

INEQUALITY: A CHINA AND INDIA PERSPECTIVE

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ABSTRACT

In the years since the introduction of liberalizing market reforms in China and India, both countries have experienced rapid and sustained economic growth even as they have struggled with a simultaneous surge in economic and social inequality. This working paper traces the evolution of the post-reform growth in inequality and demonstrates the pervasive influence of location in determining and entrenching a spatial pattern to the deepening divides in each country. Though the centrality of location serves as a common link between China and India, the unique reform experiences of each country have led to distinct outcomes. Specifically, the paper illustrates how in China the spatial pattern of inequality stems from the divide between the interior western provinces and the rapidly growing coastal provinces, whereas in India the disparity is more apparent between urban and rural areas.

The analysis outlines how policy choices in agriculture, hard infrastructure, soft infrastructure, migration and industry have affected income inequality and how these inequalities have manifested. In China, the export-led growth strategy employed after market-reforms has allowed the country to capitalize on its expansive coastline, resulting in a rapid rise in disparity between coastal and interior provinces coupled with rapid economic growth. Similarly, in India a booming service sector in the post-liberalization era allowed for a disproportionate increase in the importance and growth of urban centers at the expense of rural areas. While location alone cannot explain the post-reform experience of China and India, geographical factors underlie many of the forces which have driven the disparity.

While this analysis is inherently context-specific and requires nuanced enquiry on a local level, the implications of this discussion are global in scope. The paper concludes with several questions which require a more inclusive exploration. Does the Chinese case provide evidence that regional inequalities, particularly those that result from geographical factors, are a necessary evil of growth and globalization? What lessons can India take from the growth experience of other nations, and in turn, what lessons can it provide? These questions, and others, may serve as the basis for a larger, multi-faceted and multi-sited project on global inequality.

INTRODUCTION

Why Inequality?

In 2011 the world witnessed mass popular uprisings on an unprecedented scale. In the Middle East and North Africa citizens took to the streets in protest of what they saw as decades of inequality at the hands of authoritarian regimes. Dictators who had ruled with an iron fist for decades were toppled and the world stood by and hailed the coming of democracy in a region marred by years of conflict and pervasive inequity. In the US, thousands of the self-proclaimed “99%” took to public spaces across the country to give voice to what they saw as America’s failure to address the growing income inequality and uneven wealth distribution between the top-earning 1% and the rest of the population. In India, the discussion about inequality centered on questions of corruption as social activist Anna Hazare led a popular movement that demanded accountability at all levels of government. And in Europe, where the state has historically been an active player in providing vital social services, citizens protested tough austerity measures, enacted in the wake of the recent debt crisis, that promise to widen social inequalities throughout the continent. Protests over economic and social inequality have spread rapidly through cities across Europe, North America, the Middle East, Asia and Latin America making it increasingly clear that inequality, in whatever form it takes, is not an isolated problem, but rather an issue of immense global concern.

In this paper, we explore the progression of inequality in post-reform China and India by focusing on changes in various sectors of the economy, hard infrastructure, soft infrastructure, and income distribution in each country. In the cases of China and India, we highlight the particular importance of location in understanding existing patterns of inequality and the shape of trends in inequality since the advent of reforms in the two countries – 1978 in China and 1991 in India.

While China and India are similar in several respects, they have each followed distinct paths to growth and development in the past 60 years. Both countries became independent around the same time – India in 1947 and China in 1949; both are continental size economies with billion plus populations and geographically part of the Asian continent; pre-reform China and pre-reform India were both characterized by more or less similar levels of economic development and state planning, and were predominantly agrarian societies; both have witnessed high levels of economic growth in their respective post-reform periods, though China has grown much faster and for a longer stretch of time. And hence both are now called emerging economies.

On the other hand, China and India have also had significantly different political and economic histories. Most significantly, while China is governed by single party authoritarian rule, India is a multi-party democracy. While the Indian Constitution provides for free speech, press and an independent judiciary, these ideals and institutions do not exist in China. India's growth has differed from China's in its reliance on domestic demand and growth in services rather than export-oriented labor-intensive manufacturing production as has been the case in China. While China became a huge success in attracting foreign direct investment and in creating tens of millions of job opportunities to enable it to become a major platform for manufacturing, India on the other hand failed on this front due largely to its half-hearted attempts. Going forward, given the demographic transition in the two countries, India's workforce will increase by 110 million over the current decade while China's will increase by less than 20 million.

Inequality in China and India prior to market reforms

From the formation of the People's Republic of China in 1949 through to the introduction of market reforms in 1978, the "pre-reform era," China experienced relatively low and steady levels of inequality, discounting spikes introduced by the effects of the Great Leap Forward and the Great Famine (1960) and the Cultural Revolution (1976). The communist "pre-reform era" was

characterized by a central planning system under which the national government retained strict control over the allocation and utilization of financial revenues with the goal of achieving broad-scale equity of distribution¹. Periods of inequality did occur - during the Great Famine a series of natural disasters coupled with gross mismanagement of resources on the part of the state resulted in millions of rural deaths and sharp increases in rural-urban inequality. Similarly, during the Cultural Revolution, a lack of incentives in the agricultural sector and a strong bias towards heavy industry led to a China's second pre-reform peak in inequality. However, while inequality did exist in the pre-reform era, central planning was largely successful in keeping income levels in China at a relatively equitable level and the country did not see a steady rise in income inequality until after the initiation of market reforms in 1978.

It is interesting to note, however, that despite relatively low levels of inequality in the pre-reform era, several policy choices made during that period, namely the center's concentration of heavy industry investment in the north-eastern coastal provinces, have had a significant impact on the rise of regional inequality during the reform period and onwards. The effects of these policies will be explored in greater detail in later sections.

Recognizing the need for a substantial change in the direction of the economy following the devastation wrought by the Cultural Revolution, the Chinese leadership introduced the first set of market reforms in 1978, starting with a renewed focus on agriculture. As the following sections will illustrate, the rise in income inequality in China has been shaped primarily through the effects of three prominent forces: a heavy industry bias pursued prior to reform and later shift to a labor-intensive, export-oriented manufacturing strategy; the decentralization of fiscal and decision making powers in the post-reform era; and the opening of the Chinese economy to external trade and investment. The effects of these forces have been profoundly location-specific and lead us to explore the extent to which geography has played a role in determining inequality in China.

In 1991, India introduced its market reforms and began the process of liberalization amidst a very different economic and political context. Upon achieving independence in 1947, India adopted a Constitution in 1949, the Preamble of which stated India would be a "Sovereign, Socialist, Secular Democratic Republic" that featured a mixed economy model wherein both the public and private sectors had a role to play. Over the course of the next 41 years, this structure would lead to the creation of a large, bureaucratic state that exerted tight controls on trade and private enterprise. Of course, attempts were made in 1966 and in 1985 to liberalize certain sectors of the economy, but they did not lead to any significant liberalization of the economy. Even as neighbouring countries, such as Japan, South Korea, and China experienced periods of rapid growth, the Indian economy inched along at a meagre 3.5% average GDP growth rate until the mid-1980s. Although considerations of social and economic equity played a large part in the initial decision to adopt a socialist model, data from the pre-reform period shows extremely poor indicators for poverty and inequality.

By the mid-1980s, as the effects of India's restrictive economic structure and policies continued to hinder the attainment of higher GDP growth and rapid economic development, the government

¹ While the central planning system managed to keep inequality levels relatively low, it did so largely at the expense of efficiency. Under agricultural collectivization, the system of income distribution in the communes provided little work incentive and contributed to a decline in worker productivity. Studies show that the productivity of "private plots" during collectivization was often five to seven times that of collective land. During this period, surplus from agriculture was redirected towards industrial production meaning that no additional capital was invested into improving the productivity of agricultural land. Regional comparative advantage was all but ignored in favour of local self-sufficiency in grain production in support of the rapid industrialization push (Wu 1997).

started to introduce a modest program of reforms. However these measures were very limited in scope (Bajpai, 1996). Meanwhile, heavy governmental borrowing between 1985 and 1990, though leading to a boost in GDP growth rate, also caused external debt to rise from 12% to 23%.

Government efforts to mitigate the growing imbalance in the country's balance of payments that began in the mid-1980s led to a fiscal and balance of payments crisis in 1990-1991. The government reached near bankruptcy in that year as it struggled to cope with severely depleted foreign reserves. In response to the crisis, the then Finance Minister Manmohan Singh, as part of Prime Minister P.V. Narasimha Rao's government, led a program of economic policy reform for macroeconomic stabilization and opening up of the Indian economy to attain and sustain higher rates of GDP growth. While the program still called for gradual change, it ultimately spurred a much wider range of reforms that served to liberalize the Indian economy. Regulations on industry and trade were drastically reduced, and the financial sector was reformed to become much more encouraging of private sector growth. During the crisis period, GDP growth fell to a low of 0.8% while gross fiscal deficit of the government reached 10% of GDP and inflation peaked at 17% (Bajpai, 1996). The government's strategy served to stabilize these numbers in the short term, and the structural adjustments allowed for much higher annual GDP growth in subsequent years. However these positive changes have also led to significant concerns regarding the worsening state of social and economic inequality in India in the decades since liberalization. In particular, the locational patterns of growth and development have led to questions regarding the importance of urbanization as an engine of Indian growth and the extent to which such growth can be inclusive in a country with a majority rural population.

In this paper, we focus on understanding the size and shape of inequality in various sectors in China and India, and then attempt to synthesize these findings in the context of changes in the post-reform era in each country. Section II explores inequalities within the agriculture, industrial, and service sectors, hard and soft infrastructure, and income distribution in China. Section III goes through a parallel analysis for India. Section IV explains how a locational pattern of growth has served to deepen an equivalent pattern of inequality among the aforementioned sectors, highlighting the importance of geography in thinking about strategies for inclusive growth in China and India. Section V presents concluding remarks.

CHINA

Agriculture, Industry & Services

The agriculture and industrial sectors, and to a much lesser degree the service sector, were at the crux of the market reforms introduced in China in 1978 in response to declining economic growth rates witnessed in the aftermath of the Cultural Revolution. Each has played a critical role in shaping patterns of income inequality across the country and their reform experiences have been significant in that role.

Agricultural reforms were introduced as part of the first package of policy changes in the early reform period, beginning in 1978. The commune system², once the pillar of the Chinese agricultural

² Under the communist collectivist system, the commune was a political and economic organization that undertook most local government functions, ranging from the administration and operation of schools and hospitals to justice and police. Communes also controlled all economic activities, including assigning state production plans and procurement quotas to production brigades and teams, promoting new technologies, and mobilizing massive amounts of labor to construct agricultural infrastructure. Under the commune system, agricultural output was sold under a rationing scheme to urban consumers and industries at subsidized prices. As a result, a large agricultural surplus was transferred from agricultural producers to urban consumers and

system, was replaced by the "Household Production Responsibility System (HPRS) in which individual households leased land from the collectives guaranteeing more equitable access to land for individual farmers and improving production incentives. In addition to contributing to high rates of agricultural growth during the early reform period, the introduction of HPRS, and the corresponding boost in agricultural efficiency, allowed non-agricultural rural industries, known as Township and Village Enterprises (TVEs), to expand, absorbing a large part of farm labour. That this shift in employment from farm labour towards newly developed non-agricultural industry occurred within the rural economy, rather than prompting migration from rural to urban areas, represents a unique element of China's reform experience (OECD, 2005). TVEs provided a framework for investing new agricultural surpluses back into the rural economy and played a critical role in the export-led growth of the post-reform economy. In 2000, TVEs accounted for 47% of total industrial output and 48% of the country's total exports (Fu & Balasubramanyam, 2003), indicating the extent to which agricultural reforms not only had an impact in raising agricultural production and absorbing the resultant surpluses in rural industry, but also contributed to China's overall post-reform economic take-off.

A central feature of China's economic reforms have been the devolution of administrative and fiscal decision making powers from the center to local governments. A new fiscal structure was put in place in which local governments were granted more autonomy in allocating resources towards priority sectors. While allowing local governments greater incentive to promote economic growth, due to historical differences in economic development, as well as inherent geographical factors, the impact of decentralization has differed among provinces. Consequently, decentralization has become an influential factor in the rise in regional inequality in the post-reform era (Kanbur and Zhang, 2005).

As a result of fiscal decentralization, regions with a diverse economic structure and a larger revenue base have had a greater degree of freedom with which to finance economic development. Conversely, those provinces with a historically agrarian economy have had to rely more heavily on the extraction of levies, hindering economic growth (Kanbur and Zhang, 2005). This effect has been felt primarily in the non-coastal provinces which have had few other avenues for economic expansion outside of agriculture.

Nevertheless, agriculture has played a major role in the growth of the aggregate economy, which has seen real GDP growth average above 9% from 1990 through 2010 and even more rapid growth in trade and investment (World Bank, 2010). Following agrarian reforms the agriculture sector has expanded rapidly, at a rate of 4.6% per year since 1978 (in contrast to a growth rate of 2.5% in India), despite a declining share of overall employment from 1993 onwards (Bosworth and Collins, 2007).

The industrial sector (composed of the mining, manufacturing, construction and public utility industries) has been similarly significant for the Chinese economy. State-owned enterprises (SOEs) have consistently contributed to approximately half of the country's GDP, due in part to a historical bias towards heavy industry which lay the foundation for China's rise as a powerhouse of labor intensive, export-oriented manufacturing, and a history of state-sponsored industrial production (Bosworth and Collins, 2007). In order to promote industrialization after the initial period of land reform in 1952, the Chinese state extracted massive resources from agriculture through the suppression of agricultural prices and restrictions on labor mobility. Heavy industry received the majority of scarce investment funds - in place of light industry, agriculture and the service sector - up until the reform period, with industrial centers in the north-eastern coastal provinces of Manchuria

industries. Under collectivization, nearly 120 million farm households were forced onto approximately 24,000 communes in rural China, each containing around 5,000 households (Wu 1997).

benefiting at the expense of the country's rural economy (Kanbur and Zhang, 2005). Early industrialization in the north-eastern provinces of Heilongjiang, Jilin and Liaoning, set the stage for these three, traditionally rich provinces, to capitalize on the industrial reforms introduced as part of the larger packet of market reforms in the early 1980s, and solidify their standing as the industrial heartland of China. However, it was the coastal provinces of Hebei, Shandong, Jiangsu, Zhejiang, Fujian, Guangdong and Hainan that experienced the fastest GDP growth in the post-reform era, with their expansive coastlines and natural ports allowing them to take advantage of the export-oriented nature of industrial reforms (Demurger et. al., 2002).

FIGURE 1. Map of China divided by costal and interior provinces



Industrial reform was initiated in China as a result of dissatisfaction with the country's economic performance on the part of party leaders. With the aim of boosting industrial performance to the level of China's East Asian neighbours, the central government began to tackle a series of problems and opportunities within the sector with ad hoc policy responses throughout the 1980s. The 1990s, however, brought consensus in Beijing that a decentralized market economy would be the target outcome of economic reforms (Rawski, 1994).

China's initial industrial reforms, aimed at promoting an export-led growth strategy, have focussed primarily on creating an enabling environment for industrial initiative by removing existing barriers for state-owned enterprises (SOEs). These reforms, introduced in 1980, allowed SOEs to retain a share of their profits rather than handing them over to the state, introduced a bonus system that sought to improve worker productivity, and ensured room for SOEs to procure their own inputs and produce and sell goods outside of the plan, after fulfilling specific production and financial targets. Goods produced outside of the plan were permitted to be sold in what were predominately free markets (Rawski, 1994). The industrial sector grew rapidly between 1978-1983, with large increases in employment and total factor productivity improvement (Bosworth and Collins, 2007). While industrial reform allowed SOEs to continue to operate in the new market economy, the impact of industrial reform was felt mainly in the non-state sector. The growth of the non-state sector in the

post reform-era served to largely offset the inevitable losses incurred by state-owned enterprises as the economy transitioned.

Tsui argues that the industrial sector has exerted the predominant influence on interprovincial inequality in China. The historic preference for heavy industry emphasized under the central planning system has created a weighty bias towards industrial provinces which received sustained investment in the pre-reform era and were most well situated to take advantage of industrial reforms. While the relative factor weight of the secondary sector on inequality began to decrease in the years leading up to 1984, when industrial reforms were introduced, Tsui asserts that the declining trend can be explained by the reorientation of the industrial sector from the production of heavy industrial goods to light industry. An upturn in the relative factor weight of the industrial sector can be seen in 1984, explained by the introduction of the package of urban industrial reform detailed above which allowed the richer coastal provinces, with more developed non-state industrial sectors controlled by the local governments, to boom in the post-reform period. The industrial reform packages, aimed at encouraging an export-oriented growth strategy, gave non-state enterprises significant freedom to expand in the second half of the 1980s and onwards, allowing for the rapid proliferation of labor-intensive manufacturing in the richer, coastal provinces (Tsui, 1996). In 1980, the Chinese leadership realized that the key to attaining high rates of growth depended on achieving high export growth which in turn depended on diversifying away from traditional sectors, especially raw materials, into non-traditional sectors, especially labour intensive manufactured goods. However, China lacked the technology by itself to be competitive in manufactured goods. Therefore, it invited in foreign direct investors to provide the capital and the expertise to achieve export competitiveness in a wide range of sectors, including electronics, apparel, plastic toys, stuffed animals, ceramics, and many other labour-intensive sectors.

In each sector, the key was to link foreign investor capital and expertise with a large and low-cost Chinese labor force. The foreign investors brought in the product design, specialized machine tools and capital goods, key intermediate products, and knowledge of world marketing channels. The Chinese government assured these foreign investors certain key conditions for profitability, such as low taxes, reliable infrastructure, physical security, adequate power, decent logistics for the import and export of goods, and so forth. At the center of China's export strategy were the special economic zones (SEZs) in which favourable export conditions were assured.

Accordingly, China implemented an ambitious export-oriented growth strategy, the central feature of which was the establishment of SEZs and Open Coastal Cities. This was done essentially to develop China into a major platform for labor intensive manufacturing production. Between 1978 (when the Open Door policy was implemented) and 2010, it grew from the thirty-second largest trading nation in the world to the second, with the most dramatic growth being in labor intensive manufacturing production where it had a distinct comparative advantage. This trade liberalization has been accompanied by spectacular growth in GDP and foreign trade. The SEZ and Open Cities have grown rapidly from fairly small backward areas to thriving modern industrial cities.

The first four SEZs, set up in 1980, were Shenzhen, Zhuhai, and Shantou in Guangdong Province, and Xiamen in Fujian Province. They were chosen specifically because of their geographical proximity to the major regional world trading centers of Hong Kong, Macao, and Taiwan. The understanding was that this proximity would make it easier to attract foreign direct investment and would make it attractive for firms to shift parts of their production bases (particularly those which are labor or land intensive as both labor and land are more scarce and expensive abroad) to mainland China. Also, it was to be a geographically isolated (and therefore controlled) experiment with market oriented policies.

Given the successes achieved in attracting foreign direct investment; creating large scale employment opportunities and in boosting exports, the scope of the SEZs has expanded considerably since their inception and except for Shenzhen, their territories have been increased. Additional provinces have been opened to foreign direct investment and the demarcation between so-called open areas and the rest of China have become less sharp. In 1984 fourteen coastal towns were opened up to form Open Coastal Zones and in 1988 the island of Hainan received full provincial status and was officially declared the fifth SEZ. The Chinese leadership also decided to open up the entire coastal region from Liaoning province in the north to Guangxi province in the south. In 1990 the most ambitious of the economic development zones, Pudong New Area (in Shanghai) was opened. In early 1992 preferential policies were also extended to cities in inland provinces, especially those along the Yangtze river. Statistics bear testimony to the fact that coastal provinces, with the help of SEZs, became the engine of China's growth and while the interior provinces grew rapidly too, they were no match for the runaway growth witnessed in the coastal provinces for a period of almost three decades since 1980.

Unlike industry, China's service sector played a minimal role in the pre-reform era, during which it was artificially suppressed in keeping with the "Stalinist mode of industrial development," yet it has begun to play an increasingly more important role in the post-reform Chinese economy. The service sector expanded at an average annual growth rate of over 9% during the 1990s, accompanied by rapid income growth, and has increased its share of employment from 13.1% in 1980 to 28.7% in 2010. The increase comes mainly from the primary sector, which has seen its share of total employment fall from 68.7% in 1980 to 36.7% in 2010 (Chinese Statistical Yearbook, 2010a). An investigation of provincial level data illustrates that the bulk of the growth of the service sector can be attributed to the richer, and more urbanized, coastal provinces. Employment share in the service sector in 2010 was below 40% in most provinces only exceeding 50% in Beijing (74.1%) and Shanghai (58.5%) (China Statistical Yearbook, 2010a). As the Chinese economy continues to grow and income levels continue to rise the importance of the service sector will naturally increase, perpetuating existing disparities in regional inequality.

The sustained importance of industry to the Chinese economy, coupled with the slow rise of the service sector and the declining employment share in agriculture, have had a profound effect on inequality in China. As income levels have risen in the coastal provinces which are best suited to take advantage of export-led growth, and decentralization has further weakened the ability of the inland agrarian provinces to finance economic expansion, China has had to contend with the fact that market reforms have led to unequal levels of growth across the country. In considering growth, which is contingent on having the necessary infrastructure to support economic activity, we must then ask what the effects of reform have been on the development of hard infrastructure in order to analyze the ease by which the different sectors have been able to flourish in particular regions.

Hard Infrastructure

The rapid development of hard infrastructure has been a central component of the growth story experienced by China in the reform era. The transport, water, and energy sectors have experienced substantial expansion in the last three decades; by 2009 90% of China's population had access to clean drinking water, 99% had access to electricity and the road network had reached a density of 40 km per 100 sq of land area (World Bank, 2010). Similarly, by 2009 China's energy generation exceeded 3.6 million gigawatt hours, making China the second largest energy producer in the world³ (World Bank, 2010).

³ China's rapid expansion of energy production has come about primarily through the operation of coal-fired power plants, resulting in an equally rapid increase in the country's CO₂ emissions. In 2011 China's averaged per capita CO₂ emissions of 7.2 tonnes, making China the world's leading emitter from fossil fuel use (Olivier et.al, 2012).

As was the experience with other sectors, the centralized decision-making structure of the pre-reform era meant that public investments for infrastructure development were made according to priorities established by the central government's general development strategy. Prior to reform, a preference for heavy industry development, and from 1960 onwards, self-sufficiency, proved particularly influential for infrastructure growth, most notably in the transport sector. Emphasis on heavy industry concentrated transportation network investments in north-eastern China, where the majority of heavy industry was located (Demurger, 2001). Conversely, the lack of infrastructural development in other regions, coupled with a lack of investment in industry, led to an unfavourable environment for growth and perpetuated the cycle of inequality. The infrastructural investments made by the state in the heavy industry centers of the northeast prior to 1978 laid the foundation for the labor-intensive manufacturing sector to flourish in post-reform China. That those investments were concentrated in the eastern provinces compounded the inherent inequity of the export-led, coastal based growth strategy.

Despite the emphasis on infrastructural development in the pre-reform era, infrastructure investments in that period were inadequate to meet the needs of the country. While a priority investment program, initiated in the early 1980s, named the energy and infrastructure sectors as key areas of focus and financial allocation, investment in transport, telecommunications, and energy continued to lag behind that of industry for the subsequent decade, with the share of investment remaining constant at 10% and 20% of state fixed-asset investments respectively. However infrastructure became increasingly prioritized from the start of the 1990s, bringing the share of transportation and telecommunication services in state fixed-assets investment to 30% in 1998 (Demurger, 2001). However, by 2010 the share of state fixed-asset investment in transportation and communications infrastructure (including investments in IT infrastructure) had dropped back to approximately 11% (China Statistical Yearbook, 2010b).

The experience of the infrastructure sector in the post-reform economy closely resembled that of the previous sectors discussed, with the decentralization process playing a considerable role in the inequitable development of infrastructure among the different provinces. While fiscal decentralization has allowed local governments more flexibility in allocating funds towards fixed asset investment, many provinces have neglected their roles as providers of public goods in order to concentrate attention and funds towards economically productive activities. As such, decentralization had the effect of reinforcing pre-existing inequalities, as the capacity to raise funds for infrastructural development has depended heavily on local government revenues, which are significantly greater in provinces which have historically had a larger infrastructural capacity and thus a larger industrial revenue base (Demurger, 2001).

A coastal/interior divide appears sharply when one considers transport network density, which declines rapidly the further into the interior one goes. The disparity is particularly evident in the road network, which was developed primarily in the past twenty years, illustrating the uneven development of infrastructure between the coastal and interior provinces throughout the reform era. Even among non-coastal provinces, those that are relatively well equipped with transportation facilities are located on the periphery of the coastal provinces and boast either significant energy resources (e.g. the province of Shanxi, which is a major coal producer) or easy access to the Yangtze River (e.g. Hubei and Anhui). However several provinces with extensive energy resources - such as Nigxia, Inner Mongolia and Xinjiang - which are considerably more remote, and do not border a coastal province, lack any significant transport infrastructure (Demurger, 2001).

This argument is support by a study conducted by Banerjee, Duflo and Qian that found that regions located closer to historical transportation networks – such as railroads – exhibited a higher GDP per

capita, higher amount of industrial activity, and higher profits from industry. The study goes on to assert that these same regions also exhibit higher levels of income inequality. Banerjee, Duflo and Qian argue that higher inequality in the better connected regions results from a situation where capital mobility is lower than the mobility of goods and capital movement flows from less connected areas towards better connected areas (Banerjee, Duflo and Qian, 2012).

An even more noteworthy regional divide is evident in the distribution of telecommunications infrastructure, which reinforces the disparity in transport infrastructure and the underlying focus on developing infrastructural capacity in historically industry-heavy provinces during the pre-reform period. The three northern provinces of Liaoning, Jilin, and Heilongjiang, all state-owned industry bases prior to the reforms, led in the distribution of telecommunications facilities (Demurger, 2001). Infrastructural deficits in the western provinces have played a self-perpetuating role in regional inequality and underlie the importance that fiscal decentralization has played in increasing disparities in the post-reform period. Without the requisite infrastructure to support growth in economic activity, the interior provinces have lagged behind the coast in attracting the foreign direct investment that has bolstered coastal China's boom. Yet without a sufficient economic base, local governments in the interior provinces have lacked adequate funds to invest in infrastructural expansion, furthering regional inequality.

As we have demonstrated thus far, market reforms have led to uneven levels of growth throughout the country. The Chinese economic growth story has been characterized by a preference for export-oriented industry along the coast, leading to lower levels of investment in hard infrastructure, and subsequently lower income growth, in provinces that lacked a geographical advantage. The situation was further compounded by a fiscal decentralization scheme which deepened the disadvantages of the poorer and more remote western provinces. How then have social sectors fared as a result of reform?

Soft Infrastructure (Health and Education)

Fiscal reform has had a profound effect on both the health and education sectors in China, limiting the redistributive power of the central government and imposing tight budget constraints on local governments. While prior to reform the central government managed strict control of all healthcare services across the country, organizing a three-tier system - which included China's famous "barefoot doctors" - that resulted in a rapid advance in the health status of the country, the decentralization of financial responsibility for managing healthcare to the provincial level led to a growing exacerbation of health disparities between rich and poor regions (Dong and Phillips, 2008).

As a result of decentralization, regions with limited resources were forced to make cuts in social sector spending and pass responsibility for healthcare expenses to individual households (Zhang and Kanbur, 2005). The share of public spending on healthcare declined from 84% of total health expenditure to 39% between 1980 and 2001. Conversely, out-of-pocket expenditure as a share of total health expenditure rose from 16% in 1980, the year after market reforms were initiated, to 61% in 2001 (Zhang and Kanbur, 2005). Though total per capita expenditure on health, which includes both public and out-of-pocket spending, rose from \$44 USD in 2000 to \$221 USD in 2010 (World Bank, 2010), indicating larger investments in healthcare overall, the shift in the source of financing during the initial twenty years after reform left many unable to meet the burden of rising out-of-pocket expenditure and resulted in systemic changes which further accelerated the rising trend of inequality in post-reform China. Though public expenditure rates have subsequently increased, reaching 54% of total health expenditure in 2010⁴ (World Bank, 2010), health care

⁴ At the same time, out-of-pocket expenditure as a share of total health expenditure has declined from 61% in 2001 to 37% in 2010 (World Bank, 2010).

resources remain unevenly distributed with most rural areas lacking health facilities able to provide even the most basic of care.

China has realized impressive gains in education, achieving nearly universal enrolment in primary education by the early 1960s, and witnessing growth in the adult literacy rate from 60% in 1960 to 94.3% in 2010 (UNESCO, 2010). Yet despite these gains, studies show that there is a widening disparity in access to, and quality of, basic education within and among Chinese provinces, stratifying those who have benefited from the rapid economic growth of the reform period and those who have not. The declining share of government expenditure on education, and the subsequent variation in the amount of local resources targeted for education, has led primarily to disparities in capital construction, teacher salaries, and the quantity and quality of teaching facilities and materials (Qian and Smyth, 2008).

Data from the late 1990s and early 2000s show the richer, and more urbanized, coastal provinces meeting benchmarks for the mandated nine years of universal primary education and percentage of primary school students continuing to secondary school. In western provinces, however nearly 1 in 10 primary school graduates fail to progress to secondary school, with the failure rate closer to 21% in Guizhou and 45% in Tibet. Research suggests that the highest provincial primary education expenditure per student (Shanghai) is ten times that of the lowest. As regional disparities for education funding increase, and with non-budgeted funding becoming increasingly tied to economic performance, disparities in educational performance are likely to grow (Hannum and Wang, 2006).

The uneven economic growth among provinces and the decline in state investment in hard infrastructure development and social services as a result of fiscal reforms has all played a role in the rise in income inequality in China in the post-reform era. As the sections above illustrate, the effects of reform have been particularly significant when location is considered. The coastal regions have surged ahead, taking advantage of historic and geographic advantages, leaving the interior regions to suffer the consequences of a pullback in the central government's redistributive powers. Taking into account the rising out-of-pocket costs that result from a decline in social sector spending an inquiry into inequality in China must naturally turn to questions of income distribution. How have income levels been affected by the trends we have explored? Does the divide between coastal and inland provinces persist when taking in to account inequality in income? What factors have been the most significant in explaining the widening gap in income inequality in the post-reform era?

Income

Income inequality in China was relatively low in the pre-reform era, despite peaks brought about by the effects of the Great Leap Forward and the Great Famine in 1960 and the Cultural Revolution in 1976. It was not until the start of economic reforms in the late 1970s and early 1980s and after 1983 in particular when the process of fiscal decentralization began and China began to open its economy to external trade and foreign direct investment, that the country saw a steady and consistent rise in income inequality (Kanbur and Zhang, 2005).

According to GINI coefficient data, income inequality in China was 16% higher in 2000 than it was in 1960, far exceeding the spikes brought about by the Great Famine and Cultural Revolution. Inequality appears to have been at its lowest when policy was encouraging the agricultural and rural sectors and highest when these sectors have been neglected (Kanbur and Zhang, 2005).

Kanbur and Zhang have argued that the evolution of income inequality in China can be traced by the progression of distinct political and economic periods in Chinese history, specifically the heavy industry development strategy of the pre-reform period and the subsequent export-led industrial growth strategy of the post-reform era, and the decentralization and opening of the Chinese economy in the 1980s and 1990s (Kanbur and Zhang, 2005). As such, China has seen a widening gap

in regional income inequality in the past decade as the effects of decentralization and the open economy take root. Table 1 below shows the distribution of per capita incomes for the top six and bottom six provinces over a thirty year time span. Coastal provinces exhibit the highest per capita incomes, while the bottom six provinces, all with per capita incomes significantly lower than the national average, are located in the western interior.

TABLE 1. GDP per capita (Yuan) in China by Province

Province	1980	1990	2000	2010
Shanghai	2737.0	6107.0	29671.0	76074.0
Beijing	1544.0	4635.0	24122.0	75943.0
Tianjin	1358.0	3487.0	17353.0	72994.0
Jiangsu	541.0	2109.0	11765.0	52840.0
Zhejiang	471.0	2138.0	13416.0	51711.0
Guangdong	481.0	2484.0	12736.0	44736.0
Shaanxi	334.0	1241.0	4968.0	27133.0
Qinghai	473.0	1558.0	5138.0	24115.0
Tibet	471.0	1276.0	4572.0	17027.0
Gansu	388.0	1099.0	4129.0	16113.0
Yunnan	267.0	1224.0	4769.0	15752.0
Guizhou	219.0	810.0	2759.0	13119.0
<i>National Average</i>	<i>463.3</i>	<i>1644.0</i>	<i>7857.0</i>	<i>29991.8</i>

Source: China Statistical Yearbook, 2010

Wan and Zhou explain that when provinces are ranked in terms of per capita income, as shown in Table 1, the rankings do not tend to shift significantly from year to year, particularly when looking at the top and bottom performers. This, they argue, suggests that little convergence of income levels has taken place despite the Chinese economic success story of the past two decades at both national and regional levels.

Using household-level survey data, Wan and Zhou decompose inequality to determine what factors have played the most significant role in the widening gap in income inequality in China among coastal and non-coastal provinces. Given that income gaps across geographical regions were relatively small in the mid-1980s but have expanded rapidly from the mid-1990s onwards, geographical location alone cannot be considered as the sole driver of the increasing disparity. Using data from three provinces; Guangdong, a rich province located on the south-eastern coast; Hubei, a middle-income province in central China; and Yunnan, a poor province in the western region; a regression-based decomposition of household level data was conducted. The results show that geography plays a fairly constant role in total inequality over time, reflecting the intractability of locational factors. However, as total inequality has been increasing over time, the percentage contribution of geography displays a decreasing trend. Conversely, the share of capital input in a region shows an increasing role in total inequality. While contributing a meagre 2-4% in the 1990s, the contribution of capital input to total inequality has risen to 16-24% in the past decade (Wan and Zhou, 2005). These findings are consistent with our analysis in the sections above which detail the significant impact that fiscal decentralization has had on the availability of capital in the historically poorer provinces of western China which must now rely on a narrowing agrarian revenue base to stimulate economic activity in the absence of the required investments from the central government.

As our analysis in this section has shown, the rise in income inequality in China can be traced to three, location-specific, factors brought about by the market reforms introduced in 1978: the heavy-

industry bias prior to reform and later the shift to labor-intensive, export-oriented manufacturing; fiscal decentralization; and the opening of the economy to external trade and investment, which will be explored in more detail in section IV. While geographical factors alone cannot explain the increase in inequality, the experience of each of these reform trends has been significantly affected by provincial location.

INDIA

Agriculture, Industry & Services

The development of agriculture, a historically dynamic as well as volatile component of the Indian economy, and the primary source of employment for the majority of the 69% rural population today, provides an interesting starting point for understanding the changing shape of India's economy in the post-reform era. Throughout even a large part of the 20th century, India has had to cope with threats of absolute food grain shortages, famines, and failure to import enough and distribute effectively. As a result, agricultural planning after independence in 1947 largely focused on increasing production and attaining self-sufficiency. This effort, aided in large part by the Green Revolution, succeeded in making India self-sufficient in food grains by the end of the 1970s, and a major exporter by the turn of the 21st century (Mujumdar, 2006).

While agriculture has clearly come a long way in the past half century, data shows that the advances in agriculture have long since begun to falter. The momentum created by the Green Revolution began to slow after the 1970s, dampening the scope and intensity of its improvements, and agriculture became fully crippled by the effects of the economic reforms launched in response to the crisis in 1991. Mujumdar (2006) calls the 1990s a "lost decade for agriculture" (p. 32). Indeed there is a consensus among most economists that the agricultural sector was largely ignored during the process of liberalization, causing a sharp decrease in the rate of growth of the sector and leading to what the Indian Government has characterized as an "agrarian crisis" (Ministry of Finance, 13). The annual growth rate of agriculture, which had been 2-4% during most of the period after independence, dropped down to an average of just 0.6% between 1994-95 and 2004-05 (Krishna & Bajpai, 2011, p. 47). This decline, set against the backdrop of a booming economy led by rapid service-sector growth, has accelerated the downward slide of agriculture's share in GDP; data from the Central Statistical Organization (CSO) indicates that the 29.5% share of agriculture in 1990-1991 has diminished to just 13.9% in 2011-2012 (Planning Commission, 2012.)

While the declining importance of agriculture is a familiar feature of a developing economy, its particular importance in India, a nation where well over 50% of the population still relies on the sector for employment and income, renders this fall particularly devastating. In fact, even as agriculture has stagnated over the past two decades for reasons including inefficient distribution of land, inadequate access to finance, and a lack of recent technological advances, the share of agriculture in employment, according to CSO data, has only slightly decreased, remaining within the 50-60% window (Ministry of Finance, 2007, p. 15). This has created a situation of saturation in agriculture, as evidenced by a non-agriculture to agriculture worker productivity ratio that was already over 4 at the time of reforms and had grown to over 5 by 2005-06 (Ministry of Finance, 2007, p. 15). Many rural families, in an effort to supplement increasingly meagre agricultural incomes, have been forced to turn to other industries. With inadequate alternate employment in rural areas, much of this supplemental income has had to come from towns and cities. The data indicates that the share of agriculture in rural incomes has decreased by over 25% in the period between 1993-94 and 2004-05 (Krishna and Bajpai, 2011).

As the primary occupation of an 833 million strong rural India, agriculture is a key indicator of India's growth and development. Yet the Indian economy has been booming with a rapid GDP growth rate

in the post-reform era, a success story that has been largely shaped by an ever growing service sector. In sharp contrast to the stagnation of agriculture in the post-reform era, the service sector, which typically employs more highly educated urban-dwellers, has boomed and allowed for these sections of the population to see great growth and success.

Interestingly in India, the manufacturing sector, which has historically come to dominate primarily agricultural economies as a country develops, has remained extremely small and has seen very limited growth even in the more encouraging atmosphere of the post-reform years. Indeed it could have been this economic vacuum, created by a stagnating agricultural sector and a non-starter in manufacturing, which left the service sector to dominate the economy and grow. In any case, this bifurcated economic structure is illuminating in the way that it institutionalizes a cleavage between those with the opportunity to join the service-led boom and those that are relegated to agricultural-stagnation, and thus creates a major pattern of Indian inequality in its image.

Hard Infrastructure

Given that a crisis in balance of payments brought on the economic reforms of the 1990s, efforts to reduce the government deficit, which had been averaging 7% (and 10% plus when combined with state deficits) in the years leading up to the crisis, became central to achieving macroeconomic stability. Specifically, revenue expenditure was extremely high at the time of the crisis when compared with revenue receipts. Moreover, revenue expenditure had continued to impose an increasing burden on the deficit even in the decade after reforms (Bajpai, 1996). The need for fiscal consolidation in the aftermath of the reforms therefore required a cut in capital expenditure, which involved rollbacks in spending on physical and social infrastructure (Pal & Ghosh, 2007). Targets for investment in hard infrastructure items like roads, power lines, and water resources, as well as soft infrastructure areas, like health and education, were reduced. And in reality, spending in these areas indeed fell short of even these reduced budget allocations (Chandrasekhar & Ghosh, 2002).

It is important to note the role of state governments when assessing targets and achievements in building infrastructure. In the Indian system, states hold much responsibility for planning and financing development in both hard and soft infrastructure. As a result, the impact of liberalization on states and their budgets is also highly relevant in the development of infrastructure. For the most part, the first decade of liberalization had the effect of tightening state resources available for spending on physical and social infrastructure. However for high growth states, which were inevitably the ones which housed the centers of the booming service-sector industry and to a lesser extent manufacturing, there was much more fiscal space to budget for such investment (Pal & Ghosh, 2007). This administrative feature of the system served to further entrench geographic inequalities between regions of high service-sector growth and those without by tying the fates of growth and physical development.

Data from the post-reform period show that despite a tightened state and central budget and the adverse effect this had on public investment, there was a marked expansion in hard infrastructure indicators. Looking at rural infrastructure even in the first post-reform decade between 1991 and 2001, there was an overall increase from 68% to 76% in the proportion of villages that received electricity and an increase from 42% to 64% in villages connected by paved roads. When disaggregated, however, this data shows that for indicators representing road connectivity, power, irrigation, and telecommunications, there is a marked downward trend as distance from the nearest city or town is increased. This means that there has been a disproportionate emphasis on rural areas located closer to urban areas. This trend is directly relevant to the spatial pattern of inequality that emerged from the discussion on agriculture and services; while rural dwellers located in villages near cities and towns are directly enabled to supplement agricultural income with work in urban areas

those in villages located farther away remain dependent solely on agriculture (Krishna & Bajpai, 2011).

The turn of the century brought the beginning of a new phase in the post-reform economy. A decade into the post-reform era, the pattern of drastically increasing inequality, clearly presented by the poor lot of large swathes of rural India, had become apparent. Additionally, an exploding growth rate had increased government resources and capacity to intervene. The decade brought on an era of renewed government spending on large-scale development programs.

Bharat Nirman, a flagship program launched in 2005 by the government, was intended to represent a holistic approach towards building rural infrastructure for development. It consists of projects targeting water supply, roads, housing, telecommunications connectivity, electricity, and irrigation throughout India. The program, currently in its second phase, was slated to receive Rs. 480 billion or 4% of total government expenditure in 2010-2011. While success has been tempered with significant shortcomings and inefficiencies in several areas, the program has managed considerable success in meeting its goals for telecommunications and drinking water supply increases (Lalvani, 2010).

Soft Infrastructure

While the impact on hard infrastructure in the 1990s rollbacks in government expenditure was somewhat ambivalent, the effect on government spending for soft infrastructure target areas, notably health and education, was one of more decided neglect. Amidst a long-standing trend of low rates of government expenditure on health and education, the reductions brought on after liberalization exacerbated existing patterns of poor social indicators, particularly among the poorer sections of the population.

Despite India's limited successes since independence in improving an extremely poor health and nutrition status, it still shows some of the worst indicators in the world in these two areas. According to World Bank data, even today 53% of Indian children are undernourished and up to 88% of pregnant women are burdened with anaemia. For other indicators, there are huge regional disparities within India; for instance UNDP data from 2011 shows a life expectancy of 74 in Kerala as opposed to only 58 in Madhya Pradesh. These poor and incredibly disparate health and nutrition conditions are thought to stem from the structure in which they are planned and financed within the government system. Firstly, public spending on health in India is extremely low by international standards compared to its income level. Moreover, the dramatic increases in GDP growth in the last two decades have also highlighted that health spending seems to be relatively inelastic to growth in India. Center and state health spending together amounted to only about 1% of GDP throughout the period between 1996-97 and 2005-06. Despite concerted efforts to focus on health in more recent years, this proportion had only risen to 1.2% in 2009-10 (Tandon & Cashin, 2010). Secondly, planning and financing health initiatives is predominantly the responsibility of the states, and inter-state differentials in GDP serve to limit certain states' capacity for improving health while differentials in priorities, based on cultural factors, serve to create very heterogeneous health conditions throughout the country. Overall, in the years since reforms, there has been a decline in states' social spending overall, as well as a related drop in health spending, while central government spending simply remained stagnant during this period. There has also been an increasing gap between the spending of richer and more social-sector oriented states and others. For instance, in 2008-2009, Bihar's public spending on health was under half that in Kerala and Tamil Nadu (Berman & Ahuja, 2008).

In 2005, the National Rural Health Mission (NRHM) was launched by the Department of Health and Family Welfare in order to mitigate the negative health and nutrition effects on a rural population that was more vulnerable to disease and less able to pay for care. Programs such as the NRHM, the

Janani Suraksha Yojana, for mothers, and the Rashtriya Swasthya Bima Yojana (RSBY), an insurance program for the poor, aim to improve access and affordability of health care for the poor. Given the current challenges inherent in the health prevention and care system, particularly the low levels of federal and state government spending, the vast majority of spending on health comes out of pocket and on private providers. In light of the huge burden this places on primarily poor families, the NRHM and RSBY aim to bring some relief particularly to the rural poor, although they have been implemented with mixed success.

Education has had much better success in the post-reform years than health, though wide disparities in availability and quality of educational resources have persisted. Literacy rates have been steadily increasing from about 43% in 1981 to 52% in 1991 and 65% in 2001. Such aggregate data hides the many differentials that exist between groups. For instance, the gap between male and female literacy rates is closing all too slowly, and regional disparities in literacy rates can be quite high. The state with the lowest literacy rate, Bihar, has literacy rates that are about 18% below the national average, while Kerala has an average literacy rate of around 90.92% (Pal & Ghosh, 2007, 16).

TABLE 2. Literacy rates by location in 1991, 2001, 2011

	1991			2001			2011		
	Male	Female	All	Male	Female	All	Male	Female	All
Rural	56.96	30.17	44.01	70.69	46.12	58.73	78.57	58.75	68.91
Urban	81.09	64.05	73.08	86.27	72.86	79.92	89.67	79.92	84.97
All	64.13	39.29	52.21	75.26	53.57	64.83	82.14	65.46	74.04
Rural-Urban Differences	24.13	33.88	29.07	15.58	26.74	21.19	11.1	21.17	16.06

Source: Government of India 2011 census website (See www.censusindia.gov.in).

Primary school enrolment again shows a steadily increasing trend, but one that is all too slow. With shortfalls in essential resources like buildings, blackboards, toilets, and textbooks, and a high frequency of teacher absenteeism, there is a reluctance to enrol and a high rate of drop outs. This has resulted in a large number of 6-14 year olds being out of school. (Pal & Ghosh, 2007, 17).

In education, as in health, there has been a surge in private sector involvement, with a large number of private schools often offering a much higher quality of education. This has been met with a parallel decline in the share of government schools offering education at the primary and secondary school levels. The vast majority of these private schools are located in urban areas (Pal & Ghosh, 2007). This trend in education has again fostered a structure that compounds the challenge of including rural populations in growth. In recognition of the poor quality of many rural schools and the complete lack of schools in some areas, the government launched Sarva Shiksha Abhiyan in 2000. While the program fell far short of its goal of universal primary education by 2010, it did increase enrolment rates and promote retention in many states, especially among girls (Das, 2007).

Income

The post-reform era brought a marked increase in income inequality across India. The trend can be observed by looking at the Gini coefficient based on aggregate, all-India data: it was 0.337 in 1983, 0.347 in 1993-94, and 0.376 in 2004-05. Income inequality can, in a sense, be viewed as both a cause for, and a consequence of disparities in opportunity caused by the inequitable distribution of growing industries and employment, hard physical infrastructure, and soft social infrastructure. Viewed in this way, the data seriously questions the overall extent to which growth has been inclusive in India. India recorded one of the fastest recoveries from a fiscal and balance of payments

crisis and the growth achieved in the post-crisis period was more sustainable than the growth in the immediate pre-crisis period. Overall economic growth of GDP at factor cost, after rising to 6.3% in 1994-95, accelerated further to 7% in 1995-96. The second half of the 1990s and the first decade of the 21st century saw India sustaining high rates of economic growth before being pulled down as a result of a combination of factors - internal deficiencies and the global downturn. However, even as the top income quintile within urban areas were able to see an average annual growth of 5% in wage rate, the data shows that over half of the Indian population was stagnant if not declining during this period (Sarkar & Mehta, 2009).

In the pre-reform period, although there was a wide differential between the richest and poorest income groups and no strong evidence for convergence, the pervading economic structure imposed limits on growth that also effectively resulted in a cap on the magnitude of the divide. In the high growth post-reform India, however, the easily quantifiable increases in income inequality illustrate the deepening need for inclusive growth. Even in the second decade after reforms, a comparison of the per capita state domestic products of the top 6 and bottom 6 states shows the widening divide.

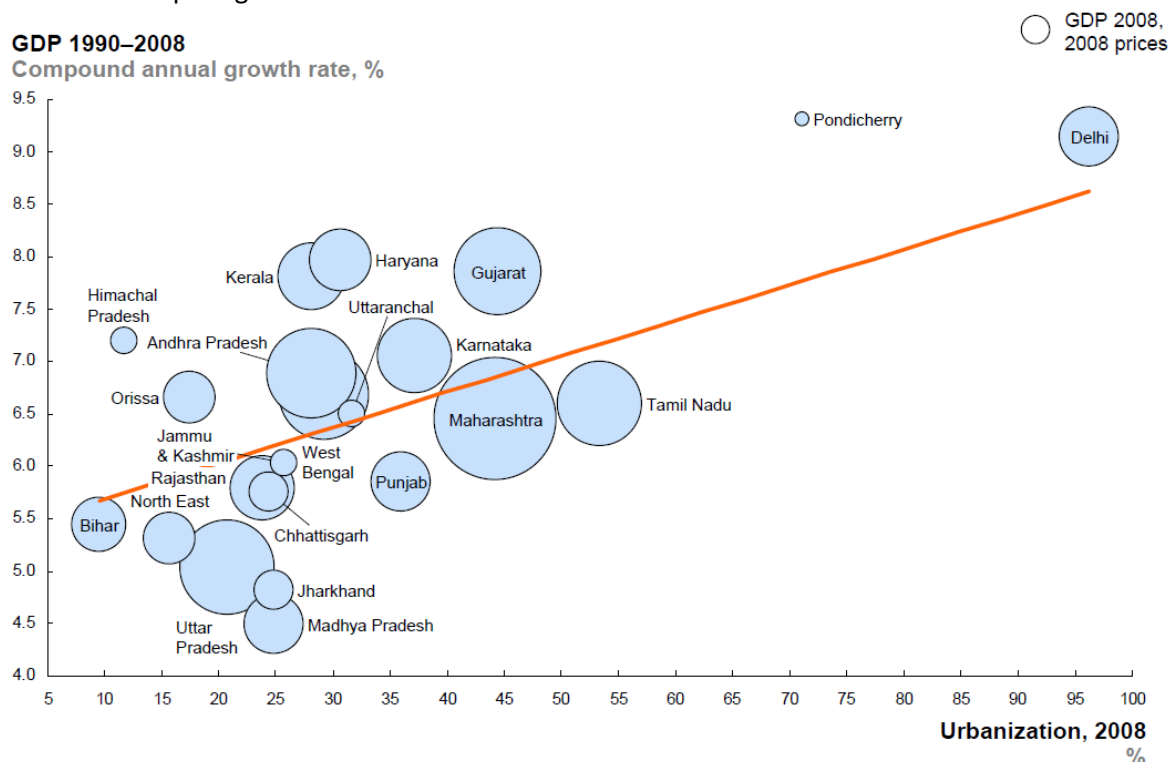
TABLE 3. Per Capita Net State Domestic Product at Current Prices

State	2000-2001	2010-2011
Haryana	25583	94680
Maharashtra	22777	83471
Sikkim	16077	81159
Gujarat	18392	75115
Tamil Nadu	20972	72993
Kerala	20094	71434
Madhya Pradesh	11862	32222
Assam	12803	30569
Jharkhand	10345	29786
Manipur	12369	29684
Uttar Pradesh	9828	26355
Bihar	6415	20708

Source: Government of India, Planning Commission Data

Unlike in China, where the top states are distinguished by heavy manufacturing and exporting enabled by proximity to the coast, the top states in India are predominantly characterized by significant levels of urbanization, often even led by the remarkable success of one or two major cities. It is indicative that the top two states in the chart above are home to India's two largest cities – Gurgaon (part of Delhi's National Capital Region) in Haryana and Mumbai in Maharashtra. In fact when GDP and urbanization are graphed against each other, strong evidence for correlation does emerge.

FIGURE 2. Comparing Indian States: GDP vs. Urbanization



Source: India’s urban awakening: Building Inclusive cities, sustaining economic growth

Sarkar and Mehta (2009) have shown that in the post-reform decade, the bottom two income quintiles in rural India saw only a 1% increase in income while the middle quintile remained stagnant. In urban areas, they show that the growth of the wage rate among regular workers was negative up to the 50th percentile. But in both urban and rural areas, the top quintile saw much higher increases, averaging around 5% per annum.

Krishna and Bajpai (2011) have analysed the data for trends among various quintiles in rural areas for an even more recent period, between 1993 and 2005. Their findings have made a strong case for the importance of proximity to urban centers among the rural population. Using distance from the nearest town or city as a variable, they have found that rural indicators for villages located less than 5 kilometres from the nearest town or city are significantly better than for those that are further off. In fact, in these “umbra” villages, as they have called them, they have shown that all income groups increased in purchasing power in the post-reform era, although the top quintile benefited the most with 20% growth. Data from villages that are located more than 5 kilometres away from the nearest city or town, on the other hand, depicts a much different story in these areas in the period of economic liberalization. Their findings have shown that among this population, every quintile except for the topmost has experienced a real loss in wages during the period 1993-2005. And they have found that the bottom-most quintile has experienced a drastic 15% decline in real income over the course of that period (p. 44).

LOCATION AS A DEFINING FACTOR

China

As was explored in section II, inequality in China can largely be characterized by a coastal-interior divide. While the basis of this stratification was sewn in the pre-reform era, during which the center's heavy industry development strategy prioritized investment in urban industrial centers along the coast which then became the most favourably situated to adapt to the post-reform, export-oriented push, economic reforms have led to further perpetuation of regional disparities.

In order to promote rapid integration into world markets in the 1980s and onwards, China implemented a coastal-biased development policy, making it difficult for the inland provinces to take advantage of the benefits of an open and decentralized economy. Several policy choices favoured coastal development including: (1) an increased rate of state investment; (2) higher tax breaks for exports, higher foreign exchange retention rates and lower tariffs on imports for coastal provinces; (3) increased provincial autonomy due to decentralization; and (4) favourable policies for attracting labor, capital and raw materials from the interior (Wei, 1998). As the opening discussion on China illustrates, the effect of these policies, compounded by the tightened budgets faced by local governments in the wake of fiscal decentralization, created a situation in which the interior provinces were unable to compete with those along the coast.

As a result of favourable policies, in addition to their inherent geographical advantages, coastal provinces have attracted the majority of FDI and have generated higher trade volumes than inland provinces. In 2000, three coastal provinces - Guangdong, Jiangsu, and Shanghai - attracted the highest FDI while three inland provinces - Guizhou, Inner Mongolia, and Jilin - attracted the least. The same top three provinces alone contributed to more than 60% of total foreign trade in 2000 (Kanbur and Zhang, 2005).

The impact of openness on the coastal-inland disparity has been significant. In 1978, the coastal province of Guangdong ranked 14th in labor productivity compared to a ranking of 15th for Sichuan, an interior province. In China's closed economy, Guangdong did not enjoy a significantly better resource endowment than Sichuan, leading to comparable rates of economic growth. However with the opening of China's economy, Guangdong's proximity to Hong Kong made it a favoured location for FDI while Sichuan declined from 15th in labor productivity to 23rd in 2000 (Kanbur and Zhang, 2005).

In addition to their geographical advantages, coastal provinces have been granted several advantages such as the creation of strategically placed SEZs (such as in Guangdong and Fujian, the sites of the first two SEZs to be established) and development zones which offer generous incentives to foreign investors. Coupled with a historical economic advantage, coastal provinces have been successful in parlaying these benefits into spectacular rates of economic growth (Tsui, 1996) by following an export-led growth strategy.

FIGURE 3. Special Economic Zones of the People's Republic of China



Research shows that geography contributed to 40% of total inequality in 2002, 15% lower than its share in 1995 (Wan and Zhou, 2005), indicating that although location is declining in importance it continues to play a substantial role in determining inequality. Kanbur and Zhang argue that though the share of the inland-coastal disparity is declining in regards to total inequality, it has contributed dramatically to the changes in inequality that have occurred as the Chinese economy has opened up (Kanbur and Zhang, 2005). Coastal and inland regions started with relatively similar urban-rural relative incomes in 1985, but by 2000 the urban-rural income differential became much higher inland than on the coast. Within urban areas, coastal-inland relative incomes grew from 1.25 in 1985 to 1.42 in 2000. In rural areas the differential grew from 1.27 in 1985 to 1.67 in 2000 (Lin, Wang and Zhao, 2004).

The coastal-inland disparity can easily be considered the defining factor of income inequality in China. Inherent geographical advantages have been compounded by decades of coastal-biased development and the uneven impacts of market reforms, resulting in a situation in which coastal China has surged far ahead of the rest of the country. China's restrictive migration regulations have intensified the effects of these regional disparities and have impeded income convergence in unique ways. The following two sections touch upon the effects of China's migration policies and attempts to correct the coastal-inland divide.

Migration

In order to support a preference for heavy industry and accelerate the pace of industrialization in the early 1950s, the central government established the *Hokou*⁵ system of household registration, restricting people to the village or city of their birth in order to ensure that there was sufficient agricultural labor to produce the necessary amount of grain for urban industrial workers (Kanbur and

⁵ The 1958 "Regulation on the Registration of Households," which formed the legal basis for the *Hokou* system, required every household to register its place of residence and to gain permission for any change in residence. Official permissions for change in residence were strictly limited. Migration without permission was extremely difficult from 1958 through the early 1980s. Food provisions were strictly rationed and allotments were made according to one's official residence. As such, migrating without official permission jeopardized a household's source of food. Additionally, children of illegal migrants were denied access to government schools, and other services provided in urban areas were made unavailable to unregistered migrants (Jian, Sachs and Warner, 1996).

Zhang, 2005). As labor mobility is a key component in the convergence of income levels, the limitations put on migration in China in the pre-reform era serve as an important determinant for income inequality (Jian, Sachs and Warner, 1996).

With the adoption of reforms in 1978, food and lodging have become available on a market basis making unregistered migration considerably easier. Though constraints remain and illegal migrants continue to be denied access to schooling, state-run healthcare and other urban services, informal migration increased significantly in the 1980s and 1990s, with an estimated 100-150 million people migrating in the mid-1990s (Jian, Sachs and Warner, 1996). From 1979 to 2010, permanent urban population increased by 474 million due to the massive influx of rural migrants (World Bank, 2010). However, while urban migrant workers typically earn more than three times the average income per capita of most rural farmers, less than 10% receive the social security and medical insurance granted to over two-thirds of permanent urban residents. 14-20 million children of migrant workers lack access to education, in addition to vaccination coverage and routine health services. Many migrant workers, subjected to working conditions in which health hazards are high, are forced to move back to rural areas in order to receive medical care (Ha, Yi, and Zhang, 2009).

Thus while the easing of migration restrictions have alleviated some of the pressure on coastal-inland inequality by allowing workers from the interior to migrate to more economically productive urban areas along the coast, it has also contributed to a rise in urban inequality. Further relaxation of migration restrictions, as well as other corrective policy measures, will be needed in order to reduce the widening coastal-interior divide. The Western China Initiative, inaugurated by the central government in 1999, is such an attempt.

Western China Initiative

Throughout the 1980s and 1990s the Chinese government followed a concerted strategy to first develop the eastern and southern coastal regions, in order to boost the country's overall growth, before turning attention to the western and central provinces. Birthed out of the "Xi'an Speech" given by Jian Zemin on 17 June 1999, the Western China Initiative (WCI) was aimed at compensating the interior provinces for their "patience" during decades of coastal-focused policies and reversing perceived exploitation of the interior provinces by the coast (Lai, 2002). While the initiative stated numerous priorities, from the construction of infrastructure to economic and sectoral adjustments targeted towards the interior's comparative advantages and improving living standards, in reality the program was geared mainly towards four key areas: the construction or upgrading of hard infrastructure, the creation of a more favourable policy environment for investment, building a skilled labor force, and maintaining the region's ecological soundness (Lai, 2002).

The change in China's regional development policy to include the western regions seemed to suggest that not only would the state redirect resources for the western provinces, but that there would be a higher degree of state intervention in the economic development of the region than had characterized the reform era up to that point. However the experience of the Western China Initiative has in fact seen little redirection of state resources towards the interior and investment has been limited to specific projects for which funding had already been identified prior to the start of the initiative. The lack of resources has been matched by a lack of coherent or consistent policy statements detailing the initiative, leading to the belief that the Western China Initiative emerged from a collection of parallel and sometimes competing agendas aimed at hastily rectifying decades of inequitable development, rather than from a purposeful policy strategy (Goodman, 2004).

Nonetheless, the GDP per capita of provinces covered by the Western China Initiative grew more rapidly after the initiation of the program, with the average annual growth rate of real GDP per capital rising to 13.26% in the period from 2001-2010 from 6.6% between 1991-2000 (Lu and Deng,

2011). The increases in GDP can mainly be attributed to the optimization of the economic structure of Western China as a result of additional investment in critical infrastructure, with the primary sector declining in its share of economic output and the region witnessing critical growth in industrial output (both in mining and manufacturing). In 2000, the value-added share of industry in the interior as part of the national total was only 13.7%; by 2010 it had risen to 21.4% (Lu and Deng, 2011). The shift in the orientation of the economy of Western China holds consistent to the pattern of economic development experienced by not only the rest of China but the majority of developed countries and demonstrates the necessity of continued intervention by the state in the development of the historically overlooked western provinces.

While studies show that the standard of living has improved in both urban and rural areas of the western provinces, WCI has done little to address inequalities in social services like health and education that have perpetuated in the West as a result of decentralization. In addition, interregional inequality has grown within Western China, with inequality measures based on real GDP per capita of western regions rising from 0.031 in 2000 to 0.065 in 2010. Similarly, urban-rural income disparities are much higher than those on the national level, although the trend is similar (Lu and Deng, 2011). It has yet to be determined what the impact of the Western China Initiative has been on reducing overall regional inequality or if it will prove to be a successful counterpoint to China's coastal focussed, export-led growth strategy

India

Krishna and Bajpai (2011) have said, “Globalisation-driven economic growth in a country whose population remains largely rural has [had] spatial effects on the distribution of benefits” (p. 44). Given recent trends in the shape of the economy, in hard and soft infrastructure, and ultimately, in income inequality, a clear spatial pattern indeed does seem to emerge in terms of the opportunity that is provided and the success that has been attained among various parts of the population. Specifically, the discussion above points toward a divide between urban and rural India.

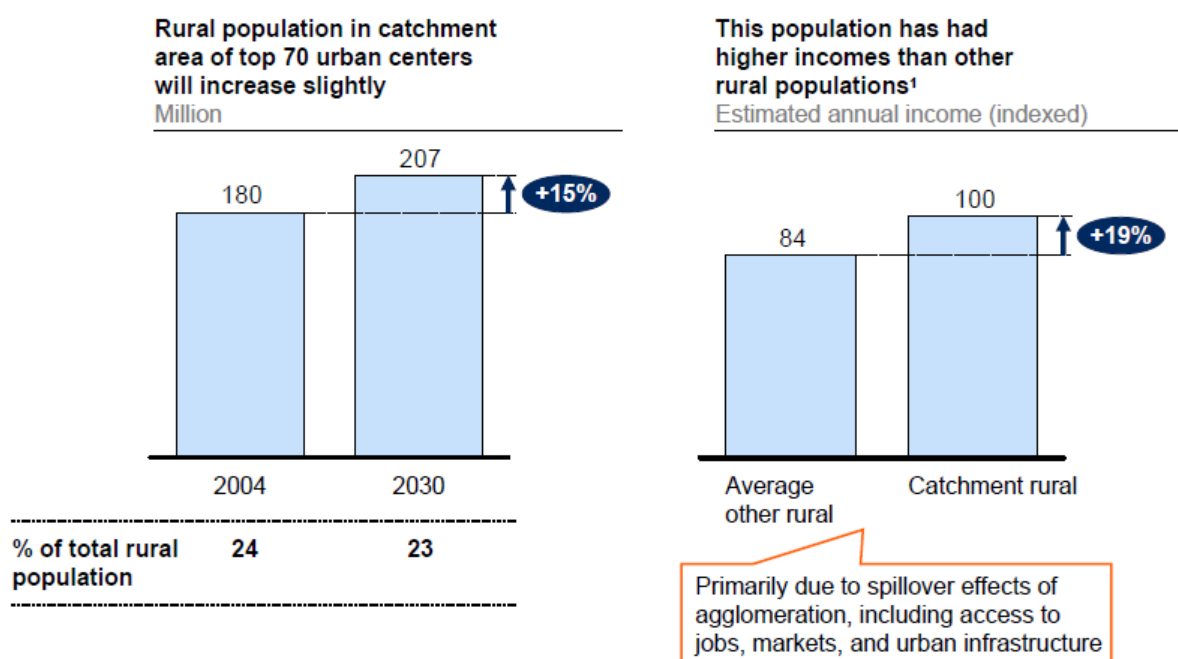
This pattern is established by the opening discussion outlining the various sectors of the economy. Agriculture and its allied industries form the cornerstone of the economy and employment in rural areas. And yet investments in agriculture, which can be led by discovering and spreading innovative new technologies on the one hand and developing rural infrastructure to irrigate more land on the other, have been lacking. As saturated agricultural opportunities run dry, more and more rural dwellers have been forced to seek supplementary employment. This supplementary income has been disproportionately located in urban areas, mainly due to the fact that only the service sector, which is concentrated in urban areas, has been growing and providing increasingly diverse avenues for employment. Interestingly, the manufacturing sector in India never took off in the way it should have. While the easing of regulations and encouragement of the private sector spurred huge growth in services, manufacturing remained limited. Boosting the manufacturing sector could be an option, and indeed remains a highly recommended objective, for directing labour in need of employment (Bajpai and Sachs, 2011).

The lack of sufficient income generating opportunities explains one root cause of the pattern of the urban-rural income inequality observed in the data above. A key feature of this pattern in inequality is that the urban-rural divide seems to manifest as a continuum, where direct benefits increase with proximity to a city or town from a range beginning up to 5 kilometres away (Krishna & Bajpai, 2011, 48). This spatial pattern is supported by the analysis on hard infrastructure, which indicates that everything from irrigation to road and telephone connectivity in rural areas improve with proximity to urban areas. In an economy which has rendered agricultural opportunities weak and largely insufficient to support the rural population, those living closer to cities can have better irrigated

farms to glean more off of their agriculture, and are also better connected to potentially seek their supplemental income in urban centers, where economic opportunities are far greater.

In a study that covered 10 years of pre-reform India and almost a similar period of post-reform India, growth rates of GSDP per capita were found to be highly correlated with the extent of urbanization to start with (Sachs, Bajpai & Ramiah, 2001.) In a regression of growth of the states during 1980-1998 on their initial incomes in 1980 and urbanization as of 1981, the urbanization coefficient turned out to be highly significant. The regression results also show that a 10-percentage point higher rate of urbanization is associated with 1.3 percentage points of higher annual growth. As much as 82% of the cross-state variation in growth is explained only by the differentials in level of "urbanization". The strong influence of urbanization is confirmed also when the regression is run without initial income as an explanatory variable. This strong historical trend is also expected to persist in the coming decades.

FIGURE 3. Projected increase in population and incomes in rural areas located near cities



Source: India's urban awakening: Building Inclusive cities, sustaining economic growth

The dynamics of social infrastructure again seem to build on the existing pattern. Poor water supplies and drainage systems in faraway villages contribute to disease. And yet improved health care facilities, including access to private facilities, are more readily available in urban centers, benefitting those with better connectivity. Similarly the barrier to entry into the booming service sector is education, which has been more heavily invested in areas with greater proximity to urban centers.

While these collective circumstances have created a system of deep barriers for rural dwellers, the concentration of the service sector economy in urban centers and the access to a wider range of infrastructure and services has enabled a part of the urban population to grow their income without constraint.

An interesting comparison to note is the manner in which locational patterns of inequality have come to manifest themselves in China and India. The discussion on China indicates a concerted effort on the part of the government to use the opening of the economy to boost coastal provinces in their development. In India, however, the pervading circumstances seemed to come about much

more organically. The liberalization of the economy provided no safeguards, and therefore adverse circumstances, for a very slowly improving agricultural sector. Meanwhile the manufacturing sector, bogged down by a peculiar set of circumstances tied with long-standing controls on its growth, found it difficult to take advantage of the sudden change in the economic and political environment. Thus the service sector, almost as a gap-filler, came to capitalize on the increased economic freedom in the 1990s. Service sector industries are typically concentrated in urban areas, by nature and necessity. As such, the disproportionate bias towards urban growth and development, and towards opportunities for urban dwellers, has also been more a feature of circumstance in India. This is not to say that government policies have been irrelevant. Indeed the government did aim to bolster what they saw as the engine of Indian growth, leaving other parts of the country in relative neglect.

Regardless of the reason for these emerging locational trends in opportunity, like in China, much of the rural population has sought to take part in the urban-led growth. Indeed over the course of the past two decades, there has been increased migration from rural to urban areas as well as an increased rate in the creation of urban centers (Krishna and Bajpai, 2011). Additionally, to elaborate on the importance of proximity to urban places, population data has also shown that the proportion of the rural population located in “umbra” villages has increased by 18% in the last decade (p. 49). The resultant increase in a disadvantaged urban population has in part been responsible for the significant rise in urban inequality in the post-reform era. As our data has shown, a large part of the urban population has remained stagnant or even declining in real wages. Compared with the exponential growth of the top quintiles of the urban population, therefore, inequality within urban areas is actually much more drastic than that within rural areas. For instance, the gini coefficient in urban areas was 0.367 in 1983, reduced to 0.357 in 1993-94, and shot up to 0.389 by 2004-05. By contrast, in rural areas the gini coefficient was 0.319 in 1983, down to 0.298 by 1993-94, and back up to 0.320 by 2004-05. In rural areas, the reforms seem only to have cemented patterns of inequality while in urban areas, the gap between the rich and the poor has grown much more substantially and rapidly (Sarkar & Mehta, 2009, 48).

Another peculiarity arises in assessing the effects of education in urban and rural areas. For the bottom 3 or 4 quintiles, returns to education at all levels is higher for those in urban areas. This indicates that India’s growth has been urban-biased for households in this majority segment. But at the highest percentiles of the welfare distribution, the study shows that returns to every level of education except college were higher in rural areas. The gap between education among the urban and rural poor may be diminishing due to rural education programs that are creating more educated youth among the rural poor than the labour market can accommodate. Additionally, rural to urban migration of the least educated groups also contributes to the lessening disparity. (Chamarbagwala, 2010).

Krishna and Bajpai (2011) describe the urban-rural imbalance as an issue of holistic “distance,” having said, “distance from market, both physical and cognitive, can importantly influence individuals’ economic prospects” (p. 44) In an economy that became much more oriented towards private sector forces in the period after 1991, it follows that patterns of inequality would be shaped according to distance from the market. In response to the overwhelming increase in inequality that grew out of these circumstances, the government began in the mid-2000s to reinvest in large-scale development schemes meant to boost rural development. Like the Western China Initiative in China, programs like Bharat Nirman, the National Rural Health Mission, Sarva Shiksha Abhiyan, and the Mahatma Gandhi National Rural Employment Guarantee Act, have strived to mitigate the effects of liberalization and neglect in the 1990s in order to foster a more inclusive growth. These on-going schemes have so far been met with mixed success. While they have met with modest success in improving some rural indicators, they have been criticized for inefficiencies in design, including in service delivery, accountability, and course corrections. While these programs have all been put

together with the right intentions and for the right beneficiaries, they are unlikely to deliver optimal results unless of course they are implemented in ways that can transcend the bureaucratic structures that are in place and use for example ICT as a tool for improved service delivery or have far greater involvement of the third tier of government for meaningful transparency and local accountability.

CONCLUDING REMARKS

In this paper we have argued that geographical location serves as a defining factor of inequality in post-reform China and India. In China, an export-led growth strategy has allowed the country to capitalize on a vast coastline to spur rapid economic growth. However, the effects of market reforms on the distribution of resources on a provincial level and a historical bias towards export-oriented industry, has allowed for a rapid increase in inequality in tandem with a rise in income levels. Fiscal reforms in the agricultural and industrial sectors have left the inland agrarian provinces to stagnate while allowing coastal provinces to take advantage of industry incentives for increased production and growth. Similarly, loosening restrictions on the service sector have led to rapid growth in the richer, more developed coastal provinces where rising income levels have resulted in an increased demand for services. Infrastructural development has followed a similar pattern; industrial coastal provinces, traditionally endowed with more developed infrastructure, have been able to capitalize on economic growth to drive additional infrastructure investments whereas agricultural provinces have languished due to a lack of local resources for investment. Declining social sector investments in health and education have unduly burdened rural Chinese residents in the interior provinces whose incomes have not risen to match the increases in out-of-pocket expenditures.

In India, a boom in service sector growth in the wake of liberalizing the Indian economy led to the disproportionate increase in the importance of urban centers as the engines of growth and the centers of opportunity. However this success story is set against the backdrop of a large rural population which, facing deteriorating circumstances due to the effects of liberalization and the lack of government intervention during the decade after the advent of the reforms, now lags far behind in growth and opportunities compared to its urban counterpart. For the most part, the reforms of the 1990s created a market-based system that tended to deepen existing patterns of inequality by enabling rapid growth in the urban-based service sector and by forcing the already declining agricultural industry into stagnation. Unlike the case in China, where state planning has continued to play a strong role in growth and development, Indian government policy, particularly in the early years after the crisis, served to further enable the high-performing areas while neglecting others.

While location alone cannot serve to explain the rapid rise in income inequality in China, geographical factors underlie each of the forces which have driven the disparity. In recent decades, a loosening of restrictions on migration and a concerted policy initiative aimed at rectifying inequities between coastal China and the western hinterland have led to improvements in income levels in the interior provinces, yet the overall impact on regional inequality has yet to be determined. China's reform experience, a result of a concerted effort on the part of the central government to boost China's economic growth to the level of its East Asian neighbours, has certainly been successful, yet many questions remain. How can the success of the coastal provinces be harnessed to bring about more inclusive growth, reducing the impact of mounting regional inequalities? How can access to services be improved in economically and physically disconnected areas of the hinterland and how might this improved access lead to type of growth that would allow the western provinces to develop alongside the coastal areas? Does the Chinese case provide evidence that regional inequalities, particularly due to geographical factors, are a necessary evil of growth and globalization?

Similarly, in India, there have been positive forces towards improving the lot of rural areas. Government policy initiatives, while limited, do constitute large-scale attempts to disseminate hard and soft infrastructure resources to rural areas and have shown some level of impact in improving relevant social and economic indicators among this population. Additionally, the shape of the economy, as it arose in the wake of reforms, has also begun to change. As the government has poured more resources into improving agriculture while also creating policies to protect agricultural interests, there are signs of change for the better in the direction the industry will take in the future. Meanwhile, the service sector, which was previously concentrated only in urban areas, has begun to shift into rural areas to escape congestion and increasing prices in urban centers. As a result, employment opportunities have been created and return to employment in the service sector in rural areas has increased compared to that in urban centers, at least for the top four quintiles (Chamarbagwala, 2010). The dynamic changes over the last couple of decades in India have led to a number of questions. How can the government promote inclusive growth throughout the country? Can the success of the service sector be spread to provide gains for a larger share of the population? Can other sectors of the economy be bolstered to provide diversified employment avenues to the population? What lessons can India take from the growth experience of other nations, and in turn, what lessons can it provide?

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