers on the coast especially hard. In the first half of 2008, it was estimated that 67,000 factories shut down, threatening to put millions of workers out of jobs, plunge the economy into recession, and spark political unrest.²⁴ The 2008 crisis made it clear that continued reliance on low-cost export manufacturing is unsustainable not only for the coastal economies, but also for the PRC.

Following the State Council’s 2010 Circular was a host of concrete ministerial-level policies to promote industrial transfer. Important ministerial bodies came on board, including the NDRC, Ministry of Commerce, and Ministry of Industry and Information Technology. Once the State Council circular was issued, the central government established several “recipient of industrial transfer model zones” in selected cities of the central region. Like special economic zones in the past, these zones received a comprehensive package of benefits: preferential policies from the center, infrastructure

²² Ang 2016, Chapter 6. “Taxless public financing” played a similar role in facilitating interstate commerce during the early days of state building in America (Wallis 2005).

²³ Gallagher 2014.

²⁴ “Factories shut, Chinese workers are suffering,” *The New York Times*, 13 November 2008.

funds, loans, waiver of interest payments, priority land quota allocation, and priority approval of targeted investment projects.²⁵

In short, the processes leading up to industrial transfer today may be summed up in the following steps: market liberalization in 1978 → influx of foreign investment (especially from East Asia) to coastal PRC, stimulating early industrialization and growth → as coastal markets grew and saturated, costs rose and local regulations stiffened → coastal manufacturers pressured to migrate and invest inland → late industrialization and growth spurts in parts of central and western PRC.²⁶

4. A CLOSER LOOK AT COST PRESSURES

Having outlined the macro historical processes leading up to domestic industrial transfer in recent years, this section zooms in further on the cost pressures facing manufacturers on the coast. In previous decades, many coastal manufacturers were engaged in light industries and produced consumer items (e.g., textiles, shoes, furniture, paper, and toys) for retailers in advanced market economies. Outsource manufacturing thrived on low costs, and intense competition among producers kept profits wafer-thin. This industry is thus highly sensitive to cost pressures, especially land and labor costs.

In the PRC, land cannot be sold to private parties; instead, businesses can lease the right to use parcels of land by bidding for and paying a one-time land use fee (*tudi churangjin*).²⁷ Table 2 compares the average price per hectare of land in 2011 across four major regions—coastal, central, western, and northeastern—based on the amount of land use fees collected. The average price of land in the coastal region, CNY18.36 million per hectare, is three times higher than in the remaining regions. Within the coastal region, there is wide variance. Land is most expensive in Shanghai, costing an average of CNY45.51 million per hectare, making the city prohibitively expensive for building factories.

Table 2: Average Land Price across Regions, 2011

Regions	Provinces Included	Average Price per Hectare of Land (CNY million)	Ratio to Coastal Region
Coastal	Fujian, Guangdong, Jiangsu, Zhejiang, Shanghai, Shandong	18.36	1.00
Central	Anhui, Henan, Hunan, Hubei, Jiangxi, Shanxi	6.63	0.36
Western	Gansu, Guangxi, Guizhou, Inner Mongolia, Ningxia, Qinghai, Sichuan, Tibet Autonomous Region, Yunnan, Chongqing	5.57	0.30
Northeastern	Heilongjiang, Jilin, Liaoning	6.51	0.35

Source: Author's calculation from *China Land Resources Yearbook*.

²⁵ *Xinhua*, July 2, 2009.

²⁶ For a historical case study of this process of a county in Hubei province, see Ang, 2016, Chapter 6 (Connecting First-Movers and Laggards).

²⁷ Man and Hong 2011.

Next, consider the increase in labor cost from 2000 to 2013, as detailed in Table 3. Across the regions, the coast consistently fetched the highest manufacturing wage. Converted to US dollars, in 2000, the average annual wage per worker on the coast was \$2,393 per annum; and by 2013, it had grown to \$11,443. Compare this to the United States, where the average hourly wage of manufacturing workers was \$24.34 in 2013.²⁸ Assuming eight hours of work per day and 20 days per month, average annual earnings would add up to \$46,732. Evidently, although the cost of labor in coastal PRC was still only a quarter of that in America, the tremendous labor cost advantage that the PRC's coastal cities used to enjoy drastically shriveled within a span of only 13 years.

Table 3: Average Manufacturing Wage across Regions, 2000 vs. 2013²⁹

Regions	Average Manufacturing Wage per Worker			
	In 2000 (CNY)	In 2000 (\$)	In 2013 (CNY)	In 2013 (\$)
Coastal	19,811	2,393	72,092	11,443
Central	4,103	496	27,771	4,408
Western	4,926	595	30,288	4,808
Northeastern	6,809	822	37,196	5,904

Source: Author's calculation from *China Labor Yearbook*, 2001 and 2014.

Table 4 further summarizes a comparison of average manufacturing wage across regions and over time. On average, wages in the PRC increased by 450% from 2000 to 2013. From 2000 to 2013, wages in the coastal region increased by 264%. This rate of increase was actually less than in the central (577%), western (515%), and northeastern (446%) regions. Indeed, in my fieldwork and interviews conducted in the central provinces of Hubei and Jiangxi, local officials lamented that wage costs are on the rise even in inland PRC.³⁰ In 2000, the average manufacturing wage in the central, western, and northeastern regions was 21%, 25%, and 34% respectively of that on the coast. Thus, for coastal factories, relocation to the interior provinces still provided attractive cost savings. However, the cost gap between the coast and the other regions has narrowed since 2000. By 2013, the average wage in the central, western, and northeastern regions had increased to 39%, 42%, and 52% respectively of that in the coastal region.

Table 4: Comparison of Average Manufacturing Wage across Regions and Over Time

Regions	Increase in Average Wage per Worker Since 2000	Ratio to Average Wage in Coastal Region (2000)	Ratio to Average Wage in Coastal Region (2013)
Coastal	264%	1.00	1.00
Central	577%	0.21	0.39
Western	515%	0.25	0.42
Northeastern	446%	0.34	0.52

²⁸ Official website of the US Bureau of Labor Statistics. Accessed in October 2015 at http://data.bls.gov/timeseries/CES3000000003?data_tool=Xgtable

²⁹ Following the World Bank Indicator, the exchange rate was CNY6.2 to \$1 in 2013, and CNY8.3 to \$1 in 2000. Source: <http://data.worldbank.org/indicator/PA.NUS.FCRF>

³⁰ Ang 2016, Chap 6.

These numerical trends point to both the economic promise and perils of industrial relocation within the PRC. On the one hand, there remains a significant gap in factor costs between the coastal and interior regions, making it potentially cost-effective for coastal factories to transfer production inland. The migration of industries has been spurred by a rapid expansion of cross-regional infrastructure projects under the auspices of the “Great Western Development” and “Rise of the Central Regions” campaigns. Furthermore, the central government has recently tried to shift the sources of economic growth from exports and investments to domestic consumption.³¹ Some coastal producers have relocated inland to capture growing consumer markets in the interior. On the other hand, the cost advantage of the interior vis-à-vis the coast is shrinking. Even in the central, western, and northeastern provinces, the supply of blue-collar workers is declining. This results both from the PRC’s one-child policy and from increased enrollment of the young labor force in universities. Additionally, as the PRC’s workforce enjoys more political freedom and exposure to ideas about labor rights, it is also becoming increasingly assertive, as is evident from the high-profile labor protests in recent years.³²

5. A CLOSER LOOK AT POLICY PRESSURES

In addition to factor costs, policies and regulations made by local governments are another major push-or-pull factor for manufacturers. Since the launch of market reforms, the PRC’s economic development has been highly decentralized. Party state bureaucrats, reaching down to the counties, townships, and villages, have played and continue to play an active role in recruiting investors and nurturing local enterprises. This exceptionally prominent growth-promoting role of local officials prompted some observers to characterize the PRC as a *local* variant of the East Asian developmental states.³³

Although local governments in the PRC are generally pro-growth, however, they do not pursue the same types of growth or employ identical strategies simultaneously. The content of local developmental policies, including the targets of investment recruitment and eviction, varies tremendously across regions and evolves over time. My book, *How China Escaped the Poverty Trap*, documents the evolution of industrial promotion policies among locales on the coast and in the interior.³⁴ In the years following 1993 (when the central party announced the decision to pursue full-fledged market reforms), local governments in the coastal region were keen to attract any type of investment, regardless of sector, value, or complementarities. During the early years of market building, the focus of these local governments was on achieving quantity—rather than quality—in terms of growth. However, over time, as investments poured in and markets expanded, coastal local governments became less financially desperate and also more selective in the type of investment they sought to attract. Today, these governments enact higher entry barriers for manufacturing investment. Many go further to formulate detailed and forceful policies to expel low-end, polluting industries from their jurisdictions.

³¹ Naughton 2015.

³² Gallagher 2014.

³³ Oi 1995, 1999; Walder 1995.

³⁴ For an abbreviated discussion, see Ang (2017).

By contrast, inland locales are on the receiving end of an influx of domestic investment coming from the coast, particularly industries that are expelled by coastal local governments. This burst of new opportunities has stirred inland local governments into a frenzy to attract investments, dubbed “investment fever” (*zhaoshang rechao*) in Chinese.³⁵ My field research in the central provinces of Hubei and Jiangxi finds that starting from the mid-2000s, local governments assigned investment recruitment targets to all agencies within the party state apparatus.³⁶ In other words, all local bureaucrats participate in recruiting investors, and domestic investors from the coast (rather than foreign investors from overseas) are their prime target of recruitment. Inland governments today are belatedly replicating the developmental approach adopted in the coastal region in the 1980s through the early 2000s. Such tactics of en masse, aggressive, and indiscriminate investment promotion were subsequently abandoned among coastal locales as markets grew and saturated. In laggard provinces like Hubei and Jiangxi, however, local governments are still desperate to attract any investment project, and they are willing to offer generous tax breaks, subsidies, and loose regulations to do so.

To illustrate the variation in developmental policies and degree of selectivity among local governments in the coastal and central regions, I compare three cities: Ningbo City (Zhejiang), Sanming City (Fujian), and Huanggang City (Hubei). Among the three cases, Ningbo, which is situated right on the coast and close to Shanghai, is the wealthiest and the earliest to embrace foreign investment. Sanming is situated in the interior of Fujian Province. It is less geographically advantaged than Ningbo and thus less wealthy, but has nevertheless industrialized heavily. Huanggang is located in the central province of Hubei. Compared to Zhejiang and Fujian, locales in Hubei were unable to attract foreign investment in the 1980s–1990s, so many were stuck in poverty throughout the previous decades.

I compared the amount and content of regulations related to the “eviction of backward industries” (*taotai luohou chanye*) on the official government websites of the three cities. Official government websites provide a rich source of information about the policies and priorities of local governments.³⁷ One should not be quick to dismiss these websites as mere vehicles of propaganda. It is likely that materials have to be vetted by senior executives within the local governments before they can be publicly posted online. Thus, information posted on these sites provides useful signals about the primary concerns and the policy stances that local authorities are willing to express openly.

Table 5 below summarizes the number of relevant hits under the search term “eviction of backward industries” on the official websites of the three city governments. I subdivided the hits into city-level state documents and regulations posted on the websites and other links (e.g., media reports). While it is easy for local governments to post links related to the eviction of backward industries, formulating and then posting state documents online indicates serious efforts at policy implementation. In line with my earlier discussion, among the three cities, Ningbo has the highest number of hits (126), 20 times more than Huanggang (only 6) and seven times that of Sanming (17). Although both Ningbo and Sanming are cities located on the coast, Ningbo posted more information and a greater number of state documents on industrial eviction than

³⁵ “Investment fever is restarted” (*zhongguo zaixianqi zhaoshang hechao*), *The People’s Daily*, 25 December 2009.

³⁶ Ang 2016, Chapter 2.

³⁷ Pan 2014.

Sanming In other words, we find economic and policy variance even within the developed coastal region.

Table 5: Local State Policies on Eviction of Backward Industries

	Total Relevant Hits (No. of Posted State Documents in Brackets)	Industries Targeted for Eviction
Ningbo, Zhejiang Province	126 (43)	Cement, steel and ferroalloy, foundry, bricks and tiles, paper, nonferrous metal, home appliances, machinery, chemicals, textiles, printing and dyeing, chemical fiber, electroplating, waste plastic processing, thermal power, lead-acid batteries, coal-fired boilers, S7 transformers, brick kilns, stainless steel smelting, steel rolling
Sanming, Fujian Province	17 (6)	Steel making, paper, ferroalloy, coal mining, cement, electricity (coal-fired), textiles, silicon industry
Huanggang, Hubei Province	6 (5)	Steel making, leather, glass, cement, printing and dyeing

Source: Author's tabulation based on official websites of the local governments.

Let us compare the types of industries targeted for eviction. Steel and cement manufacturing were targets of eviction in all three cities. Other overlapping targets of eviction in Ningbo and Sanming were paper, ferroalloy, textiles, and coal-fired electricity, while Huanggang's list overlapped with Ningbo's list only in printing and dyeing. All five targets in Huanggang were mandated by central policies, and Sanming listed only textiles and silicon in addition to the five centrally mandated targets.³⁸ This suggests that industrial eviction in the less developed cities was motivated primarily by compliance with central policies. By contrast, the most prosperous city of Ningbo went far beyond central demands. Among the three cities, it identified the longest list of industries for eviction, including cement, paper, chemicals, batteries, stainless steel, plastic processing, and even textiles (which used to be a major manufacturing sector in Zhejiang). Aside from its concern for environmental protection, the Ningbo city government also underscored "promoting economic restructuring and altering the method of economic development" as a motivation for phasing out backward industries.³⁹

Policy decisions to evict selected industries are backed by regulatory teeth, especially in the two coastal cities of Ningbo and Longyan. As part of the city's plan to "empty the cage and change the bird," Ningbo set up an earmarked fund to subsidize and reward local enterprises for restructuring or relocation. For example, subsidies are provided to enterprises that terminate production of goods on the evicted list and thereby "free up more than 300 tons of carbon emissions" for other manufacturing sectors. Enterprises are entitled to up to CNY200,000 (about \$32,000) in subsidy for the elimination of every unwanted product line. For particular sectors such as equipment production, one-time

³⁸ Ministry of Industry and Information, "Targets on eviction of backward industries" (2014, 2011); State Council, "Notice on the eviction of nine primary backward industries" (2010).

³⁹ Directive No. 166, "Implementation of the eviction of backward industries," Ningbo City Government, 2010 (in Chinese).

subsidies are also provided per machinery item (e.g., CNY20,000 per steam boiler), to encourage these sectors to close down or move away. Other than incentives, the city governments also issue penalties.⁴⁰ Both Sanming and Huanggang required targeted enterprises to shut down by stipulated deadlines.⁴¹ Enterprises that refused to comply could have their licenses revoked or electricity and water supply cut off.

The city governments even turned the eviction of backward industries into mandatory bureaucratic targets. For example, Huanggang announced its decision to close two printing and dyeing enterprises in 2014, and specifically marked two production lines, 68 machines, and 5400 square meters of factory space as part of the targets.⁴² Eviction tasks were assigned to specific local government offices, such as the Development Zone Committee. Bureaucratic targets in Sanming were even more comprehensive than in Huanggang. One of the targets was to assign monetary rewards for evicting backward industries.⁴³ Moreover, the city government signed “contracts” with its county and district governments, specifying their responsibilities for evicting backward industries,⁴⁴ a target included in cadre evaluation. Such targets pushed local officials so hard that the number of backward industries shut down exceeded assigned targets in some cases.⁴⁵ Although Ningbo appeared less harsh in its approach than Sanming and Huanggang, it also applied numerical targets. One document stated that the city should subsidize about 20 “empty the cage and change the bird” projects each year.⁴⁶

Yet despite apparently strong measures taken by these local governments, they cannot in fact achieve the desired outcomes by command. Some enterprises are resistant to eviction, particularly if these companies contribute to local employment and tax income.⁴⁷ It is especially difficult to expel enterprises that were earlier brought in through the personal connections of local officials.⁴⁸ Most likely, market forces will trump policy forces in driving away backward industries from the coast. If costs keep rising and factories are no longer able to make profits, then they will have to close down or move away.

Moreover, even if local governments can successfully remove backward industries, attracting new and high-value ones poses a much greater challenge. It is essential to distinguish among locales within the coast, which itself is a vast and heterogeneous area. Cities like Shanghai, Ningbo, and Shenzhen enjoy tremendous advantage in transitioning from low-end to higher-end economic activities. But for second- and third-tier cities within coastal provinces, this transition is much harder to achieve. Local officials cite the difficulty of attracting skilled talent as a major obstacle to economic restructuring. Young and educated people are unwilling to work and live in second-tier cities that lack the amenities, excitement, and opportunities of first-tier cities.

⁴⁰ Directive No. 239, “Notice on special funds for the eviction of backward industries,” Ningbo City Government (2014) (in Chinese).

⁴¹ “Targets on eviction of backward industries,” Sanming City Government (2011); “Policies for implementing the eviction of backward industries,” Huanggang City Government (2014).

⁴² “Evicting backward industries,” Huanggang (2014).

⁴³ “Targets on eviction of backward industries,” Sanming (2011).

⁴⁴ “Exceeded targets for evicting cement factories,” Sanming City Government (2008).

⁴⁵ “Exceeded targets,” Sanming (2008).

⁴⁶ “Notice on special funds,” Ningbo (2008).

⁴⁷ On large local enterprises as an obstacle to environmental reforms, see Lorentzen, Landry, and Yasuda (2014).

⁴⁸ Ang 2016, Chapters 2 and 4.

6. CONCLUSION

The PRC is not a monolith. To understand the past growth and current slowdown of the Chinese economy, it is important to bear in mind that wide regional variation persists within the PRC. While its coastal cities rapidly industrialized and urbanized, reaching middle-income status, vast areas of the country remain low-income economies. Among coastal provinces, pressured by growing factor costs and toughening local state policies, the competitiveness of traditional manufacturing sectors is steadily declining. In central and western provinces, however, local governments are eager to welcome unwanted industries to the coast, and these areas can offer comparatively lower costs.

The PRC's large size and regional heterogeneity distinguish it from other countries in East Asia, such as Japan and the Republic of Korea. Hence, harnessing regional inequality holds the key to the remaking of the PRC's national competitive advantage.⁴⁹ In his influential book, *The Competitive Advantage of Nations*, Michael Porter names four factors that affect national competitiveness in the global market: endowed factors, home demand for products and services, structure of supporting industries, and structure of domestic enterprises.⁵⁰ Treating nations as more or less homogeneous, Porter's theory completely ignores regional economic relations.⁵¹ Yet for the PRC, this missing factor is crucial.

Central planners in Beijing are clearly aware of the benefits of connecting advanced and backward regional economies within the country. Already, industrial transfer has been elevated to the highest policy agenda, and many programs and "model sites" have since been launched to promote industrial transfer. However, in my assessment, existing state measures are paradoxically too limited and too strong at the same time. On the one hand, the state—whether at the central or local level—is unable to dictate the location and movement of industries. As one NDRC official stated, "The government wants to guide enterprises by making policies in line with the enterprises' profit motives. However, we cannot compel or command enterprises to take particular actions. Markets are still the decisive mechanism."⁵² On the other hand, commands are issued within the bureaucracy to implement goals of economic restructuring. As discussed earlier, coastal local governments impose targets on agencies to evict unwanted industries, whereas inland local governments enlist bureaucrats en masse to recruit investors, also through the target system. Pressured to meet mandatory goals, local officials are compelled to take short-sighted, desperate measures.⁵³ Consequently, opportunistic investors have taken advantage of the situation to extract free land and lucrative deals from local governments but not in the end produce in these areas.⁵⁴

⁴⁹ Ang 2016, Chap 2.

⁵⁰ Porter 1990.

⁵¹ The developmental state literature highlights the role of the state in "picking winners," but like Porter's theory, it also does not consider the role of regional heterogeneity in the making of national competitive advantages (Amsden 1989; Evans 1995; Johnson 1982; Wade 1990). This is likely because the East Asian countries, on which the literature is based, did not feature wide regional inequalities. For a revival of this activist-state perspective in the context of the PRC, see Justin Lin's "new structural economics" theory (Lin 2012).

⁵² Author's interview with official in the NDRC, 2015.

⁵³ *The People's Daily*, 25 December 2009.

⁵⁴ For further elaboration of these problems, see Ang 2016, Chapter 6.

Furthermore, to meet its new economic challenges, the PRC will have to rethink and reform its political system. Since market liberalization, the PRC has relied on regional competition as one key driver of economic growth. Intense competition among regions pushed local officials to do whatever it takes to attract investment and accelerate production.⁵⁵ However, moving forward, if the PRC seeks to restructure its economy and enhance complementarities among unequal regions, this will require regional cooperation, in addition to competition. The current political system, however, does not have sufficient mechanisms in place to reward such cooperation and coordination.

Delayed policy diffusion deserves greater attention in the study of the PRC's policy making and experimentation process. Teets and Hurts identify three different modes of policy diffusion: top-down (from central to local), bottom-up (from local to central), and horizontal (from region to region without Beijing's intervention).⁵⁶ While the existing discussion points usefully to different directions of policy diffusion, it fails to note the important role of timing and sequence. Lagged replication of investment strategies is one among many instances in which policy adoption is conditional upon economic conditions. My research in Chengdu finds that even within a single county, while the wealthiest township was able to dilute growth targets and prioritize social goals, the same policy could not feasibly be adopted in less wealthy townships, which must first deliver economic growth.

Many questions remain for future research. While there is a palpable sense among policymakers and businesses alike that industries have been moving from the coast to the interior, we lack accurate and systematic macro measures of this movement. At the micro level, we also lack data about the responses of coastal producers to cost and policy pressures. Do these manufacturers choose to close down, move inland, or relocate to other developing countries, such as Southeast Asia? More also needs to be learned about the impact of state interventions on firms' responses to evolving market conditions.

⁵⁵ Montinola, Qian, and Weingast 1995.

⁵⁶ Teets and Hurst, 2015.

REFERENCES

- Akamatsu, Kaname. (1962). A historical pattern of economic growth in developing countries. *The Developing Economies*, 1(1), 3–25.
- Amsden, Alice H. (1989). *Asia's next giant: South Korea and late industrialization*. New York: Oxford University Press.
- Ang, Yuen Yuen. (2016). *How China escaped the poverty trap*. Ithaca, N.Y.: Cornell University Press.
- . (2017). Do Weberian bureaucracies lead to markets or vice versa? A coevolutionary approach to development. In M. Centeno, A. Kohli and D. Yashar (Eds.), *States in the developing world*. Cambridge: Cambridge University Press.
- Bai, Chong-En, Du, Yingjuan, Tao, Zhigang, and Tong, Sarah Y. (2004). Local protectionism and regional specialization: evidence from China's industries. *Journal of International Economics*, 63(2), 397.
- Evans, Peter. (1995). *Embedded autonomy: states and industrial transformation*. Princeton, N.J.: Princeton University Press.
- Florini, Ann, Lai, Hairong, and Tan, Yeling. 2012. *China experiments: from local innovations to national reform*. Washington, D.C.: Brookings Institution Press.
- Gallagher, Mary. (2014). China's Workers Movement and the end of the rapid-growth era. *Daedalus*, 143(2), 81–95.
- Heilmann, Sebastian. 2008. "From Local Experiments to National Policy: The Origins of China's Distinctive Policy Process." *China Journal*, The, 59(59), 1–30.
- Johnson, Chalmers. (1982). *MITI and the Japanese miracle : the growth of industrial policy, 1925–1975*. Stanford, CA: Stanford University Press.
- Kanbur, Ravi, and Zhang, Xiaobo. (2005). Fifty years of regional inequality in China: a journey through central planning, reform, and openness. *Review of Development Economics*, 9(1), 87.
- Leng, Tse-Kang. (2013). Sovereignty at bay? In F.-K. Liu and P. Regnier (Eds.), *Regionalism in East Asia: Paradigm Shifting?* Routledge.
- Li, Shi, Satō, Hiroshi, and Sicular, Terry. (2013). *Rising inequality in China: challenges to a harmonious society*. New York, NY: Cambridge University Press.
- Lin, Justin Yifu. (2012). *New structural economics a framework for rethinking development*. Retrieved from <http://elibrary.worldbank.org/content/book/9780821389553>
- Lorentzen, Peter, Landry, Pierre, and Yasuda, John. (2014). Undermining authoritarian innovation: The power of China's industrial giants. *Journal of Politics*, 76(1), 182–194.
- Man, Joyce Y., and Hang, Yu-hung. (2011). *China's local public finance in transition*. Cambridge, Mass.: Lincoln Institute of Land Policy.
- Montinola, G., Qian, Y. Y., and Weingast, Barry R. (1995). Federalism, Chinese style: the political basis for economic success in China. *World Politics*, 48(1), 50.
- Naughton, Barry. (1997). *The China circle*. <http://amzn.to/2sTHJH9>. Washington, D.C.: Brookings Institution Press.

- Naughton, Barry. (2003). How much can regional integration do to unify China's market? In N. Hope, D. T. Yang and M. Yang Li (Eds.), *How far across the river?: Chinese policy reform at the millennium* (pp. xxii, 510 p.). Stanford, CA: Stanford University Press.
- Naughton, Barry. (2007). *The Chinese economy: transitions and growth*. Cambridge, Mass.: MIT Press.
- . (2015). Economic rebalancing. In J. deLisle and A. Goldstein (Eds.), *China's challenges* (1st ed., pp. vi, 317 p.). Philadelphia: University of Pennsylvania Press.
- NDRC Industrial Economy Research Center. (2013). *Report on industrial development in China, 2012-2013 (中国产业发展报告) (in Chinese)*. Beijing Economic and Management Publishing House.
- Oi, Jean. (1995). The role of the local state in China's transitional economy. *The China Quarterly*, 144(144), 1132–1149.
- . (1999). *Rural China takes off: institutional foundations of economic reform*. Berkeley: University of California Press.
- Pan, Jennifer. (2014). Measuring the goals and incentives of local Chinese officials. *Working Paper, Stanford University*.
- Porter, Michael. (1990). *The competitive advantage of nations*. New York: Free Press.
- Teets, Jessica, and Hurst, William. 2015. *Local governance innovation in China: experimentation, diffusion, and defiance*. New York: Routledge.
- Wade, Robert. (1990). *Governing the market: economic theory and the role of government in East Asian industrialization*. Princeton, N.J.: Princeton University Press.
- Walder, Andrew G. (1995). Local governments as industrial firms: an organizational analysis of China's transitional economy. *American Journal of Sociology*, 101(2), 263.
- Wallis, John. (2005). Constitutions, corporations, and corruption: American states and constitutional change, 1842 to 1852. *The Journal of Economic History*, 65(1), 211–256.
- Wedeman, Andrew. (2003). *From Mao to market: rent seeking, local protectionism, and marketization in China*. Cambridge: Cambridge University Press.
- World Bank, and State Council. (2013). *China 2030 building a modern, harmonious, and creative society*. Washington, D.C.: The World Bank.
- Xu, Luodan, and Liang, Zhicheng. (2004). Regional specialization and dynamic pattern of comparative advantage. *Review of Urban and Regional Development Studies*, 16(3), 231.
- Yang, Dali. (1997). *Beyond Beijing: liberalization and the regions in China*. London; New York: Routledge.
- Young, Alwyn. (2000). The razor's edge: distortions and incremental reform in the People's Republic of China. *The Quarterly Journal of Economics*, 115(4), 1091.