



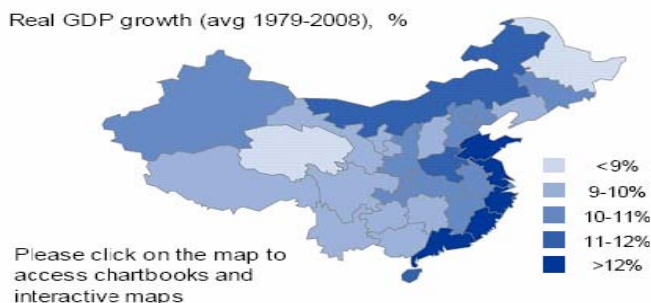
18 February 2010

# Global Macro Issues

## China's provinces - Digging one layer deeper

- **Important structural changes are happening in China which are not visible when looking at nationwide figures only.** High growth is shifting from the coast to inland provinces and low-cost labour supply is declining as regional development initiatives – like the “Go West” strategy – are bearing fruit. This will reinforce structural change in coastal regions towards higher value-added products while labour-intensive manufacturing is moving to inland provinces.
- **Pinning hopes on China to take the place of the US consumer is asking too much.** While private consumption offers some catch-up potential especially in China’s non-coastal provinces this will not be enough to offset the loss in demand from the US. Moreover, much of the additional demand for consumer goods will be served by local companies.
- **Still, opportunities exist in inner and coastal China.** Aside from catch-up potential in private consumption and labour cost advantages over coastal areas, some inland provinces may serve as springboard to neighbouring countries like Yunnan province for Vietnam or some western provinces for Central Asia. Moreover, higher value-added production and increasing importance of non-wage competitive factors should help to increase importance of the services sector.
- **In addition to this study, we provide interactive maps and online chartbooks for all Chinese provinces.** These include easily comparable charts for the macroeconomic environment, as well as public finances, infrastructure development and labour market issues. They are useful monitoring tools to keep track of the changing dynamics in China on a provincial level and put provincial developments in a national context.

**The coast has been China’s growth engine –but inland provinces are speeding up**



Source: CEIC, DB Research

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## China's provinces - Digging one layer deeper

Mainland China is administratively divided into 22 provinces, 5 autonomous regions, and four municipalities under direct administration of the central government – Beijing, Chongqing, Shanghai and Tianjin. All these entities are referred to as “provinces” in this study. In order to investigate spatial trends in development, we group these provinces into six regions: Central, Coast, North, Northeast, South, and West (see table 1). Provinces within a region are not only connected through geographical proximity, but typically share a similar macroeconomic environment.<sup>1</sup>

**Table 1: Aggregation of China's provinces in six regions**

Central	Coast	North	Northeast	South	West
Anhui	Fujian	Beijing	Heilongjiang	Chongqing	Gansu
Henan	Guangdong	Hebei	Jilin	Guangxi	Ningxia
Hubei	Hainan	Inner Mongolia	Liaoning	Guizhou	Qinghai
Hunan	Jiangsu	Shanxi		Sichuan	Shaanxi
Jiangxi	Shandong	Tianjin		Yunnan	Tibet
	Shanghai				Xinjiang
	Zhejiang				

Source: DB Research

Many Chinese provinces could count as outright “countries” when comparing population or economic output, let alone land area. Shandong, Henan and Guangdong are China's most populous provinces with populations of around 95 m people each – more than 10 m more than Germany. Xinjiang, Tibet and Inner Mongolia all have land areas of more than 1 million sq km, comparable to South Africa or Colombia.

When comparing provincial GDP numbers, Guangdong, Shandong and Jiangsu are the heavyweights. With USD 514 bn in 2008, Guangdong has roughly the same economic size as Indonesia but reaches only around 14% of Germany's GDP. Shandong and Jiangsu reached less than USD 450 bn in the same year and have roughly the size of Norway by this measure.

In the following sections we take a closer look on developments over time in China's provinces. We give an

<sup>1</sup>There are limitations to the analysis on the provincial level due to data issues. For instance, provincial GDP figures do not sum up to the national total. However, we think that despite these shortcomings readers will benefit from this analysis as it puts provincial performance into perspective.

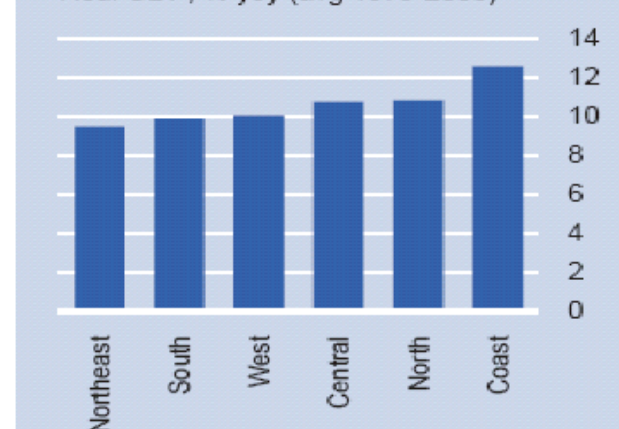
overview how the development focus shifted from the coastal region to interior provinces and present examples for successful reform initiatives on the provincial level. We also highlight areas that need further improvements. In particular we focus on provinces' trade developments, the domestic demand and consumption outlook, provincial labour markets and investment environments. In addition, we discuss recent developments in infrastructure upgrading and give an overview of the provincial banking sectors.

## From coastal development to the “Go West” strategy

In the course of the reform and open door policy, launched in the late 1970s, China promoted economic growth by allowing market-orientation in distinct areas with proximity to trading partners such as Hong Kong, Macao, and Taiwan. These Special Economic Zones were granted preferential treatment with regard to tax policy and import tariffs. Industrial parks were set up and foreign direct investment (FDI) was encouraged. Spatial agglomeration successfully triggered development in the coastal area making it China's growth star (see chart 2).

**Chart 2: The coast is China's growth star**

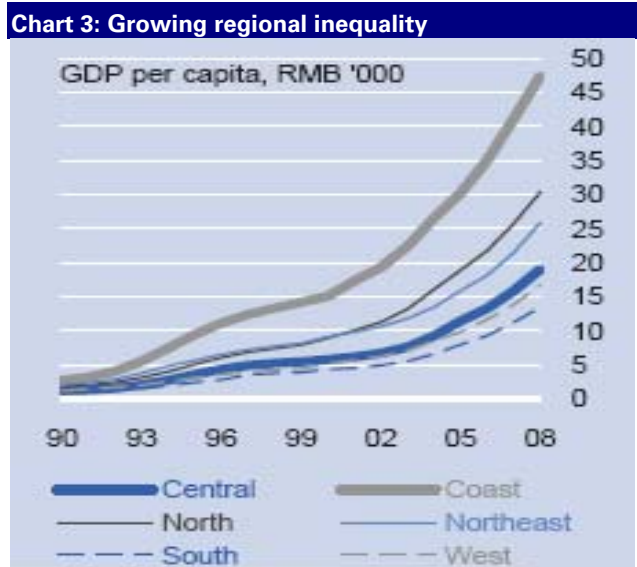
Real GDP, % yoy (avg 1979-2008)



Source: CEIC, DB Research

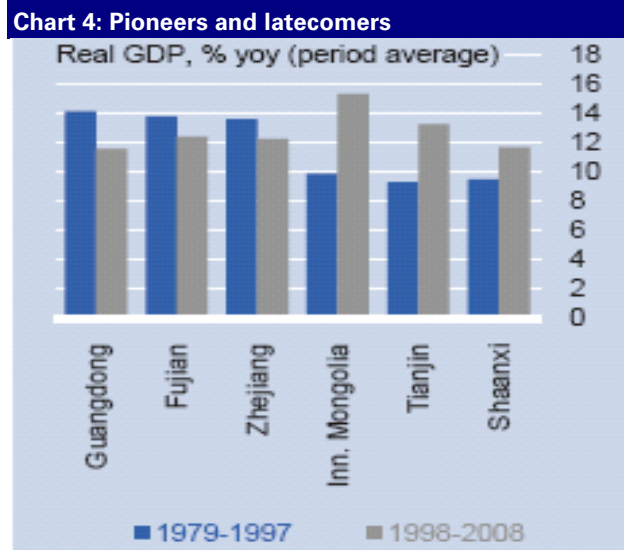
However, this policy approach also contributed to the emergence and rapid growth of regional disparities as reflected in divergent paths of GDP per capita (see chart 3). The central government reacted to persistent regional inequality by launching the “Development of the West” programme in 2000. The initiative – often dubbed as “Go West” strategy – focused on promoting infrastructural projects, improving the investment environment and encouraging domestic and foreign-funded business

formation. Preferential policies on taxation and finance were implemented to set up incentives for business activity. This strategy specifically targets 12 provinces: the West and South according to our definition plus Inner Mongolia. In the recent "Report on the Work of the Government" Prime Minister Wen Jiabao announced the government's intention to continue with its regional development strategy which primarily focuses on western and northeastern China but also aims at upgrading industrial structures in coastal China.<sup>2</sup>



Regional disparities, at least partly, stem from structural and long-term factors, such as education, industry composition and geographic location, which change only slowly or not at all.<sup>3</sup> Therefore it is not easy to gauge whether we are already witnessing the beginning of catching-up of China's interior provinces<sup>4</sup> or whether the recent trend of convergence in a number of indicators is only temporary and due to cyclical effects.<sup>5</sup>

However, since the formulation and implementation of the "Go West" development strategy some interesting changes took place. First of all, China's growth stars are no longer exclusively located on the coast. Until 1997, coastal provinces Guangdong, Fujian, Zhejiang and Jiangsu topped the list, but now new top performers are emerging. These include provinces from the North – like Inner Mongolia and Tianjin – and from the West, for instance Shaanxi (see chart 4). More recently, the southern provinces of Chongqing and Guangxi entered the sphere of more than 13% annual real GDP growth.

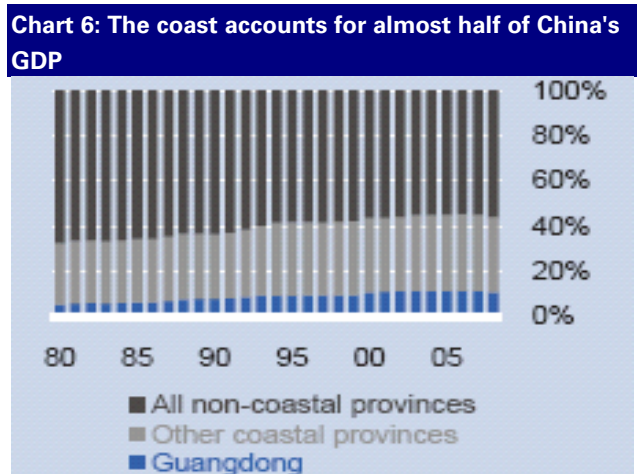


Regarding the gap in per capita GDP, the picture is mixed. Throughout the last decades Shanghai has been the richest province. In 2008 its annual per capita GDP reached 8.5 times that of Guizhou, the poorest province by this measure. There is a clear regional divergence with only coastal and northern per capita incomes above the national average, which is natural given these regions' above-average growth performance and higher initial income level. But there are tentative signs that the central government's development strategy has started to bear fruit. Since 2004, the coast's deviation from the national average is declining, partly due to a halting growth of Shanghai's per capita GDP, which amounted to 250% of the national average in 2001 but was down to 168% in 2008. Furthermore, the North's per capita GDP has risen more strongly than the national average since the mid-1990s and Western China also seems to be trending up (see chart 5).



<sup>2</sup> Report on the Work of the Government (2009).  
<sup>3</sup> Candelaria et al. (2009).  
<sup>4</sup> Kwan (2009).  
<sup>5</sup> Li and Xu (2008).

Another result of the “Go West” strategy is that non-coastal provinces have been gaining economic weight – although at a slow speed. While economic power is still clearly concentrated at the coast, its share recently levelled off at 44% of China’s total GDP after decades of steady increases (see chart 6). With an increase of more than 50% between 2000 and 2008, Inner Mongolia showed the largest increase in economic weight. Other western provinces also showed strong increases. However, with a combined 9.2% of China’s total GDP they are still smaller than Guangdong alone.



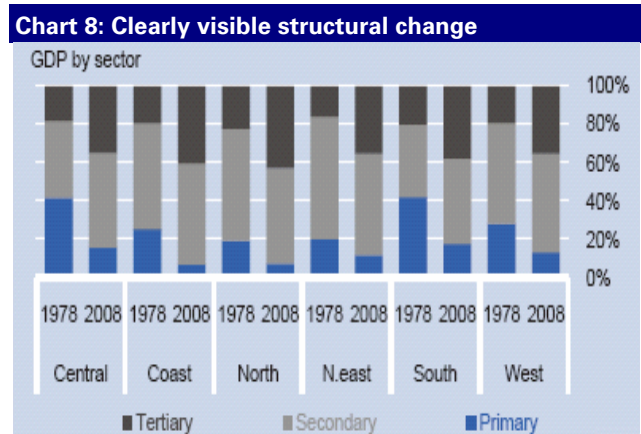
Source: CEIC, DB Research



Source: CEIC, DB Research

Finally, structural change is visible in all provinces. The importance of the agricultural sector has diminished and industry and services gained substantial weight since the early 1980s (see chart 8). Interestingly, while services expanded rapidly over the past decades, all regions except the coastal provinces show a growing share of the industrial sector since 2005, mainly at the expense of the

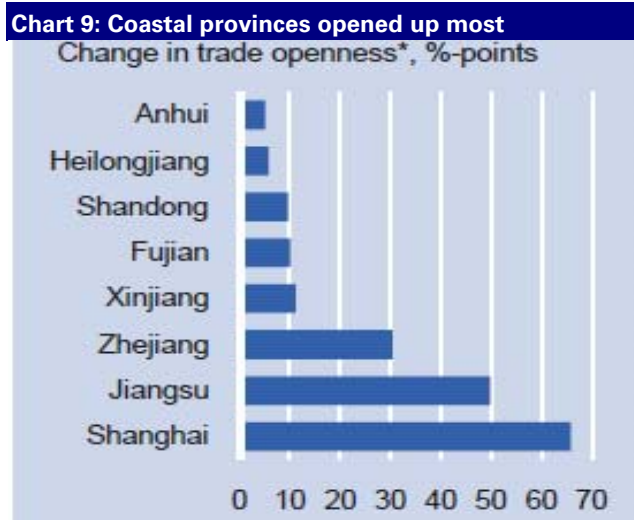
services sector. This could be a sign of intensifying industrialisation in less-developed provinces as an effect of the central government’s development strategy.



Source: CEIC, DB Research

**Coastal provinces still dominate trade but inland provinces increasingly open**

Coastal provinces dominated China’s export production during the 1990s and continue to contribute almost 70% of the country’s total exports (see chart 7). Guangdong alone accounted for more than 40% of all exports in 1998, but since then other coastal provinces have caught up. This is reflected in the sharply increasing trade openness of Shanghai, Jiangsu or Zhejiang. Aside from these coastal provinces some inland provinces also showed increases in trade openness when comparing the late 1990s and the first decade of the 21st century (see chart 9). In contrast, trade openness stagnated at low levels or even decreased for a number of inland provinces like Inner Mongolia or Shaanxi.



\*Trade openness measured as total trade in % of GDP; Change is difference of averages 2001-09 to 1995-2000. Source: CEIC, DB Research

But the coast's openness has also a negative side, namely, that the region's dependence on foreign trade is a source of vulnerability. Using US orders of durable goods as an indicator for external demand, we measure how provincial export volume varies with changes in external demand. As expected, more open provinces show a higher correlation with US durable goods orders. The correlation is especially strong during 2000-03 and 2008-09 (see chart 10).



Source: CEIC, OECD

China intends to expand export processing industries to non-coastal areas and to foster change towards higher-value manufacturing and services in the more advanced regions, including the coast. In 2007 and 2008 the Ministry of Commerce determined 31 "priority relocation destinations" in China's inland in order to increase the

central and western areas' trade share in the processing industry, especially labour-intensive manufacturing.<sup>6</sup> The transition in the production structure from low-end manufactures to higher technology products will also change China's export structure with regard to provinces. The newly established High Tech Industrial Development Zones in Sichuan and Yunnan, for instance, offer potential to serve the foreign markets for electronics and information technology.

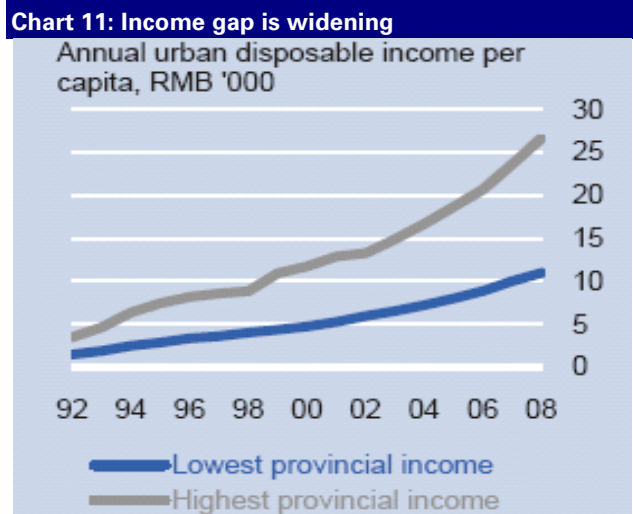
Similar to exports, China's imports are also dominated by coastal provinces, and declined the sharpest in this region. The simultaneous fall in export and import growth rates likely stems from the high share of primary and intermediate goods that are imported for being processed in China. Processing trade has dropped faster than general trade. The reason is that exporters have scaled back orders of raw materials and other inputs as a response to falling global demand. The latter explanation emphasizes the exposure of trade-dependent provinces to external shocks. At the same time, export products are increasingly composed of domestic inputs.<sup>7</sup>

### Inland provinces with catch-up potential in consumption

A widely discussed issue is whether China can offset the slump in external demand by boosting the domestic market. Although disposable income in urban areas has steadily increased over the past years, so has its variance across provinces. Shanghai has been the top earner in every year since it overtook Guangdong in 1999, and since 2002 the ratio of the highest to lowest income has been rising constantly, showing up in an again widening income gap (see chart 11).

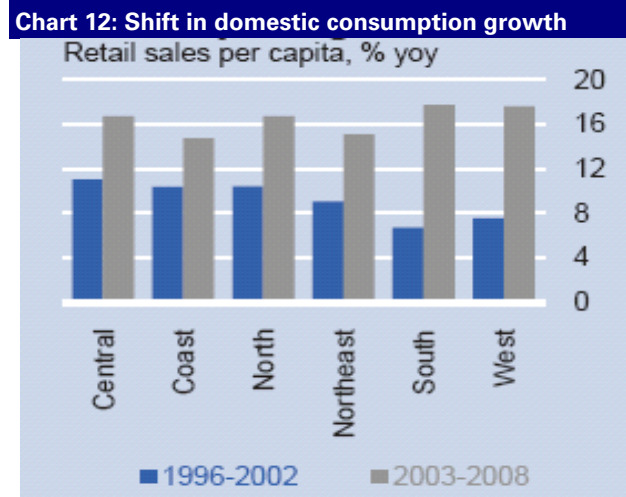
<sup>6</sup> Kwan (2009).

<sup>7</sup> Li (2007).

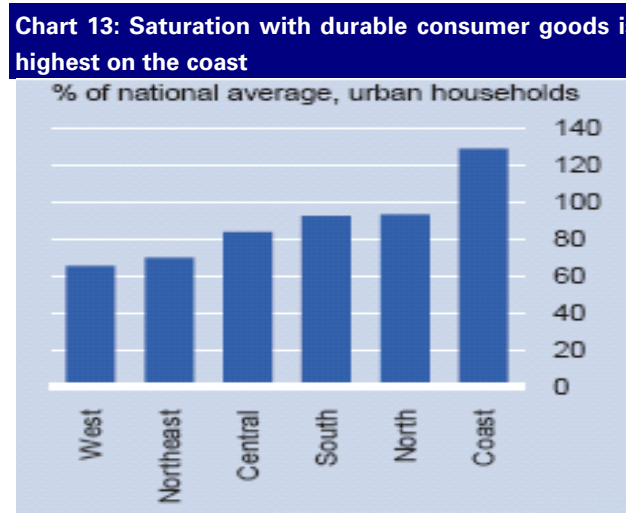


Stimulation of domestic demand was declared a long-term strategy at the National People’s Congress on March 9, 2009.<sup>8</sup> Key measures include increased state investment into low-income housing, education and health care. Special emphasis was put on adjusting China’s income distribution by raising the share of government expenditures dedicated to improving livelihoods, expanding consumer credit, and raising subsidies to farmers and low-income urban residents.

Another government aim is to “cultivate areas of high consumer demand and expand consumption in new areas”. While the coast’s retail sales value exceeds the national average by almost 90% (southern and western regions are 40% below average), retail sales growth is weakest in coastal provinces (see chart 12). This reflects the coast’s lead in consumption but also the catch-up process of some inland provinces.



Catch-up potential exists in areas like durable consumer goods, as can be seen from the relatively low levels of consumer good saturation in less well-off provinces (see chart 13). Urban households in Yunnan province, for instance, reach only less than 80% of the average saturation rate for colour TV sets or refrigerators in more developed provinces. The numbers are even lower for western provinces like Xinjiang or Qinghai. However, it seems unlikely that this will be enough to offset the loss in demand from the US. Moreover, much of the additional demand for consumer goods will be served by local companies rather than foreign companies or exporters from other countries.

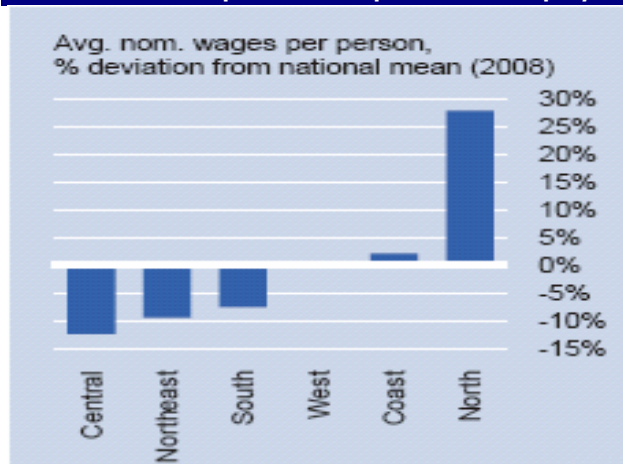


<sup>8</sup> Report on the Work of the Government (2009).

## Low-cost labour – An advantage moving inland?

The increasing consumer potential of some interior provinces is fostered by growing wages. Between 2000 and 2008, average annual wages grew by 15% per year on a national scale. But wage inequalities persist – both between and also within provinces, for instance on a rural-urban scale. Northern and coastal provinces show above-average nominal wage levels (see chart 14); in the case of the northern region this is mostly driven by Beijing and Tianjin. Nominal wages in the Western provinces are only marginally below the national average, while those in other regions show substantially lower values.

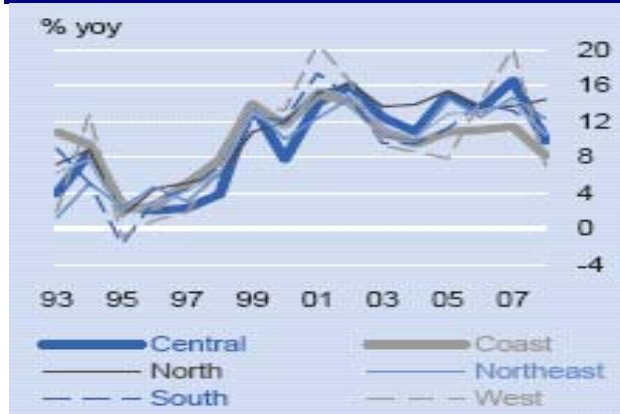
**Chart 14: Northern provinces: expensive for employers**



Source: CEIC, DB Research

Regarding consumption potential real wage developments are more important. Since the “Go West” initiative was introduced, real wages have displayed steady growth between 11.4% on average for the coast and 14.2% for the north. Western provinces’ real wages have grown by 13%, which is slightly higher than the nationwide average (see chart 15). Recently, real wage growth declined sharply for all regions but the north. This can be explained by the sharp uptick in inflation rates in 2008 which for instance reached double-digits in western provinces like Gansu, Qinghai and Xinjiang.

**Chart 15: Steady growth of real wages since the late 1990s**



Source: CEIC, DB Research

Low labour costs have been supportive of China’s competitiveness. However, coastal provinces had already reported shortages of unskilled labour in 2004, when China’s economy was booming. Companies in China’s coastal region, especially in the Pearl River Delta and Shanghai, are increasingly confronted with rising wage pressures. As infrastructure for business operations expands in inland provinces as a result of the central government’s regional development strategy, the pool of migrant workers is drying up. This is further amplified by the fact that demographic change is affecting China’s rural surplus labour force.<sup>9</sup> If diminishing supply of low-cost labour is not just a temporary phenomenon, this will initiate a shift in coastal manufacturing towards higher value products. Still, existing wage differentials between coastal and inland provinces can prove beneficial for domestic and foreign companies alike, as can be seen by the increasing number of business relocations to for instance cities like Wuhan in Hubei province or Chongqing, both large cities at the Yangtze River.

Having said that, there are also signs that some inland provinces try to leapfrog the stage of cheap manufacturing, directly moving into higher value-added segments. Science and High-Tech parks in municipal economic zones of the South and West, for instance in Chengdu, Chongqing, and Xi’an, are aiming at attracting more foreign investors who make use of the lower wage levels and escape the coast’s increasingly competitive labour markets.

<sup>9</sup> Cai et al. (2009).

## China's "Revitalize the Northeast" scheme is tackling structural challenges

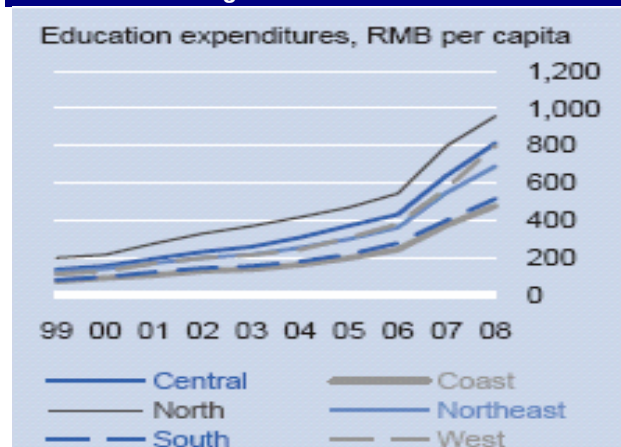
Over the past years, regional unemployment rates – based on official data – have been in the range of 3 to 4%.<sup>10</sup> Unemployment rates grew higher in provinces that faced harsher structural adjustments. This is most evident in Liaoning – a traditional heavy-industry province in China's northeast with a high percentage of its labour force employed by state-owned enterprises. In the face of massive firm restructuring, unemployment rates exceeded 6% between 2002 and 2004. The provincial government reacted by launching vocational training and business formation programmes, while the central government pushed forward the "Revitalize the Northeast" strategy, established in 2003 as the second wheel of China's regional development plan, on par with the "Go West" strategy. Even though employment stabilised accordingly, the structural problems of China's "rustbelt" are still evident: Non-competitive industries, overly strong reliance on the state sector but also on a few industries like oil, steel, automobiles, and coal. However, there are increasing signs of success as foreign investment in the region is rising. Examples include foreign-invested firms and joint-ventures in the automotive and chemicals sector. Also, Dalian – a city in Liaoning province – has successfully positioned itself as a business-process outsourcing destination mainly for Japanese and Korean firms.

## Focus on human capital formation – A key factor for growth

Human capital and related infrastructure are strongly concentrated in China's economically most active regions – the coast and metropolitan areas. Out of China's top 30 universities, ranked by the Chinese Academy of Management Science in 2008, five are located in Beijing (Tsinghua University and Peking University rank first and second), four in Shanghai, and seven in other coastal provinces. Knowledge-intensive industries are predominantly located in this area. This "knowledge belt" is also where provincial government expenditures for education are highest in per capita terms, twice as high as in central and southern provinces (see chart 16). Several inland provinces in the northeast and west have recently allocated more of their funds to education.<sup>11</sup> Formation of

human capital has been identified as a key factor for long-term growth. This goes along with the central government's intention to increase public spending on compulsory education in rural areas and to raise allowances for students from the countryside.

**Chart 16: Knowledge belt in N. China**



Source: CEIC, DB Research

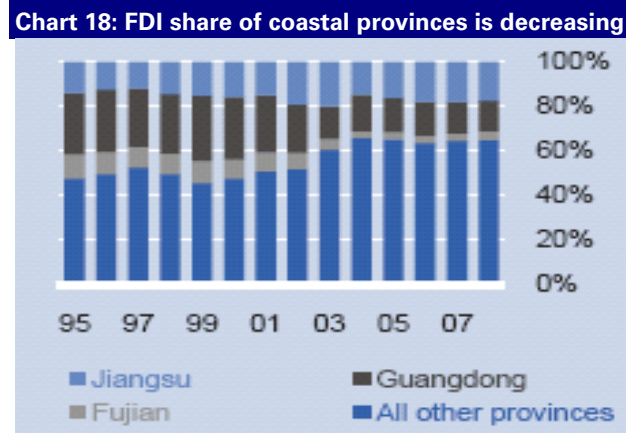
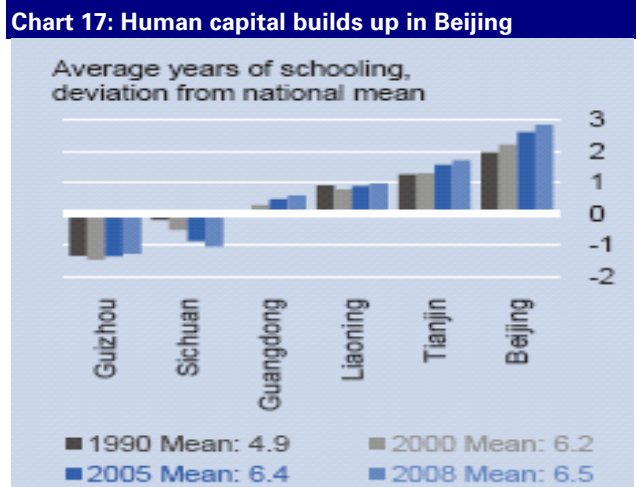
Compulsory education has been fixed to nine years universally across China, which comprises 6 years of primary school and 3 years of middle school. Census data from 1990, 2000 and 2005 reveal that out of all provinces only Beijing reaches this target. Some provinces, like Guizhou and Yunnan, even stay below the primary school level on average (see chart 17). However, recent progress in school enrolment is likely to continue in the future.<sup>12</sup> Enrolment increases today will, however, only be reflected with a time lag in the labour force's education level. Additionally, economic performance and external events can affect education levels. Migrant workers' families are especially vulnerable as their ability to provide education to their children is strongly dependent on the business cycle.

<sup>10</sup> Data are based on registered unemployment, and thus unemployed persons without formal authorisation are not covered. When considering migrant workers as well as persons who are laid-off by SOEs but remain contractually tied to their work units, rates are likely to be much higher.

<sup>11</sup> Fleisher et al. (2009).

<sup>12</sup> Holz (2006).





**Non-coastal provinces increase their share in investment**

FDI has been a major driving force for China’s economic performance over the past decades. Inward FDI has been actively encouraged and is geographically concentrated in the coastal provinces. In 1995, Guangdong, Jiangsu, and Fujian received more than 50% of China’s overall FDI inflows – in 2008 the same provinces held a share of merely 35% (see chart 18). It seems that the evolution of FDI growth rates and the shift in trade patterns across time tell a similar story. Then as now three quarters of the country’s inward FDI portions out among the same nine, most advanced provinces. This seems to be changing as many inland provinces (like Inner Mongolia, Shaanxi and Shanxi) have seen FDI inflows increase at much higher rates over the last years than the major recipient provinces – a progress that can in part be attributed to strategic encouragement of FDI in the inland. China’s northernmost province Heilongjiang achieved average annual FDI growth of 65.6% between 2005 and 2008, concentrated in equipment manufacturing, petrochemicals and food-processing.

The government’s FDI promotion focuses on regional “competitive industries” that attract FDI in order to serve specific needs. This industrial policy approach is criticised by the Asian Development Bank (ADB).<sup>13</sup> According to the ADB, it would be more favourable from a long-term point of view to establish a generally suitable environment for foreign investors, who would then invest into the most promising industries. This is certainly true from a “perfect markets” point of view. However, China’s successful experiment with Special Economic Zones in the past – which also included preferential treatment of certain industries, gives some credit to this approach. Also, the recent Intel investment in Sichuan counts as positive example. Sichuan’s FDI doubled in 2008 compared to 2007, much of which can be attributed to follow-up investments in test and research laboratories by Cisco, Ericsson, Microsoft, Nokia, SAP and Siemens.

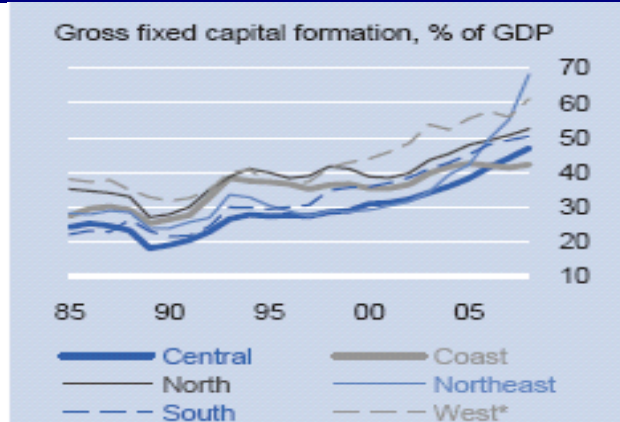
Channelling investment into China’s west and thus taking advantage of the region’s rich natural resources and still relatively inexpensive labour supply is a central objective of the “Go West”-initiative. Projects have primarily been funded by development resources out of the central government’s budget. However, it is expected that a reduction in transport costs will also bring more private investment into the region. In the first three years after the “Go West” programme was initiated the largest proportion of the West’s total fixed asset investment was allocated to the transport, storage, and telecommunications sector. Apart from that, large amounts flowed into energy, gas and water as well as into social services.

One effect of the Western development strategy has already become apparent in the higher investment rate of inland provinces (see chart 19). At more than 40%, the

<sup>13</sup> Asian Development Bank (2003).

ratio of gross fixed capital formation to GDP is high for China in general, compared to other economies at a similar level of income, e.g. 29.5% for Thailand during 1970-92 or 29% in the case of South Korea between 1969-1983.<sup>14</sup>

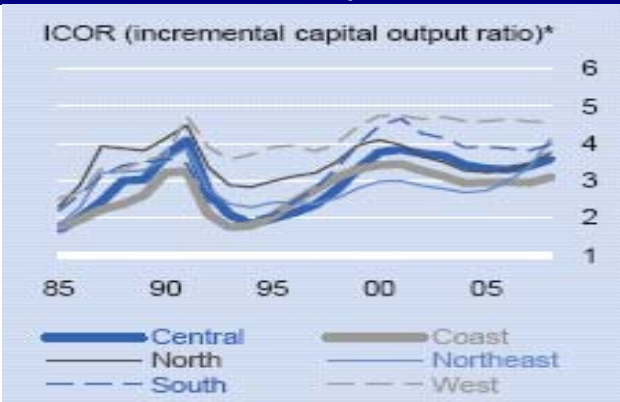
**Chart 19: Rising investment**



\* excl. Tibet; Source: CEIC, DB Research

While the investment boom in the domestic economy has certainly fuelled China’s regional economic expansion, it has not been equally efficient across regions. Coastal provinces have displayed higher investment efficiency than western and southern provinces, as observed in the provincial incremental capital output ratios (ICOR). Moreover, except for the West, the ICOR is found to be on an upward trend, indicating declining investment efficiency (see chart 20).<sup>15</sup> The efficiency decline is especially evident in the Northeast, where the share of state-owned enterprises is highest.

**Chart 20: Investment efficiency has started to decline**



\*Units of investments needed to create one unit of output. A higher value indicates lower efficiency. Source: CEIC, DB Research

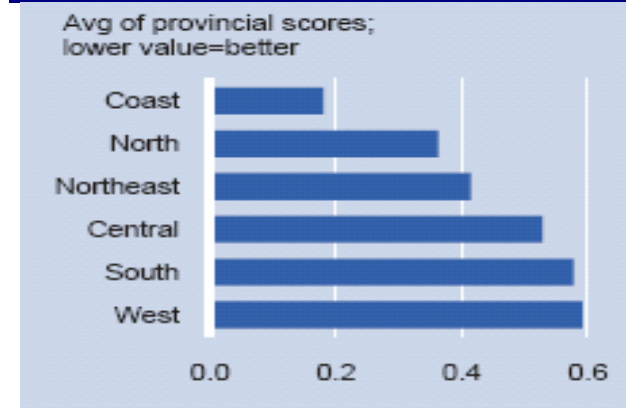
<sup>14</sup> Wu (2009).

<sup>15</sup> Findings by Wu (2009) and Boyreau-Debray and Wei (2004) support this argument.

## Doing business in China’s provinces

Doing business is easiest in the coastal region (see chart 21). Of the 30 cities surveyed by the World Bank in 2007 the top 5 are located in this region. However, there are also places in Northeast and Central China which show relatively favourable environments for doing business. These include Shenyang in Liaoning province, Harbin in Heilongjiang, as well as Chongqing.

**Chart 21: It’s easiest to do business in the coastal region**



Source: World Bank, DB Research

Also, even the top-scoring provinces still show room for improvement. For instance Hangzhou – the capital of Zhejiang province – ranks only eighth in terms of access to credit and seventh when it comes to registering property. In the top-5 group only Guangzhou shows good scores in all four categories.

Local governments have some room for implementing reforms despite the fact that many regulations are designed by the central government. Chongqing, for instance, simplified the property registration system and Chengdu, the capital of Sichuan province introduced a new approval system for starting a business in July 2007.<sup>16</sup> Between 2006 and 2007, the coastal region has been the most active reformer according to the World Bank.

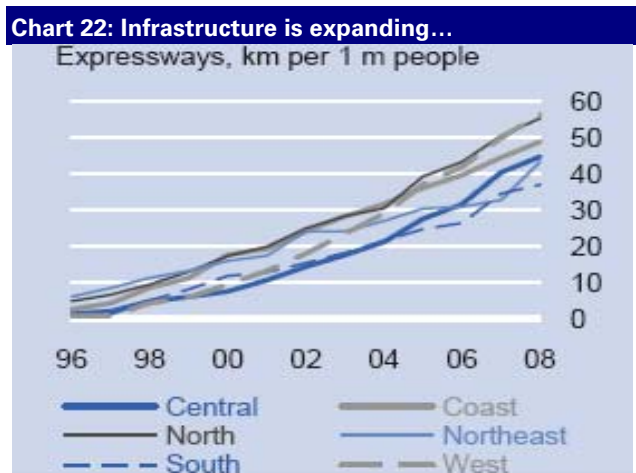
## Infrastructure – expanding the roads less travelled

Insufficient networks of physical infrastructure hamper trade and investment. It is intuitive that the expansion of highways, railroads and airports yields relatively higher returns to investment in regions with a lower initial infrastructure endowment. The construction of transport

<sup>16</sup> World Bank (2008), p. 5.

routes and distribution networks will also facilitate the exploitation of minerals, natural gas and oil, which are abundant in China's west. In addition, infrastructure expansion will help to meet increasing demand for logistics services and individual travel.

The infrastructural development of China's remote regions makes up the essential constituent of the "Go West" strategy and the total length of China's expressway network has increased substantially over the past decade (see chart 22), making it the second largest in the world.<sup>17</sup> Within the first five years of the initiative China invested more than RMB 850 bn on key projects in the west. Also, China's recent RMB 4 tr stimulus package includes RMB 1.8 tr earmarked for transportation infrastructure and power grids and RMB 370 bn for rural livelihoods and infrastructure.<sup>18</sup> Milestones are the east-west pipeline, the Qinghai-Tibet-railway, and the new Xianyang Airport in Xi'an, of which Germany's Fraport AG holds a 24.5% stake. Prior to the airport construction, time and cost of a shipment from Shanghai to Xi'an equalled shipping from Shanghai to the United States.<sup>19</sup> The introduction of high-speed railways between Nanjing and Shanghai in 2008 and between Wuhan and Hefei in April 2009 cut the travel time between Central China and the Yangtze River Delta in half to only four hours and 45 minutes. Further expansion is set to take place: According to the Ministry of Railways China's high-speed railway network is planned to increase fourfold, from currently 4,000 km to around 16,000 km by 2020.

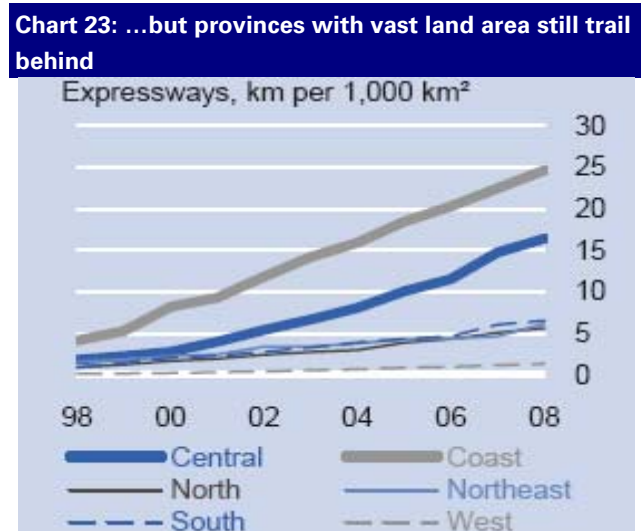


<sup>17</sup> KPMG (2009).

<sup>18</sup> See Zheng and Chen (2009).

<sup>19</sup> According to Bai Wenxiu, Professor of Northwest University, Xi'an in: China Daily

In terms of infrastructure, the western development strategy has proven quite successful: Provinces that did not have a single kilometre expressway before 2000, like Inner Mongolia or Qinghai, are now linked-up with a considerable expressway length. Of course, when taking into account most western provinces' vast land area – Inner Mongolia is comparable with Colombia or South Africa – transport networks are far from complete, resulting in a lower scoring for the western region (see chart 23).



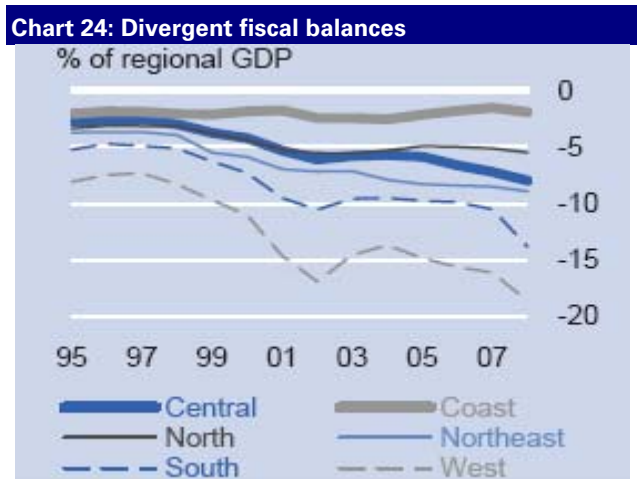
Most of China's logistics hubs are located near the coast and investment into transport, storage and postal services are highest in those areas that show the highest freight volumes, led by Shanghai with an average freight of 44,115 tonnes per highway kilometre between 2000-07. For now, being situated in China's coastal regions still boast advantages, given the country's still high exposure to maritime trading. But even here, alternative locations to the well-established coastline port cities are emerging as more and more traffic uses inland waterways. Also, orientation away from export-driven growth will support inland provinces.

**Provincial government finances**

The allocation of fiscal responsibilities between China's central government and the provincial governments has been subject to various reforms during the last decades. Fiscal decentralisation during the 1980s assigned more sovereignty to local authorities, but also led to excessive bargaining over revenue shares in central government revenues. This brought about a new fiscal system, the Tax Assignment System of 1994. It shifted control over tax revenues back towards the central government and set uniform central-provincial revenue-sharing rates<sup>20</sup> with the

<sup>20</sup> Wei (2000).

result that poorer provinces, which had previously benefited from “negotiated contracts”, lost ground compared to wealthier provinces.<sup>21</sup> By contrast, responsibilities over expenditures remained with the local governments. This asymmetry between revenue power and expenditure coupled with low efficiency of public budgeting procedures often causes financial distress of local governments and lead to a deterioration of provincial governments’ fiscal balances in all regions but the coast since the mid-1990s (see chart 24). The degree of decentralisation of expenditure responsibilities in China is now well above the level of both developing and developed countries. As much as 70% of total budgetary expenditures are assigned to the sub-national level, which includes provinces, prefectures, counties, and townships.<sup>22</sup>



### China’s less well-off provinces struggle for subsidies

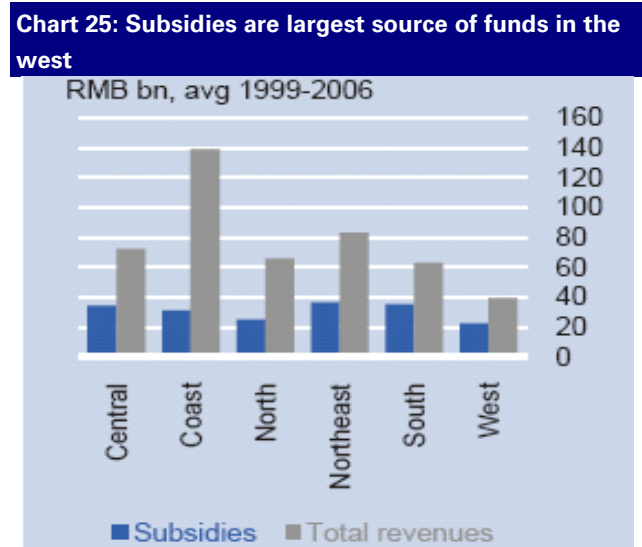
In order to smoothen the volatility of provincial expenditures, net transfers were granted to provinces which experienced negative shocks in revenues. This system helped to absorb much of the fluctuation in provincial revenues and expenditures. However, the efficacy of the net transfer system in terms of smoothing expenditure of poorer provinces declined as lump-sum transfers proved increasingly inadequate in buffering shocks since the amount did not change in reaction to revenue shocks. In addition, lump-sum transfers were fixed in nominal terms, leading to losses in value over time in real terms. Furthermore, the net transfer system came to rely increasingly on earmarked grants relative to

<sup>21</sup> Tochkov (2007).

<sup>22</sup> Wong (2007).

lump-sum transfers since 1985, with less well-off provinces being in a worse position to negotiate those grants with the central government.<sup>23</sup> This, along with the gradual weakening of central fiscal power led to a divergence of provincial budgetary positions.

Between 1999 and 2006, subsidies from the central government made up more than 50% of provincial revenue in the south and west (see chart 25), whereas in the coastal region they accounted for less than 20%. Beyond subsidies, provincial governments mainly financed their expenses by drawing on the previous year’s budget, a fact that hints to low spending efficiency. Although resource transfers set the ground for equalising the provinces’ budgetary situation, the effect was partly offset by the immense growth of extra-budgetary funds. These were mostly introduced in the form of fines and administrative charges. Such off-budget funds grant considerable autonomy to local governments and enable them to finance more spending but also undermine fiscal discipline and probably give rise to wasteful spending.<sup>24</sup> Also, better-off provinces usually find it easier to raise off-budget funds, a fact that re-enforces regional disparities.



### Development of provincial bond markets: relief for stressed provincial government finances

Issuing project bonds is one channel for local governments to finance regional economic development. Since, according to a 1995 (and 2004) law, China’s local

<sup>23</sup> Wong (2007).

<sup>24</sup> Wong (2000).

governments are not allowed to issue debt independently, China has resorted to the practice of issuing bonds through special entities. According to the Ministry of Finance's Institute of Fiscal Science, there are special ordinances by the State Council that can permit local bond financing.<sup>25</sup> Hence, when local stimulation of the economy is necessary, as during the Asian crisis and again in reaction to the 2008/2009 slowdown, the central government is able to sell bonds on behalf of local governments. In order to finance China's 2009 economic stimulus package provinces such as Jilin, Guangxi, Heilongjiang and Inner Mongolia, have been permitted to sell 3-year bonds that are guaranteed by the national government. Overall, local government bond issuance reached RMB 200 bn in 2009. The issuance quotas to provincial applicants were selected in accordance with the capital demand of major projects in the area. In this way China's Ministry of Finance provided higher quotas for central and western provinces.

While the provision of bond-financing rights to local governments would certainly give provinces more leeway to finance development projects or react to natural disasters, there are several caveats associated with increased local government bond issuance. First, it could result in a widening gap between regions, because generally western provinces and municipalities would qualify less for issuing bonds than their coastal peers. Central government guarantees for local government bonds would thus remain important for these weaker regions. Second, there is a risk for the central government as very weak local government budgets in some provinces could jeopardise timely debt service payments. Third, a certain regulatory risk lies in the fact that local governments might disguise their own debt by issuing through corporate bonds – so-called “gray” bonds. This fact complicates an accurate assessment of provinces' creditworthiness and will result in higher risk premia demanded by investors.

## Banking China's provinces

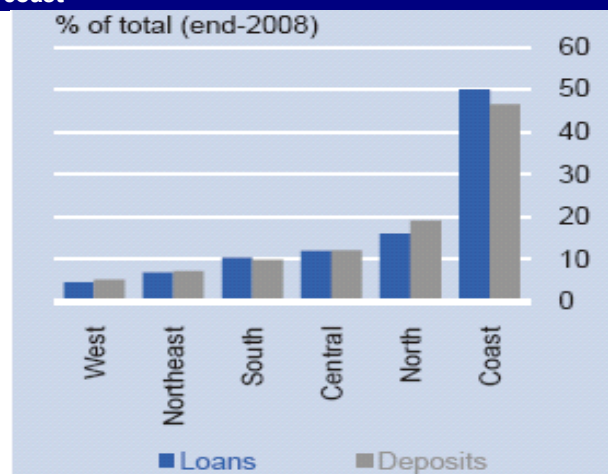
As China's capital markets remain underdeveloped reliance on banks as main source of funds is high.<sup>26</sup> Almost all nationwide-operating commercial banks are headquartered either in Beijing or Shanghai, or in one of the major coastal cities. The role of Beijing and Shanghai as China's major banking and financial centres is unchallenged. But aside from the commercial banks which operate on a national scale, there is a large number of city commercial banks and banks with a sub-provincial

business focus, as well as urban and rural credit cooperatives, plus the Postal Savings Bank. Especially the latter two play an important role in providing banking services in China's less developed provinces and regions.

## Advanced provinces are still key regions for all banks

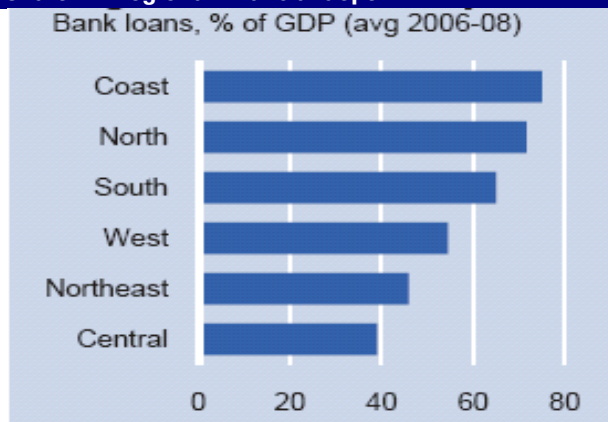
In general, the coastal region shows a strong lead with regard to the share in total loans and deposits (see chart 26). Guangdong and Zhejiang accounted for roughly 22% of total outstanding loans in 2008 and the coastal region leads by a wide margin. The ranking changes slightly when scaling loans by nominal GDP. The coastal region maintains its leading position, but the West moves up. Still, regional differences in financial depth remain as the ratio of loans to GDP ranges from 39% to 75% (see chart 27).

**Chart 26: Loans and deposits concentrated on the coast**



Source: PBoC, DB Research

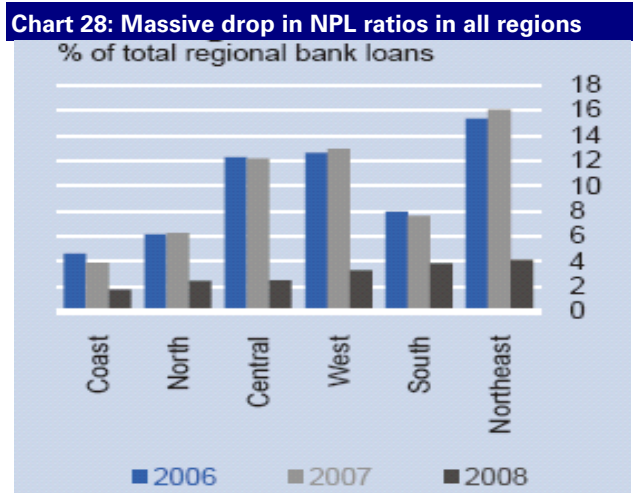
**Chart 27: Regional financial depth**



Source: CBRC, CEIC, DB Research

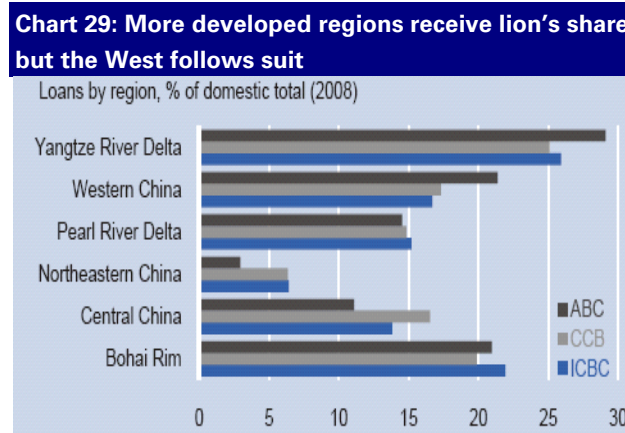
<sup>25</sup> Kang (2003).

<sup>26</sup> See Dyck et al. (2009).



Looking at different types of banks, for both the big state-owned commercial banks (SOCBs) as well as for the smaller joint-stock commercial banks (JSCBs) the economically more advanced regions play the major role. For SOCBs, more than half of their loans went to the Yangtze River Delta, Pearl River Delta, and Bohai Rim<sup>27</sup> regions in 2008. At the same time, however, Western China also receives a substantial share of the loans: In the case of Agricultural Bank of China (ABC) more than 20% of total loans go to this region (see chart 29). Lending especially by ABC is still largely driven by policy priorities rather than commercial strategies. It is therefore no wonder that the western region's shares in total loans are lower for more commercially-oriented state-owned banks like Industrial and Commercial Bank of China (ICBC), Bank of China (BoC) and Bank of Communications (BoCom). For the latter two, loans to Eastern China account for more than 40% of total domestic loans, whereas the West receives only around 8-10%. The same pattern holds – even more pronounced – for the JSCBs.

<sup>27</sup> We use the regional aggregates following the regional grouping in the annual reports of most SOCBs. Yangtze River Delta, Pearl River Delta, and Bohai Rim are very similar to our “Coast” and “North” regional aggregates.

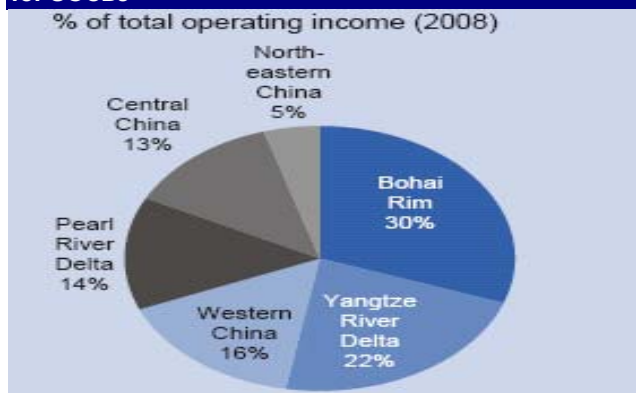


Loan quality, as measured by non-performing loans (NPLs) improved substantially for all provinces in 2008 (see chart 28) which can be attributed to the reform of ABC. With more than 7% of total loans, Sichuan exhibited the highest NPL ratio of all provinces in 2008. NPL ratios are lowest for coastal provinces like Zhejiang, Jiangsu and Fujian, as well as for the cities of Beijing, Shanghai and Chongqing.

The pattern for deposit distribution is similar to the one for loans. Domestic deposits of SOCBs are concentrated in Eastern China, making up around 60% of the total. Western China is also important, accounting for more than 17% of domestic deposits for China Construction Bank (CCB) and around 15% for other SOCBs. As for loans, due to the more limited regional coverage, data for JSCBs' deposits cannot be easily compared. Data from CITIC underline the importance of the three Eastern China regions Pearl River Delta, Yangtze River Delta, and Bohai Rim. Together they account for more than 75% of the bank's total deposits. For Huaxia Bank, Eastern China makes up for only 20% of deposits; the bulk is in North and Northeastern China, and Western China commands a respectable 14% share.

For the SOCBs, operating income and profits are highly concentrated in eastern China. Pearl River Delta, Yangtze Delta and Bohai Rim accounted for around 2/3 of total operating income in 2008 (see chart 30). In the same year, more than 70% of total profits of ICBC and CCB and more than 90% for ABC came from these three regions. However, in the latter's case this is due to a net loss in Northeastern China. Also, all of the SOCBs are headquartered in Beijing which belongs to the Bohai Rim region, and contrary to loans and deposits headquarters show high shares in the total values. Interestingly, the profit/income ratio is lowest for Northeastern China for most SOCBs and JSCBs, suggesting that operating expenses are higher for this region relative to the others.

**Chart 30: Eastern China key income generating region for SOCBs\***

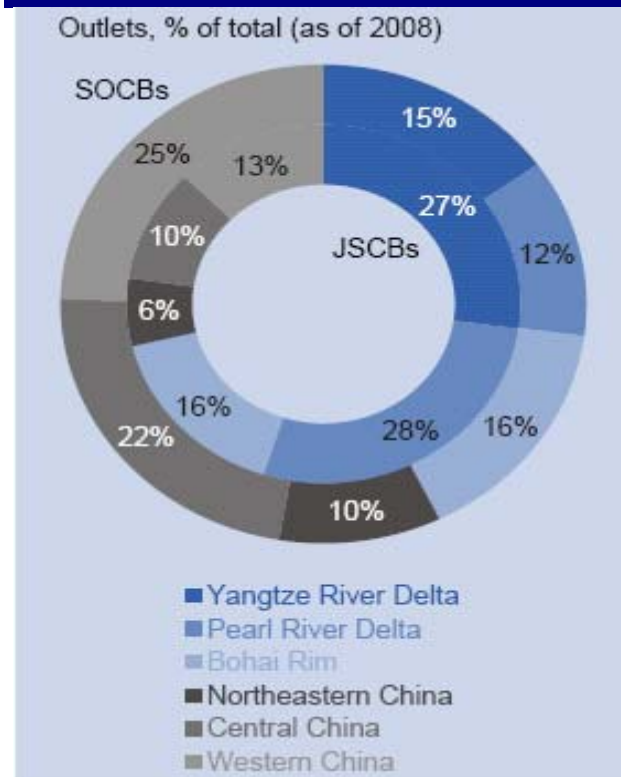


\*ABC, CCB, ICBC; Source: Banks' annual reports, DB Research

**Branch networks: Clear divide between state-owned and joint-stock commercial banks**

Looking at branch networks<sup>28</sup> it becomes clear that the “big four” are really big. In 2008 they had more than 63,000 domestic outlets, covering every province in China. With only around 3,500 outlets this number is much lower for joint-stock commercial banks. The latter have a clear focus on the coastal regions – as more than 2/3 of banking outlets are located in the Yangtze River Delta, Pearl River Delta, and Bohai Rim region – while the branch network of state-owned commercial banks is more balanced and in fact even shows a high percentage for Western China (see chart 31).

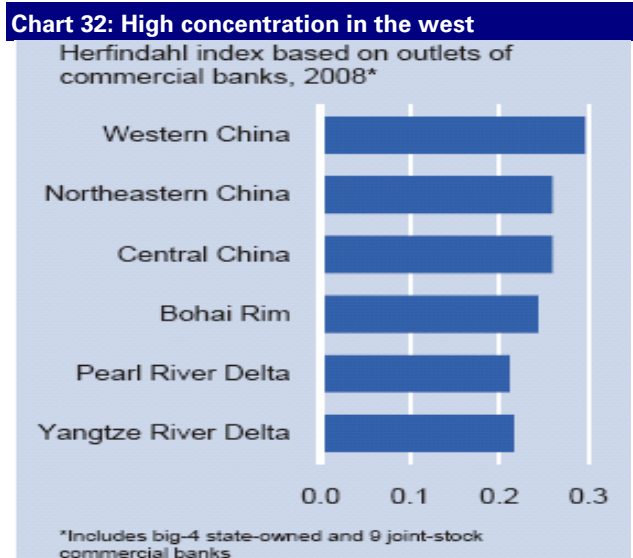
**Chart 31: Joint-stock banks focus on the coast**



Source: Banks' annual reports, DB Research

The dominance of the big SOCBs in Western China becomes clear when looking at the Herfindahl concentration index (see chart 32). In this region, SOCBs account for 97% of total banking outlets, of which ABC owns almost half. The lower concentration in the Yangtze River Delta region can be explained by the much larger number of banks active in the region. In terms of banking outlets per 1 m persons, the Yangtze River and Pearl River Delta are clearly in a leading position for all banks.

<sup>28</sup> Our dataset includes branch network data for four of the five state-owned commercial banks (SOCBs): Agricultural Bank of China (ABC), Bank of China (BoC), China Construction Bank (CCB), and Industrial and Commercial Bank of China (ICBC); and data for nine of the 12 joint-stock commercial banks (JSCBs): China CITIC Bank, China Industrial Bank, China Merchants Bank, China Minsheng Banking Corp., Guangdong Development Bank, Huaxia Bank, Shanghai Pudong Development Bank, Shenzhen Development Bank, Zhesang Bank.



### Foreign banks “discover” China’s hinterland

The number of foreign banks outlets is rising steadily and the introduction of local incorporation, including the permission to take deposits and give loans in RMB has spurred foreign banks’ branch network expansion. Outlets are generally located in the coastal region but foreign banks are also starting to move inwards.

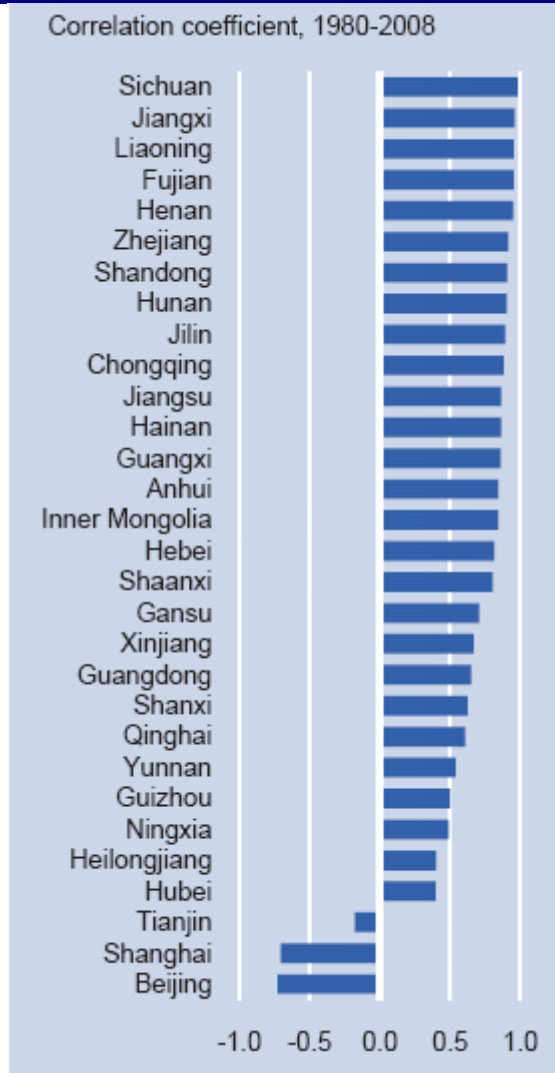
According to HSBC’s website the bank currently operates 89 outlets in mainland China, stretching along the coast from Liaoning province in the North to Guangdong province in the South. There are also outlets in the inland provinces of Hunan, Sichuan, Shaanxi, Henan, and Hubei. In 2008, Bank of East Asia operated 18 branches and 3 representative offices with a total of 69 outlets in mainland China. The regional coverage is concentrated in eastern China, but the bank is also present in Shanxi, Sichuan, and Xinjiang. Standard Chartered operates 52 outlets in mainland China, concentrated in the Bohai region, as well as the Yangtze and Pearl River delta areas. Aside from that there is one branch in Chengdu and Chongqing, respectively. Citibank recently opened its Chongqing branch, bringing the number of retail outlets to 28.<sup>29</sup>

### Inter-provincial capital mobility is still low

While expansion into economically less advanced provinces and regions is high on the agenda for almost all

banks, capital mobility between provinces remains very low. In a perfectly integrated financial market with perfect capital mobility, the correlation between provincial savings and investment should be low. To put a simple example, banks in province X should be able to provide investment funds in this province backed by deposits they take in province Y. Overall, there is relatively strong relationship between provincial savings and investment rates but outliers exist. Shanghai shows a high savings but a comparably low investment rate while Ningxia, Qinghai, and Xinjiang exhibited low savings and high investment rates on average over 1980-2008. For the bulk of Chinese provinces the correlation between savings and investment over time is close to one (see chart 33), suggesting that capital mobility between provinces is very low. Improving inter-provincial capital mobility is among the main goals of CBRC’s banking sector reform agenda, concentrating especially on rural commercial banks.

**Chart 33: Most provinces with high correlation of savings and investment**



<sup>29</sup> These four foreign banks are the largest in terms of staff, see PwC (2009). Information was obtained from respective banks websites.



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## Conclusions

China's central government shows a strong commitment to its regional development strategies which are bearing fruit: High growth is shifting from the coast to inland provinces and low-cost labour supply is declining. This enforces structural change in coastal regions towards higher value-added products while labour-intensive manufacturing is moving to inland provinces. Pinning hopes on China to replace the US consumer are overdone. While private consumption offers some catch-up potential especially in China's non-coastal provinces this will not be enough to offset the loss in demand from the US. Moreover, much of the additional demand for consumer goods will be served by local companies, thus dampening prospects for foreign competitors or exporters from other countries. Still, opportunities exist in inner and coastal China. Some inland provinces may serve as springboard to neighbouring countries like Yunnan province for Vietnam or some western provinces for Central Asia. Moreover, higher value-added production and increasing importance of non-wage competitive factors offers should help to increase importance of the services sector.

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