

Market Integration in the People's Republic of China

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Over the last 3 decades, the product, labor, and capital markets of the People's Republic of China have become gradually more integrated within its borders, though integration has been significantly slower for capital markets. There remains a significant urban–rural divide, and cities in the PRC tend to be undersized by international standards. The PRC has also integrated globally, initially through its special economic zones on the coast as launching grounds to connect with world markets, and subsequently through the PRC's accession to the World Trade Organization. For future policy considerations, we argue that its economic production needs to be spatially concentrated, and its social services need to be spread out to the interior to ensure harmonious development and domestic integration, through inclusive rural–urban transformations and effective territorial development.

JEL classification: F2, L1, J4, H7, O1, O5, P5, R1

I. INTRODUCTION

The People's Republic of China (PRC) has grown from a low-income to a middle-income economy in one generation, benefiting from the 9.5% of gross domestic product (GDP) growth rate during 1978–2005, up from 4% during 1950–1978 (Brandt and Rawski 2008). Although Young (2003) described the PRC's growth as “extensive” (i.e., the main contribution to growth was the addition of capital and labor), he found that productivity growth increased from 0.5% to 3.8% per year after the reform, and that improvements in productivity accounted for 40% of overall GDP growth from 1978 to 2005. The PRC, in purchasing power parity terms, is converging with Japan (from 37.5% of Japan's GDP in 1978, to 219% in 2004), and the United States (US) (from 3.2% of US per capita GDP in 1978 to 15.7% in 2005). Moreover, the PRC's growth was

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accompanied by dramatic reduction in absolute poverty, which fell from 40.6% of the rural population in 1980 to 4.7% in 2001 (Ravallion and Chen 2007).

As the PRC's economy grew, sectoral and spatial transformations took place. Agricultural reforms enabled a mass exodus from agriculture to nonagriculture activities. Aggregate employment in agriculture fell from 69% in 1978 to 32% in 2004. With its increasing integration with the world economy, trade increased from 10% of GDP in 1978 to 22.9% in 1985, to 38.7% in 1995, and to 63.9% in 2005 (Brandt and Rawski 2008). The PRC attracted 40% of all foreign direct investments into developing countries between 1980 and 1995, and took in \$70 billion of foreign direct investments between 2004 and 2006 (Fan et al. 2009). The Organization for Economic Cooperation and Development (OECD) estimated that the private sector accounted for 59.2% of the PRC's GDP in 2003. Accompanying the shift out of agriculture into manufacturing and services was rapid urbanization, rising industrial agglomerations, and increased migration (Cai, Park, and Zhao 2008; Fan 2005; World Bank 2008; Huang and Magnoli 2008). With these structural transformations, the PRC has not only seamlessly integrated into the global markets, but also experienced increasingly integrated domestic goods, labor, and capital markets (Xu 2000, Dong and Xu 2009).

Relying on several excellent surveys contained in Brandt and Rawski (2008) and some recent works that are directly relevant to our topic, we aim to give the reader a succinct summary of key research findings about domestic and international market integration in the PRC. We interpret market integration broadly—the process in which any resource that increasingly flows to its best uses in a larger market is viewed as market integration. We begin by reviewing the evolution of the PRC's global integration through special economic zones (SEZs) and accession to the World Trade Organization (WTO), and then move on to examine domestic integration in the regional, product, labor, and capital markets.¹ We discuss how the PRC's international integration has accelerated domestic reform, raised per capita GDP, and elevated its economic stature on the global scene. In implementing domestic integration, the PRC has been successful in concentrating resources and production in the coastal regions and allowing for rural–urban migration. People have moved from low-productivity sectors such as agriculture to high-productivity sectors such as manufacturing and services, as well as from rural poor areas to major cities. Product markets became more integrated over time, as regional trade increased and product prices were increasingly similar throughout the country. Capital markets, though still dominated by the force of the state, have been improving over time, and informal mechanisms arose to improve the state-dominated financial system. We propose that the mainstay of a nationally harmonious development strategy consists of

¹ Given that this survey largely draws from several key surveys, the list of references is not as comprehensive as many other surveys. Interested readers are encouraged to read the mentioned surveys directly, and the references therein.

measures to facilitate agglomerations that deliver scale of economies, rapid growth, and universal provision of basic amenities and social services that ensure a comparable level of living standards across the country.

The rest of the paper is organized as follows. Section II analyzes various dimensions of domestic integration, including urban agglomeration; rural–urban migration; and integration on the labor, product, and capital markets in the PRC. Section III assesses the PRC’s international openness, through SEZs and WTO accession sequentially. Section IV provides concluding remarks.

II. DOMESTIC INTEGRATION

The past 3 decades has witnessed remarkable level of domestic integration in the PRC, more so in some markets than in others. People have moved from low-productivity sectors such as agriculture to high-productivity sectors such as manufacturing and services. The population of coastal and rich regions is increasing at the expense of that in the inland and poor regions. The sharp line drawn between urban and rural and state and nonstate has become more blurred over time. Capital markets, though still dominated by the force of the state, have been improving over time, and informal mechanisms have emerged to compensate the inadequacy of the state-dominated financial system. Product markets have also become significantly more integrated, as regional trade increased and product prices became more similar across regions. In the rest of this section, we deal with the various aspects of domestic integration.

A. Regional Integration

New analyses over the last 2 decades of research in economic geography have changed the way we think about location in development (World Bank 2008). Concentration looms large. Disproportionately attractive for firms with scale economies, large markets can effectively lower costs, enhance profits, encourage existing firms to expand, and attract new firms and workers, creating a circular and cumulative reinforcements. Market access and mobility do not lead to balanced growth of all places. As new producers locate close to the existing production, the gap of economic activity between leading and lagging regions widens. Development takes place in waves, where some areas are drawn out of poverty in sequence and are pulled rapidly through the development process. The PRC’s economic activities are no exception; they have increasingly been concentrated in large and middle-sized cities (Chan, Henderson, and Tsui 2008). Indeed, cities with higher administrative ranks are larger, richer, and more productive: GDP per capita is 50% higher in provincial capitals than in other prefecture-level cities. Investment per capita and foreign direct investment (FDI)

inflows are four to six times higher for provincial capitals than for prefecture-level cities.

Growth and economic transformation have been accompanied by spatial transformation. Deng Xiaoping, the architect of reforms in the PRC, once said that if the PRC were to become rich, some people would get rich before others. To implement his idea, Deng Xiaoping initially concentrated resources on the country's coastal areas as launching grounds for connecting the PRC to world markets. Partly as a result, its eastern region (e.g., Beijing, Fujian, Guangdong, Shanghai, and Tianjin) has been growing faster than the central and western regions.

The coastal agglomerations (Bohai and Southeast regions) indeed outperform the rest of the country on nearly every investment climate measure, according to a comprehensive review of the investment climate in 120 cities in the PRC (World Bank 2006). Differences in city characteristics, such as per capita GDP, economic growth, and transport costs alone explain about 33% of the variation in firm productivity. The PRC's wealthiest regions tend to attract more capital and FDI (Figure 2). Productivity is significantly higher for the firms located in larger cities and in places with a higher share of college graduates, which reflects the benefits of agglomeration of skilled labor force.

Government efficiency and effectiveness are highest in the Southeastern cities (Fujian, Guangdong, Jiangsu, Shanghai, and Zhejiang), and are lowest in the lagging Southwest and Northwest. The firms in the coastal areas pay lower taxes and fees; have a much shorter customs clearance delay; spend less time dealing with bureaucracy; and spend less on entertainment and travel, which are good proxies of local corruption (Cai, Fang, and Xu forthcoming). The survey finds that foreign firms operating in the Southeast face considerably lower taxes and fees than elsewhere (Table 1) while combined average export/import clearance in the Southeast stood at 7.3 days in contrast to the Northwest at 16.8 (Table 2). In the coastal areas, firms reportedly have better access to finance, more reliable protection of property rights, and more effective contract enforcement.

The rising concentration of economic activity in prospering coastal areas has resulted in the rising provincial disparities of GDP per capita. Income inequality has been on the rise steadily since 1980 and then grew exponentially during the 1990s (Chan, Henderson, and Tsui 2008). The ratio of the rural per capita annual net income to urban per capita annual disposable income was 61% in 1990 and 41% in 2004. Per capita GDP gap between the wealthiest and poorest provinces more than doubled between 1988 and 1998. This pattern coincided with a substantial net migration into the eastern provinces and a net outflow from the central and western provinces (Fan 2005).

Table 1. Average Taxes and Fees Relative to Sales, 2005 (percent)

	Southeast (coastal)	Bohai (coastal)	North- east	Central	South- west	North- West
Value-added tax	2.8	3.1	3.9	3.5	4.5	4.1
Income tax	0.8	0.8	0.6	0.6	0.7	0.5
Other taxes and fees**	0.5	0.6	0.9	0.9	1.1	1.2
Total	4.1	4.5	5.4	5.0	6.3	5.8

**Includes consumption, business, resource, land, and real estate taxes, plus miscellaneous administrative fees.

Source: World Bank (2006).

Table 2. Average Days for Customs Clearance by Region, 2005

	Exports	Imports	Combined**
Southeast (coastal)	3.5	4.2	7.3
Bohai (coastal)	4.4	5.0	8.6
Northeast	6.4	8.0	12.6
Central	6.8	8.5	13.8
Southwest	7.4	8.3	14.0
Northwest	9.0	7.8	16.8

** Combined time reflects weighted sum of average customs clearance time for exports and imports.

Source: World Bank (2006).

Countries at their early stages of development tend to experience widening regional disparities in living standards before slowly converging (World Bank 2008). The PRC's rapid growth was due to its ability to exploit scale economies and take advantage of the world market of unprecedented size. The PRC's GDP per capita today is roughly equivalent to that of Britain in 1911. London at that time had a GDP per capita around 1.7 times the national average, whereas East Anglia had a GDP per capita two thirds of that average. In the PRC today, the comparable figures are 3.3 for Shanghai and one third for the lagging area of Guizhou. Shanghai has a GDP per capita (\$16,044), roughly equivalent to the British average in 1988, while Guizhou has a level (\$1,653) close to the British average in 1830 (World Bank 2008).

Meanwhile, the structural transformation also led to stronger regional specialization. Urban manufacturing employment declined steadily throughout the 1990s as the trade sector grew more slowly than services (Table 3). Regions became increasingly specialized over time (Chan, Henderson, and Tsui 2008). Raw Herfindahl index scores for industries for Beijing and Tianjin fell between 1993 and 2001, while normalized Herfindahl index scores increased, suggesting that industry structure in the PRC has become more specialized, and differentiated from the national average.

Table 3. **Growth in Business and Financial Employment in the PRC, 1997–2002**

	Manufacturing		Trade		Finance		Services	
	2002 Level	1997– 2002 Annual Growth Rate (%)						
National employment (10,000s)	8,307	-2.9	4,969	0.72	340	2.0	1,094	6.2
Beijing employment (10,000s)	152	-2.3	120	8.5	8.2	1.8	109.6	15
Shanghai employment (10,000s)	269	-3.1	116	1.5	12.6	15	60	9.3
Coastal share (%)	60		50		51		57	
Coastal employment growth		-1.6		2.1		3.2		8.5
Central share (%)	28		32		3		27	
Central employment growth rates		-4.7		-2.2		0.28		0.5
Western share (%)	13		17		18		17	
Western employment growth rates		-4.2		2.6		1.7		9.9

Source: National Bureau of Statistics (2003).

However, even with the increasing concentration of economic activities in large cities, the PRC may still be underconcentrated and underurbanized. Evidence from the 2000 Census suggests that the PRC was underurbanized. The PRC ranked low in a worldwide comparison of developing and large countries with respect to the share of its population living in large cities. Its population Gini coefficient, which in this context means the area between the 45 degree line and the Lorenz curve as a measure of the aggregated population share of its cities, is remarkably low for a large country. Formal restrictions of the hukou system combined with limited access to housing, education, and health care for migrant labor has discouraged migration, while rural industrialization through the promotion of TVEs has retained labor in rural areas. Au and Henderson (2006) estimate the efficient sizes of cities in the PRC as a function of each city's manufacturing over service ratio, as well as a variety of control factors. They find that the populations of 85% of prefecture-level cities in the PRC are smaller than their efficient sizes, and 43% of prefecture-level cities lie below the 95% confidence intervals generated by their models. Both results suggest that cities in the PRC are significantly undersized.

B. Rural-Urban Integration

The initial chasm between the rural and the urban in the PRC was deep and wide. After the 1949 Revolution in the PRC, the country's leaders promoted the development of heavy industry and implemented a planned economic system that

fixed prices and allocation of all inputs. Labor allocation was conducted by the Bureau of Labor and Personnel (Cai, Park, and Zhao 2008). Agriculture was collectivized in self-sufficient communes by 1957, and any excess grains the commune produced were prohibited from being traded. In line with the Soviet economic policy, rapid industrialization was the PRC's focus and urban areas were favored (Chan, Henderson, and Tsui 2008) by biasing the terms of trade against farmers.

The root of the long existing rural–urban division is the *hukou* (household registration) system, which has assigned agricultural or nonagricultural status to every person, mostly based on place of birth. Migration must be approved by the originating and destination governments. In an early effort to reduce geographical restrictions of individual activities, the introduction of the Household Responsibility System in 1978 allowed rural households autonomy in the production and sale of grains. The spread of the Household Responsibility System drastically raised agricultural productivity (Lin 1992). Moreover, by 1983, the government allowed farmers to sell their products beyond their local (administrative) boundaries (Cai, Park, and Zhao 2008). The government also encouraged farmers to explore opportunities in nonfarm township and village enterprises (TVEs). By the early 1990s, over 120 million people were employed by TVEs, a rise of nearly 100 million laborers since 1978. The TVEs absorbed rural labor and facilitated structural change without sizable labor migration, and rural labor markets became more integrated (De Brauw et al. 2002). Since TVEs could easily employ labor and enter and exit the market, they exposed the inefficiency of many state-owned enterprises (SOEs), which necessitated SOE reform through competition.

By the mid-1990s, food rationing was discontinued and nonstate sector employment began growing. Rural labor began seeking urban employment in greater numbers. City governments began to realize the benefits of migrant labor to urban economies, and their attitudes toward migrant labor started to change (Cai, Park, and Zhao 2008). Instead of arbitrarily ejecting migrant labor, cities began to regulate the integration and employment of migrant labor more closely by issuing and requiring the submission of identification documents. In addition, some cities and municipalities began to sell *hukou* rights to migrants. It is not surprising that rural migrants became the main forces of job mobility in cities (Knight and Yueh 2004; Chan, Henderson, and Tsui 2008). Net rural–urban migration during the 1990s was 125.5 million (Chan and Hu 2003). Urban growth doubled to over 4% per annum during the 1990s and 2000s, from previous decades (Table 4). Net in-migration accounted for 80%–88% of urban population growth.

Table 4. Components of Urban Growth in the PRC, 1950–2000

Period	No. of Years Covered	Average Annual Urban Growth		Average Annual Change in Urban Percentage (%)	Components of Urban Growth			
		Size (millions)	Percentage		Natural Increase		Net In-migration	
					Average Annual Size	Average Annual Percentage	Average Annual Size	Average Annual Percentage
		Millions	Percentage		Millions	Percentage		
1950–1957	8	5.6	7.2	0.59	2.26	40	3.35	60
1958–1960	3	10.4	9.1	1.45	1.91	18	8.50	82
1961–1965	5	-2.6	-2.1	-0.63	2.99	—	-5.62	—
1966–1977	12	3.0	2.0	-0.04	2.09	69	0.93	31
1978–1982	5	9.0	4.8	0.66	2.01	22	6.69	78
1983–1990	8	10.9	4.3	0.66	2.85	26	8.04	74
1991–2000	10	15.7	4.2	1.00	3.16	20	12.50	80
2001–2005	5	20.6	4.1	1.35	2.52	12	18.10	88
1950–2000	51	7.9	4.1	0.50	2.52	33	5.10	67

Source: Chan, Henderson, and Tsui (2008).

Is there quantitative evidence that the rural–urban migration facilitated the PRC's growth significantly? Brandt, Hsieh, and Zhu (2008) develop a dynamic three-sector model of the agriculture, state, and nonstate nonagriculture sectors to study the composition of labor reallocation and growth accounting. They find that the reallocation of labor from the agricultural sector to the manufacturing and services sectors reduced the agricultural sector's share of aggregate employment from 69% in 1978 to 32% in 2004. They also find that the reallocation of labor out of agriculture contributed 1 percentage point or one eighth of the annual growth rate of per capita GDP in their sample period for the PRC.

C. Labor Market Integration

After the reforms of the 1990s, labor markets in the PRC became much more fluid, and restrictions on labor mobility between regions were relaxed. This mobility was much needed since a large number of labor force had been released from the countryside: the agricultural labor share declined from 91% in 1979 to 61% in 2003, and the rural nonagricultural labor force grew exponentially, from 28 million in 1978 to 188 million in 2005 (Cai, Park, and Zhao 2008). Meanwhile, migrant labor (both *hukou* and those not officially registered) totaled about 131 million between 1995 and 2000 (Cai, Park, and Zhao 2008). The majority is migration to coastal regions. Among interprovincial migrants, the percentage going to the eastern provinces from western, central, and eastern provinces were 68.3%, 84.3%, and 64.4%, respectively, in 2000, compared with 44.2%, 61.7%, and 49.7%, respectively, in 1987. Since the eastern provinces tended to be more productive (World Bank 2006), such labor movements across regions facilitated efficiency and growth.

Compatible with the demand-side explanation of the migration to the coastal regions, Fan (2005) finds that migration between 1990 and 2000 is a

response to job opportunities in labor-intensive industries along the coast. Recognizing mobility in fueling industrialization, the government began to relax restrictions to internal migration. With its one-child policy, the natural rate of increase in the PRC's population is expected to level off in the coming decades, with a corresponding drop in the size of the adult labor force. Accordingly, internal migration will play an increasingly important role. Fan finds that Guangdong had the highest immigration rate in 2000, which was more than double the highest rate (Beijing) in 1990. Likewise, migration effectiveness—defined as net migration as a percentage of total migration—in 2000 more than doubled from a decade ago. The coastal provinces of Beijing, Guangdong, and Shanghai had the highest net-inflow rates; Anhui, Guangxi, Guizhou, Hunan, Jiangxi, and Sichuan had the largest out-migration. Stream effectiveness, which assesses the strength of flows from province to province, also suggests that migration patterns from the interior to the coast have strengthened since 1990.

Labor market integration is facilitated by the PRC's growing private sector and the restructuring of its state sector. Unlike Russia and the other former Soviet Republics, the PRC downsized and restructured its SOEs only after the private sector grew sufficiently to absorb redundant SOE workers (Dong and Xu 2009). In the mid-1990s, a radical ownership reform program was launched, under which the state only maintained ownership in large SOEs; small- and medium-size SOEs were restructured through privatization, mergers, and bankruptcies. The state's portion of nonagricultural employment fell from 52% to 13% between 1978 and 2004 (Xu, Zhu, and Lin 2005). By 2001, the number of SOEs had declined from 110,000 to 53,489 (Cai, Park, and Zhao 2008), accompanied with massive layoffs: at least 10 million workers were laid off by 1997, and an additional 27 million between 1998 and 2004. Growth of the private sector cushioned the displacements from the downsizing of the public sector. By 2002, job destruction rates had fallen to be at par with job creation rates (Dong and Xu 2009). Moreover, following SOE restructuring, real wages grew in the late-1990s and early 2000s (Cai, Park, and Zhao 2008; Dong and Xu 2008), and laid off workers were more likely to be reemployed. Another piece of evidence in favor of functioning labor market is seen in returns to education. By 2001, each additional year of schooling raised annual income by 10.2%, compared to 4% in 1988. College graduates earned 37.3% more than high school graduates in 2001, compared to 12.2% in 1988. Zhang et al. (2005) find that returns to education were no different between nonpublic enterprises and SOEs, suggesting that labor is mobile across sectors.

D. Product Market Integration

The PRC's internal markets of goods and commodities were segmented in the early days of the reform, but there has been emerging evidence of increasing

integration. Perhaps the most influential of this literature, Young (2000, p. 1128) argues that local protectionism has led to “a fragmented internal market with fiefdoms controlled by local officials whose economic and political ties to protected industry resemble those of the Latin American economies of past decades.” His explanation is that fiscal decentralization links local government revenue with local industry protection since local firms are stable sources of taxes and jobs. Based on five fairly aggregated sectors, he finds that industrial composition became more similar between 1980 and 1997 while prices of goods diverged. Moreover, resource allocation seemed to be deviated from the principle of comparative advantage.

Two studies reach similar conclusions. Zhou et al. (2000) find a general lack of integration among the indica rice market in the PRC based on monthly rice data from 12 cities between 1992 and 1996. They attribute this lack of integration to transport costs and government intervention in the grain markets. Similarly, Poncet (2003 and 2005) also suggest that trade barriers within the PRC became more serious in the 1990s. Using provincial trade flow data to investigate the engagement of the PRC's provinces in domestic and international trade, she finds that international trade barriers dropped but domestic trade barriers (between provinces) increased between 1987 to 1997. Interprovince trade flows fell between 1987 and 1997. Barriers to trade between the provinces in the PRC were as high as those between international borders within the European Union, or between Canada and the US.

However, evidence based on more refined data supports increasing regional specialization and product market integration over time. Bai et al. (2004) use a panel data set of 32 two-digit industries in 29 provinces between 1985 and 1997. They look at the patterns of regional specialization of industries, and examine how regional protectionism affected the patterns of regional specialization between 1985 and 1997. They find that in provinces with higher shares of SOEs, because benefits of local protection would be higher (i.e., jobs and direct control benefits), there was lower specialization amongst these industries. They also find that industries in provinces that have higher profit and tax margins have lower specialization. The higher profitability and tax revenue provided benefits and incentives to local governments to shield them from competition. However, contrary to Young (2000), they find that regional specialization rose over time, implying greater regional integration in the product market. Consistent with Bai et al. (2004), Holz (2009) presents evidence in support of an increasingly integrated domestic product market. Similarly, Huang, Rozelle and Chang (2004), using the rice market as an example, offer evidence that the PRC's commodity markets are becoming more integrated.

E. Capital Market Integration

The literature summarized below suggests that formal financial markets are still at their early development stage and inefficiency abounds, but informal channels of finances fill some of the gaps in inadequate formal financial intermediation. There is no strong evidence yet of increasing financial market integration.

Critics of the PRC's financial system find various indications of inefficiency in financial allocation. The PRC's financial system is dominated by state-owned banks (Cull and Xu 2000) that tend to favor certain sectors and types of firms (such as SOEs). Protection of local jobs also restricts capital from moving beyond the local boundary. Boyreau-Debray and Wei (2003), using regional level panel data, find that the PRC's capital market became more fragmented between 1980s and 2001, and the government tended to systematically reallocate capital from more productive regions to less productive ones. Zhang and Tan (2007), using the data of 1978–2001 with four sectors (urban industry, urban services, agriculture, and rural enterprise) in each region, find that estimates of marginal productivity of capital were much higher and rising for the rural nonfarm sector compared to the other three sectors, and the variability of marginal product of capital rose through 1990s.

There is evidence that the stock market in the PRC did not function well either. The PRC's stock market was established in 1990, after which the stock market capitalization grew quickly, to 54% of GDP in 2000. However, there is no evidence that it contributed to better allocation of capital. Wang, Xu, and Zhu (2004) examine the effect of public listing on firm performance. They find that operating performance in listed firms did not necessarily improve, and some actually declined. This could be due to either moral hazard associated with lower managerial ownership stake, or financial packaging (i.e., window-dressing a firm's performance) before listing. Firm performance tends to be better when top shareholders have more equal ownership stakes and could monitor one another more effectively. The benefits of public listing are mostly enjoyed only by large firms with good access to finance, and they tend to be state-owned or state-controlled with poor corporate governance. Thus, the stock market has not facilitated small firms' access to financing, despite their higher returns of capital.

But there are also signs of progresses in the financial sector. The return to capital has been high despite high investment rates (at 45% of GDP in 2008). It is highest in the coastal area, followed by the central region, then the west region. The dispersion of returns to capital across provinces has decreased over time. Bai, Hsieh, and Qian (2006) find that the rate of return to capital was around 25% during 1978–1993, fell during 1993–1998, and stayed flat around 20% since. In the early years of the reform (1978–1982), Shanghai had a much higher return than all other provinces, and this disparity has reduced over time.

In the prereform period, SOEs mainly obtained investment funding through government budgetary allocation, but now bank financing is the key channel for external financing, and is responsive to firm performance (Cull and Xu 2000 and 2003).² There were instances where credits allocated by state-owned banks to SOEs were rechanneled to the private sector. Cull, Xu, and Zhu (2009) find that poorly performing SOEs redistributed loans to other firms via trade credit. Profitable private firms are also more likely to extend trade credit to other firms without formal finance. Cull and Xu (2005) find that access to trade credit helps private firms, and that access to formal and informal finance enhances firms' reinvestments (see also Allen, Qian, and Qian 2005).

III. INTERNATIONAL INTEGRATION³

The PRC has been particularly successful in integrating with the global markets, as it has become the low-cost manufacturer for the world and has been steadily moving up the technology ladder into higher-value production. This has been achieved through deliberate opening of its economy to foreign investment and significantly investing in infrastructure and education at all levels—from adopting elements of the European dual vocational training system to building top-class universities. By utilizing selective opening and regulatory reforms, initially in SEZs located to maximize export potential and then via WTO accession, the PRC managed to generate investor confidence, attract foreign investment and know-how, and enter foreign markets for their products. The PRC's integration in the regional and global production networks has increased its economic standing on the world stage, and contributed to significant per capita income growth.

Openness to trade and investment has encouraged productivity growth and competitiveness through a variety of channels. First, openness creates market discipline by exposing domestic firms to international competition. Second, openness injects capital and know-how. Privatization of firms in transition economies to foreign owners considerably improves their performance (Estrin et al. 2009; Correa, Fernandes, and Uregin 2010). Third, openness encourages reciprocity. Liberalization of bilateral market access tends to proceed on a quid pro quo level. Fourth, openness enhances risk sharing. Sharing capital investments with foreign firms, for instance in modernizing industries, shelters domestic companies from some of the risk of falling commodity prices. Diversification, encouraged by open markets, reduces the volatility of an

²However, there is also evidence that bank financing became more inefficient—that is, the link between bank finance and firm performance became weaker when banks took on more bailout responsibility in the early 1990s.

³See Branstetter and Lardy (2008) for an excellent survey on this topic.

economy depending on only a few sectors (Tarr and Volchkova 2010). Finally, openness encourages institutional reforms and improvements in governance. International investors expect a comparable legal and regulatory environment, which also benefits domestic firms.

The PRC's greater openness to international cooperation and investment since 1980 has modernized and diversified its economy. Its integration with the global economy has helped restructuring of its economy, facilitated its investment abroad, and liberalized its domestic markets. Selective interventions such as special economic zones and WTO accession have helped overcome various barriers to reform.

A. Special Economic Zones

Just like in other countries, the PRC's reformers faced opposition from those benefiting from the status quo. The PRC managed to reform its economy by using selective opening and regulatory reforms, first in SEZs located to maximize export potential. This reduced rent seeking and opposition to reforms in non-SEZ areas. By the time SEZ privileges were phased out and larger parts of the economy were reformed, there was enough pressure from export-oriented firms and entrepreneurs to counter rent seekers and reform opponents.

SEZs can be an instrument for the reform, and their purpose is explicitly to showcase conditions for generating a dynamic market economy and to create a strong constituency for expanding those conditions countrywide. The PRC's SEZs are effectively early reform zones that demonstrate and spread the benefits of good governance. They provide an environment of excellent infrastructure, enabling services, market-friendly institutions, and good governance. Productivity gains eventually spilled over from the SEZs to SOEs outside the zones. Expansion of local competition among firms also reduced scope for rent seeking among government officials. With a more dynamic and market-oriented economy, managers of private firms demanded greater safeguards for private property rights and more independent courts to enforce contracts without government interference. Taxation preferences were phased out by 1994 in the PRC when SEZs' business conditions had essentially expanded to the rest of the economy.

Investors in the PRC's SEZs during the early days were foreign firms that brought in new technology, global standards, and international managerial practices, and were often found to be more productive than domestic firms. Indeed, Xu, Zhu, and Lin (2005) find evidence that foreign ownership is strongly associated with higher firm productivity in the PRC.⁴ Similarly, World Bank

⁴The three authors examine the effectiveness of privatization or corporatization and ownership structure on firm performance post-SOE reform using a 1998 national survey data set on ownership reform of industrial SOEs conducted by the National Statistical Bureau. They find that individual ownership (by the employees) has a negative impact on firm performance, partly due to the dispersed nature of individual ownership and limited number of strategic owners, but foreign ownership has a positive impact on firm performance.

(2006) also confirms, with a larger sample of firms, that foreign firms tend to have significantly higher productivity in the PRC.

Why would adopting SEZs policy be good for economic growth in the PRC? SEZs, which enjoy privileged tax laws, labor flexibility, absorption of FDI, and strategic economic relations, do not make sense from the perspectives of classical balanced growth theories. Rosenstein-Rodan (1943), Nurkse (1953), and Scitovsky (1954), for instance, argue that since there are important interrelationships and complementarities between sectors of the economy, all sectors should be developed simultaneously. Unless all sectors make progress simultaneously, they argue, fixed investment in any one sector will be unprofitable because other sectors will lag behind and the economy will not be able to take advantage of the strategic complementarities between sectors. In stark contrast, Hirschman (1958) suggests that countries that do not have resources to develop all sectors simultaneously should focus their investment in key sectors.

In supporting establishment of SEZs, Litwack and Qian (1998) also suggest that an unbalanced approach to economic development could be helpful in breaking out of a bad equilibrium. Specifically, during a transition from a planned to a market-oriented economy, a country faces a political constraint to satisfy social expenditure requirements, which requires significant tax revenue. However, these countries also lack institutions to constrain the state from expropriation. In particular, when profits and taxes are low, the government can respond by increasing taxes thereby reducing incentives for firm restructuring. This appears to be the case in some transition economies. The Russian Federation and Ukraine, for example, for a while appeared to be in a trap of continual budgetary pressures, high and unstable taxation, significant tax evasion, and low incentives for investment in the economy as a whole. SEZs in the PRC were successful because they showcased the benefits of good governance and infrastructure, which in turn create the pressure for overall domestic reform. When a sufficient number of firms choose to restructure, SEZs can help the economy move into a good equilibrium without increasing taxes.

Litwack and Qian (2008) distinguish two types of SEZs. A Type-1 strategy features high investments and very low taxes to maximize incentives in special areas of the economy. A Type-2 strategy combines high investment with high taxation in special areas to exploit spillover effects into the rest of the economy. The PRC's experience with SEZs demonstrates how the PRC government first adopted the Type-1 strategy to develop the SEZs, then moved to the Type-2 strategy to allow spillover of SEZs to the rest of the economy. Fujian and Guangdong, from the outset in 1979, enjoyed remarkable autonomy in setting local investment priorities, selecting investment projects, and receiving preferential treatment from the central government. Indeed, firms in SEZs are given favored corporate income tax policies, import licensing, tariffs, priority in obtaining Bank of China loans, exemptions on profits remitted abroad, and

reduced land use fees (Ramachandran and Cleetus 1999). Furthermore, private firms are allowed foreign ownership, or allowed to enter into equity joint ventures or contractual joint ventures. Most importantly, SEZs are permitted to make investment decisions autonomously, unlike the rest of the PRC. The first SEZs in Shantou, Shenzhen, Xiamen, and Zhuhai were chosen because of their proximity to the major trading centers of Hong Kong, China; Macau, China; and Taipei, China.⁵ This proximity would facilitate FDI and the outsourcing of some production processes to the PRC. Following early successes, additional SEZs were established in Guangxi, Hainan, Liaoning, and the Pudong New Area of Shanghai.

Policies of the SEZs successfully attracted investment. Throughout the 1980s, domestic and foreign investments in the SEZs were high, and most of the FDI went to the SEZs. Between 1979 and 1994, about 90% of FDI inflows went to the coastal areas. In particular, Guangzhou alone received 40% (Gang 2001). Equally important, Fujian and Guangdong could retain most of their tax revenues. Throughout most of the 1980s, Guangdong remitted about 1 billion yuan annually to the central government, whereas Shanghai remitted more than 12 billion yuan. The SEZs of Fujian and Guangdong encouraged firm restructuring, and Guangdong particularly grew faster than the other SEZs (Ramachandra and Cleetus 1999). An important aspect of the PRC's SEZ policy is the targeting of particular sectors, making the development of sectors under SEZs unbalanced. The central government defined areas within which a SEZ has comparative advantage, such as light industry, textiles, machinery, and electronic goods. Indeed, exports grew substantially for each of these industries throughout the 1980s and early 1990s (Ramachandran and Cleetus 1999).

By the late 1980s when firms in SEZs started flourishing, the central government reformed its fiscal policies toward the SEZs to garner more tax revenues and decrease its dependence on stagnating cities and provinces. At this time, Guangdong's tax burden surpassed that of Beijing and Shanghai. The higher tax revenues that were eventually remitted by the SEZs created a spillover effect and pulled up the rest of the economy. Investment and fiscal strategies between coastal and inland regions in the PRC had become more equitable by the mid-1990s, demonstrating the positive spillover effects from the SEZs on the broader economy. Therefore, throughout the 1980s, the PRC employed the Type-1 SEZ

⁵Hong Kong, China has played an important role in the success of the PRC's SEZs. In the mid-1980s, firms based in Hong Kong, China attracted by lower land and labor costs, started to shift manufacturing to the PRC. This shift brought much needed foreign capital, new technology, and modern management know-how to the mainland. By the late 1990s, more than half of the PRC's exports were handled through Hong Kong, China. Of the \$45 billion in cumulative FDI to the PRC through 1992, 70% came from Hong Kong, China, most of which went to export-oriented joint ventures. The shared cultural ties between the PRC and Hong Kong, China also reduced the perceived threat of FDI to leaders in the PRC, who felt that Hong Kong, China was not much of a "foreign power." Given the export-oriented nature of FDI, SEZs provided much needed jobs for the SEZ provinces. This had favorable spillover effects for the region and the rest of the PRC by raising income levels and domestic demand, and by facilitating migration from the countryside to cities.

strategy to adapt to a business environment characterized by limited investment and weak commitment power of local governments. However, by the late 1980s, the strategy evolved into the Type-2 strategy as the SEZs started remitting large revenues, so that the central government could better redistribute tax revenues to the other regions.

Benefitting from SEZs and other measures of international integration, exports of the PRC exhibit rising sophistication compared to other countries with similar endowments of labor and capital (Schott 2006). Schott suggests that the PRC's exports have more in common with the members of the OECD than its emerging market peers. The PRC's leading exports over the last 20 years shifted from crude oil, refined petroleum products, and apparel to electronic and information technology (IT) products. However, the level of technological sophistication of the PRC's exports is probably overstated. While the PRC's value added for IT products and electronics products is approximately 15%, the PRC's "high-tech" products actually tend to be relatively low-technology (Branstetter and Lardy 2008). Major technology exports of the PRC include digital versatile disk players, mobile phones, and notebook computers. Additionally, while the PRC exported \$142 billion of electronics and IT products in 2003, it imported \$127 billion of electronics and IT products. Finally, most of the high-technology producers tend to be foreign-invested enterprises that use the PRC as a platform for export. Even for these high-technology products, the value added by makers in the PRC is limited, with most of the key high-technology components (e.g., semiconductors and microprocessors) are imported (Branstetter and Lardy 2008).

B. WTO Accession

Prior to reform, imports and exports fell under the jurisdiction of the State Planning Commission. The PRC's structure of trade was not related to its comparative advantages—the PRC's primary exports in 1978 were petroleum, crude oil, and apparel. After 1979, the PRC moved from a system of strict import and export planning to a complex system of tariffs, quotas, trading rights, and inspections (Branstetter and Lardy 2008). From as high as 56% in 1982, the average tariff rate fell to 43% in 1985 and stayed at that level until 1992. However, between 1992 and WTO accession in 2001, the average tariff rate fell to 15%. Prior to WTO accession, the government restricted commodity trade using quotas and import licenses. As tariffs were decreasing, the use of quotas and import licenses rose to covering roughly half of the PRC's imports.

The PRC government began in 1979 to grant special privileges to firms engaged in export processing (i.e., firms that process raw materials or assemble imported goods for export). Following reform, joint ventures and foreign-owned firms were in general allowed to import capital goods duty-free. Thus, by the mid-1980s, the PRC had established dual trading systems: an open regime for foreign

firms and domestic firms involved in export processing, and a more restrictive regime for all the other firms. However, the two regimes were harder to separate than it appeared—leakages and smuggling made it challenging to shield sectors of the PRC's economy from global competition.

The PRC initially maintained an overvalued exchange rate prior to the reform, so it could subsidize imports of capital goods. In order to buttress the value of the renminbi, strict exchange controls, which included a foreign exchange surrender requirement, were necessary. During the reform period, the exchange rate policy was loosened, so much so that the International Monetary Fund estimated that the renminbi depreciated by about 70% vis-à-vis the US dollar between 1980 and 1995.

The PRC's overall openness to FDI increased in tandem with its declines in barriers to trade and liberalization of its currency. Given the success of its four original SEZs in attracting foreign capital, the central government began opening other cities in 1984 to foreign firms. In 1986, the "22 Regulations" made foreign invested enterprises eligible for lower business tax rates and loosened restrictions on profit remittances across the mainland. In addition, export-oriented and technologically advanced projects were given privileges. In the 1980s, FDI came primarily from Hong Kong, China; Macau, China; Singapore; and Taipei, China. After 1990, FDI increasingly flew in from Japan, the US, and other developed countries. FDI inflows fell in the mid-1990s, but resumed following the commencement of WTO accession talks. What explains the PRC's FDI level? Analyzing cross-country panel data of FDI inflows, Fan et al. (2009) find that the main factors that attracted FDI to the PRC were the PRC's high expected growth rate, low volatility of growth, and low ratio of dependent population.⁶

What are the macroeconomic implications of the PRC's growing openness before the WTO accession? Branstetter and Lardy (2008) find that net exports contributed modestly to GDP growth compared to capital investment or private consumption, and thus FDI did not drive aggregate economic expansion from the mid-1990s through the early 2000s. In addition, FDI's contribution to capital formation was rather modest (about 7% in 2003). However, the PRC's increased openness to trade and FDI has helped raise overall living standards as consumers in the PRC have benefited from lower prices, better goods, and more varieties. The PRC's openness has also encouraged greater competition, exposed inefficiencies, and shifted industrial production. Finally, FDI has contributed to spillover effects in skills, managerial know-how, and technological advances.

The crescendo of the PRC's openness is, of course, the PRC's final WTO accession, which specified a set of conditions that were stricter than the provisions for other developing countries. This was partly due to the belief of the PRC's leaders—Premier Zhu Rongji believed that WTO membership was an

⁶Once controlling for the PRC's good economic record, there is no evidence that the PRC is an exception.

agent for reform, as the domestic sectors would be exposed to substantial foreign competition and investment. It could bring about administrative and governance reforms that would instill confidence among domestic and international investors, encourage innovative small- and medium-size enterprises to enter the PRC market, and facilitate dynamic and globally competitive businesses.

For its WTO accession, the PRC agreed to liberalize its manufacturing and services sectors. It agreed to lower average tariff levels on industrial products to 8.9%, which was largely accomplished by 2005, while tariffs on some important products such as IT products had been cut to zero. The PRC also agreed to eliminate all quotas, licenses, tendering requirements, and other nontariff barriers to imports of manufactured goods by 2005, with the exception of automobiles. The PRC would liberalize its trading system of commodities. The PRC would cease forced technology transfers from foreign-invested enterprises to domestic firms and eliminate local content requirements, trade balancing requirements, and foreign exchange balancing requirements. The PRC also pledged to shrink tariffs on agricultural products to 15%, eliminate nontariff barriers to the importation of agricultural products, issue reformed health and quality standards, and limit agricultural subsidies to 8.5% of the value of agricultural output.

In an effort to fully integrate into the global economy, the PRC is also freeing up its service sector—including distribution, telecommunications, financial services, professional, audiovisual, and construction services—to foreign investment and competition. At the end of 2006, regulators in the PRC started regulating foreign banks as if they were domestically owned, and foreign banks are now able to offer domestic currency services to citizens of the PRC. While the market share of foreign banks in the PRC has remained low and there is regulatory restriction to opening branches, foreign banks are taking up equity shares of banks in the PRC. Since 2005, the PRC has removed geographic restrictions as to where foreign insurance companies can do business. Foreign insurance companies are restricted to joint ventures with firms in nonlife insurance (51% foreign ownership) and life insurance (50% foreign ownership) in the PRC.⁷ As a whole, the PRC's openness to FDI and foreign participation in service sectors has been rated by McKinsey & Co. and the International Monetary Fund as stronger than that in Japan or the Republic of Korea.

IV. CONCLUSIONS

Over decades of rapid growth, the PRC has become a microcosm of East Asia. At one end of the spectrum are lagging interior provinces (e.g., Guizhou and Shanxi) resembling the low-income countries such as Cambodia and Lao People's

⁷The PRC has not opened its securities and fund management industries to foreign competition. For example, joint venture securities firms cannot trade in "A" shares on the PRC's exchanges.

Democratic Republic; at the other end are leading coastal provinces (e.g., Guangdong and Shanghai) aspiring to be high-income countries such as Japan and the Republic of Korea.⁸ From the angle of total GDP, the province of Yunnan is similar to Viet Nam, Sichuan to Malaysia, Guangdong to Indonesia, Shanghai to Finland, and Jiangsu to Switzerland (see Figure 5). What connect all these regions are increasingly efficient infrastructure and shared market institutions. Infrastructure can help reduce economic distances within the PRC, but it will never equalize transport costs between coastal cities and the world market, or between cities in the interior and the world market. It takes more than 5,000 yuan per kilometer to truck a 20-foot container to the relevant seaport from Taiyuan; less than 400 yuan from the port of Shanghai. It takes more than 15,000 yuan per kilometer to ship the same container from Chengdu; while it can take more than 20,000 yuan from cities in the western regions (Gill and Kharas 2007, World Bank 2010). There is not much one can do to change this feature of economic geography.

Over time, the growing concentration of economic activities in the coastal and central areas would raise labor and land costs in coastal areas so much that it may be more profitable to relocate to the central and western regions. Some of this may already be happening, but in the meantime, there is a growing concentration of production in the coastal areas, which can be potentially beneficial for the PRC's economic growth. One has to be patient about spreading out economic production. Economic growth is inherently unbalanced (spatially), and to try to spread out economic activity is to discourage growth. But development can still be inclusive, in that even people who start their lives far from economic opportunities can benefit from the growing concentration of wealth in a few places. And the way to get the benefits of both uneven growth and inclusive development is economic integration.

The PRC has been successful in international integration, and it will have to be more ambitious in dealing with domestic integration. It is crucial to continue to exploit scale economies in production and aggressively address both territorial integration and rural–urban integration. While we applaud the PRC's success in concentrating production in the coastal region and parts of the central region, we recognize the need for the PRC to scale up its efforts to improve access to essential social services in the western region. In addition, with rapid urbanization, the PRC would do well to institute the mechanisms to help towns and cities identify and deliver services—internal, localization, and urbanization-related scale economies—they are best suited for. Distinguishing between the geography of economic production and the geography of social welfare is the secret of harmonious development. An appreciation for these two distinct

⁸The concluding section draws from the World Bank (2010, 146–49).

geographies implies patience in the concentration of economic production, and impatience with disparities in social services.

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