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Continental Drift: China and the Global Economic Crisis

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Abstract

The economic prosperity associated with the Coastal regions of China has not ‘trickled’ down to the Western and Central regions sufficiently enough to eliminate the disparities in income between the regions. Indeed, the disparities between China’s Coastal regions and its other regions continue to deepen.

In the Mao period, central planners held the mistaken belief that investment in the railways and development of heavy industry in the interior parts of China would bring prosperity. In the reform period and beyond, the focus of economic development in China has been to take advantage of China’s low labour costs. In the earlier part of the reform era the focus of economic reforms centred on the development of Special Economic Zones (SEZ’s). In the second phase of reform policies were centred on the High Technology Development Zones [NHTIDZ’s]. A characteristic feature of both SEZ’s and NHTIDZ’s is that they represent a concentration of infrastructure within a predefined spatial area.

The current global economic crisis has presented China with a unique opportunity to deepen the economic transformation of the coastal regions by shifting the focus of economic development to its interior regions. Indeed, the government’s efforts to stave off the effects of the global crisis on the Chinese economy by attempting to maintain economic growth above 8% by utilising an expansive fiscal stimulus has had the effect of initiating the transformation of the interior Chinese economy. This then represents China’s third stage of economic development since 1949. This paper will examine the factors leading to China’s third stage of economic development which has resulted from the global economic crisis – the Continental drift of the economic development of China.

Key words: Income disparity, Infrastructure, Knowledge Creation, Global Economic Crisis, China
JEL: 018, 053, 01, R11

Introduction

China's post 1949 economic development was characterised by central planning, heavy industry in the style of the Soviet Union; and political episodes such as the Great Leap Forward and the Cultural Revolution. However, a change of leadership in 1977 and the realisation that unless China reformed its economy then the Chinese people would not be exposed to the market forces which have allowed the citizens of the developed world to accumulate wealth, led to the post-1978 economic reforms. The post-1978 economic reforms focused on the development of China's coastal regions under the slogan of 'let have some prosperity first'; and the focused concentration of infrastructure in specifically designated areas which had free market properties. These specially designated areas were the SEZ's of the coastal regions – the 'islands of Capitalism in a sea of central planning'. However, the ensuing prosperity of the Coastal regions meant that the post-1978 economic reforms which were related to education and R&D became more deeply embedded in China's Coastal regions than in its Central and Western regions. This resulted from a lack of connectivity¹ in China's Central and Western provinces; and an increase in the heterogeneity of the population of these provinces. The combination of tougher labour legislation, tougher enforcement of Environmental Protection by the Chinese government ; and the deeper embedding of the fruits of educational and R&D reforms in China's coastal regions has had two implications. Firstly, the higher cost of production in the Coastal regions implies that manufacturing will shift further inland or overseas, spurring the economic development of China's interior regions or shifting economic development opportunities elsewhere.

¹ This refers to a lack of infrastructure in the interior provinces. A concentrated investment in infrastructure as in the SEZ's of the coastal provinces would lead to a higher rate of return than if the infrastructural investment had been more sparsely spread in China's interior regions.



Figure 1: Map of China

Source: <http://www.map-of-china.org/>

Secondly, China’s Coastal regions will be transformed into a pole of economic development through knowledge creation. The catalyst for this divergence in the nature of economic development between China’s regions, Coastal and interior, lies in the roots of the current global economic crisis which saw its roots in the sub-prime lending crisis in the United States. It will be the sub-prime lending crisis which will accentuate the economic development of China’s Western and Central provinces. The global economic crisis has resulted in China engaging in ‘stimulus spending’ in four key areas , wealth redistribution, market integration, sustainable development and institutional development, in order to boost domestic consumption in order to counteract the effects of collapsing global demand for Chinese exports. This paper will seek to evaluate the factors responsible for the movement in China’s economic development from East to West, the so called ‘Continental Drift’.

The Chinese Economy

The neo-classical production function suggests that the production process involves the production of a given level of output for a given level of labour and capital, assuming that technology is freely available to all firms but with no mention of the environment and how the production process may impact on labour. China produces agricultural and manufacturing goods as well as engaging in the

extraction of natural resources. The factor which is common to all three activities is that there may be more than one input or output into the production process which emerges and circulates into the air, water or the soil; and either kills or maims living things. In this way the production process not only impacts on the environment, it also impacts on labour in a number of ways depending on how labour is prevented from being exploited. Modern industries, which have substantial foreign investment, such as the manufacture of automobiles and fuels are very efficient. However, Chinese industries which are locally financed such as coal mining, cement and paper manufacture tend to be inefficient using technologies which pollute.² Another feature of Chinese industry is its structure, with Town and Village Enterprises which have on average six employees contributing to 50% of Chinese exports but contributing a much greater amount to environmental damage through pollution.³ It would be worthwhile at this stage to point out that pollution and China are not new to each other. Both became acquainted after the 1949 revolution through deforestation, the impact of the Great Leap Forward which saw a fourfold increase in the number of factories and further deforestation; as well as the 'Third Line' program during which many factories were located to the interior of China.⁴ In what follows is a discussion of Labour Legislation, Environmental Protection, the Global Financial Crisis and finally Continental Drift.

Labour Legislation

China's post 1978 economic growth was fuelled by the manufacture and export of consumer goods to consumers in developed countries. China in effect became the manufacturing work house of the world. The post-1978 economic boom required workers to work the machines which were to produce goods for export. These workers were to be found in China's vast interior region; and required their migration to the Coastal areas such as Guangdong and Shenzhen where manufacturing firms had become established as a result of the government's reform policies. However, once the workers became employed by firms in the Coastal region, many were simply at their employer's mercy. This was due to the fact that the relationship between worker and employer had no legal status. The increasing demand for workers by firms in China's Coastal regions placed an upward pressure on wages in those regions.

² Liu, J & Diamond, J. (2005), 'China's Environment in a Globalising World: How China and the rest of the world affect each other?', *Nature* Volume 435/30, June 2005.

³ Ibid.

⁴ Ibid.

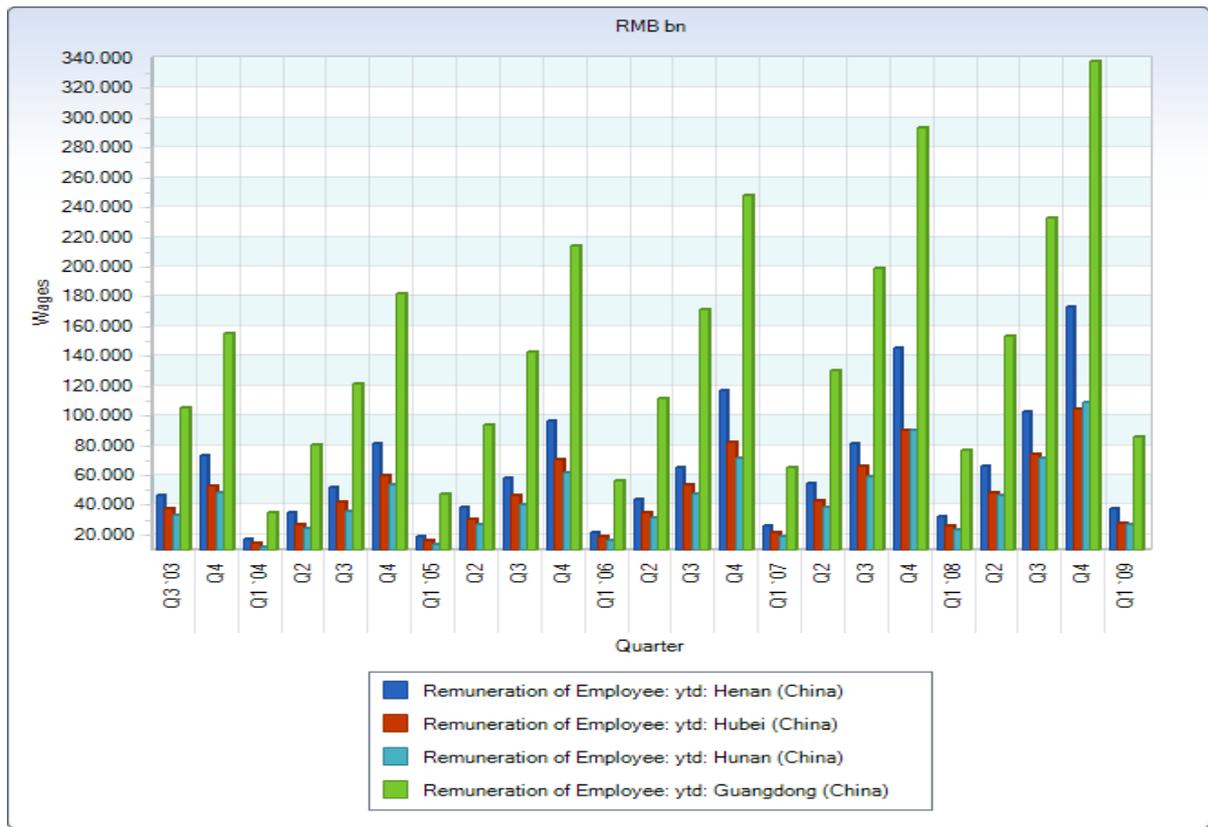


Figure 2: Total Remuneration of Employees by Region

Source: www.ceicdata.com

This phenomenon can be clearly seen in Figure 2 which shows the total remuneration for employees in the provinces of Henan, Hubei, Hunan and Guangdong for successive quarters between 2003 and 2009. The first three provinces are in central China and the last is a coastal province bordering both Shenzhen and Hong Kong. It can be seen that the total remuneration of workers in Guangdong is significantly higher than that in the other three provinces in all quarters from 2003 to 2009.

The lack of transparent contractual obligations between worker and employer meant that employers could do as they liked in order to remain profitable. Indeed, ‘given the seemingly endless labour supply from China’s rural areas, workers who complained about wages or working conditions ran the risk of losing their jobs to others who were more compliant’.⁵ Nevertheless, according to Wang et al (2009) the combined effects of falling birth rates, increased demand for labour and technology has led to the worker having an upper hand over the employer. These factors have also led to foreign firms to seeking safer

⁵ Wang.H et al(2009), ‘China’s New Labour Contract Law:Is China moving towards increased Power for Workers?’ Third World Quarterly, Vol.30, No.3, 2009, pp 485-501.

havens for their centres of manufacture in countries such as Vietnam. There was thus a need for government intervention which materialised with China's new labour contract law, which was passed into legislation in 2008. The purpose behind establishing the rights of workers, through a legally binding contract, was to make them answerable to the law. The main provisions of the new labour contract law are:⁶

- a) The requirement for the employer to enter into an employment contract with the worker within one month of the employer starting employment,
- b) The requirement for non-fixed term contracts if the worker has been employed for at least ten consecutive years,
- c) Enhanced powers for trade unions to enter into collective agreements with employers on behalf of workers to increase safety and hygiene at work for example,
- d) The regulation of part-time work, outsourcing and overtime.

The introduction of these new measures increases the variable costs of employers who operate in China's coastal regions through the costs associated with having to pay higher wages. It is intuitive to believe that these regulations will increase the variable costs of firms is due to the introduction of inflexible mechanisms into the production process. However, although employers have found ways to sidestep the regulations⁷, it is far easier for the firm to move its operations to an inner province in China or move to another country such as Vietnam.

Environmental Protection

Environmental Protection and sustainable development have gained in importance since the launch of economic reforms in 1978 from which time high economic growth has been at the expense of damage to the environment. This is because pollution reduces GDP due to pollution costs. Specifically, these costs relate to the health care costs associated with treating the victims of pollution related illnesses; and the economic losses which arise as a result of damage to the environment and loss of worker productivity. In 2004, pollution costs amounted to 3.05% of China's GDP.⁸ Indeed, 'rapid growth has brought with it substantial environmental damage that in some cases has slowed economic development, boosted domestic dissatisfaction, and contributed to instability within the country'.⁹ The Green GDP project, which would have given a clearer idea of the economic cost of

⁶ Ibid.

⁷ Ibid.

⁸ Liu, X & Gill, B. (2007), 'Assessing China's Response to the Challenges of Environmental Health', Woodrow Wilson International Center for Scholars.

⁹ Schwartz. (2003), 'The impact of State Capacity on Enforcement of Environmental Policies: The Case of China', *Journal of Environment and Development*, Vol.12, No.1, March 2003 50-81.

pollution and its impact on GDP, was stopped in 2007 because of pressure from local officials. It is clear that central government environmental policies are not effectively enforced at the local level due to the local objective of maximising economic growth at the expense of environmental degradation.¹⁰ However, the level of enforcement of central legislation will vary with the level of state capacity, which has been defined as a combination of human capital, reach/responsiveness and fiscal strength.¹¹ Schwartz (2003) has shown that a relationship exists between provincial capacity and the level of provincial compliance with central government legislation regarding environmental protection. It was found that high capacity provinces such as Liaoning, Jiangsu, Heilongjiang and Guangdong have high levels of compliance with environmental legislation while low capacity provinces such as Shandong, Henan, Hunan, Guangxi and Yunnan have low levels of compliance. It can be seen that of the high capacity/high compliance provinces two [Jiangsu and Guangdong] are coastal provinces; and of the low capacity/low compliance provinces at least three are central provinces. These circumstances may lend evidence towards the hypothesis that the coastal provinces having benefited the most from the post-1978 economic reforms i.e. higher levels of human capital and higher fiscal strength. Moreover, Coastal leadership realised the economic and social costs of environmental degradation and began to take the lead role towards enforcing environmental protection legislation. This approach may perhaps reflect the fact that without provincial environmental safeguards foreign investors will be weary of investing money at provincial level, instead favoring provinces which have a high commitment and capacity to enforce central environmental legislation.¹² With regards to Jiangsu, 'central government pressure has resulted in Jiangsu provincial government efforts to enforce environmental policies'.¹³ This in turn has incentivised Environmental Protection Bureau [EPB] officials to take action to protect the environment because they know that they will have the backing of both the provincial, municipal and central governments. However, in the majority of the least developed provinces this may not be the case. In these provinces, provincial and municipal governments may be unwilling to be supportive of the actions of local EPB officials to protect the environment from the impact of economic development. Moreover, Schwartz (2003) also points out that 'the lack of commitment often found among officials opens the door to an important aspect of low commitment contributing to ineffective enforcement – corruption'. Intuitively, this maybe the reason why manufacturing firms in the coastal regions are relocating to sites further inland – they are free to pollute as long as they make profits and bring wealth to provincial coffers.

¹⁰ Ibid.

¹¹ Ibid.

¹² Clarke, S. & Thomas, F. (1997), 'Pollution Control in the PRC: An Investors Guide', London, Environmental Resources Management.

¹³ Ibid.

Environmental issues which face China today are those related to industrial pollution, soil erosion and river damage, water pollution and air pollution. In 1973 the first government institution to focus on environmental protection was formed, transforming in 1988 into the National Environmental Protection Agency; and then in 1998 into the State Environmental Protection Administration [SEPA]. The latter became the Ministry of Environmental Protection in March 2008. The Chinese Ministry of Health, although playing no part in the prevention of diseases caused by pollution 'tend to deal primarily with the consequences of environmental pollution on health, rather than taking a more proactive and preventative position'.¹⁴ In February 2007, the Chinese Ministry of Health (MoH) and the SEPA started an inter-agency mechanism which would hopefully generate better data and provide for education and training. However, the MoH and SEPA share their duties for environmental problems with the Ministry of Construction which deals with waste management issues.

Environmental protection became a national principle in 1983, a policy for sustainable development being instituted in 1994, with the first Environmental Protection regulations enshrined within the 9th Five Year plan in 1996.¹⁵ Further, Environmental Protection regulations were rolled out in the 10th Five Year plan (2001-2005). With regards to enterprises the most significant regulation was that the authorities would collect fees from those enterprises which polluted; and then use those fees for Environmental Protection.¹⁶ These fees represented a type of Environmental Protection tax, in effect forming a market for the externality of pollution. In China's 11th Five Year plan (2006-2010) there were many objectives regarding Environmental Protection. The main objective of the plan regarding Environmental Protection was to reduce energy consumption per unit of GDP by 20% and pollutant discharges by 10% by 2010.¹⁷ There were also other aspects of the plan relevant to Environmental Protection.¹⁸ Firstly, economic restructuring which moulded environmental protection into industrialisation. Secondly, an improvement in all aspects of the enforcement in the laws regarding pollution. Thirdly, the utilisation of technology and innovation to meet the needs of Environmental Protection i.e. clean coal technologies. Fourthly, improving the use of environmental education to educate the public about environmental damage. And, finally an improvement in the cooperation between local and national government in order to make Environmental Protection more effective. An initiative was also started in the latter part of 2007 which would focus solely on research and regulatory responses to environmental health issues which arose from air, water and solid waste

¹⁴ Liu, X & Gill, B. (2007), 'Assessing China's Response to the Challenges of Environmental Health', Woodrow Wilson International Center for Scholars.

¹⁵ Liu, J & Diamond, J. (2005), 'China's Environment in a Globalising World: How China and the rest of the world affect each other?', Nature Volume 435/30, June 2005.

¹⁶ http://english.peopledaily.com.cn/200201/12/eng20020112_88510.shtml

¹⁷ Xinhua News Agency, (2007), <http://www.china.org.cn/english/government/225976.htm>

¹⁸ Ibid.

pollution.¹⁹ As of March 2009, the Chinese government has invited bids to conduct research into various aspects of Environmental Protection to be implemented in the 12th Five Year plan.²⁰

Global Financial Crisis

The roots of the financial crisis which surfaced in July 2007, and which became worldwide after the collapse of Lehman Brothers in September 2008, lay in the sub-prime mortgage market in the United States. Between 2001 to 2003 mortgage lending in the US rose dramatically until 2006.²¹ The main problem was that loans for homes were being made to those who would not be able to continue to make repayments if they lost their jobs or if interest rates increased.

In the period 2004-2006, US\$ 1.4 trillion were securitised. This represented 79.3% of all sub-prime mortgages. According to Lapavistas (2009), 'securitisation involved parcelling mortgages into small amounts, placing them into larger composites, and selling the lots as new securities held by financial institutions across the world'. As interest rates began to rise after 2004, mortgage foreclosures increased. The result of the latter was that the securities became unsaleable. This in turn raised the questions about the solvency of banks which preferred to hoard liquid assets instead of continuing to extend credit to the market. The resulting liquidity shortage can thus be characterised by the movement between the 3 month LIBOR or interbank lending rate and the 3 month Overnight Indexed Swap (OIS) rate, with the former exceeding the latter after August 2007, reaching a peak in Sept/Oct 2008.²² Thus, liquidity dried up with banks unwilling to lend to each other; and consequently to firms and consumers. The impact of this was reduced consumption, increasing unemployment and overall contraction of the economies of developed countries whose consumers had satisfied the demand for Chinese exports. As demand from western consumers dried up, so the export capacity of Chinese firms began to contract with the result that millions of Chinese workers in the Coastal provinces were made unemployed and had to return to their homes in China's interior provinces. While this unemployment of millions of workers may lend itself to rural unrest, it may also support the economic development of China's interior provinces. The mechanism for this economic development rests with the skills of returning workers; and the November 2008 fiscal stimulus which the Chinese government instituted to put the brakes on the impact of the global financial crisis on China's economy.

¹⁹ Liu, X & Gill, B. (2007), 'Assessing China's Response to the Challenges of Environmental Health', Woodrow Wilson International Center for Scholars.

²⁰ <http://www.chinaenvironmentallaw.com/2009/03/04/chinas-environmental-protection-12th-five-year-plan/>

²¹ Lapavistas, C. (2009), 'Financialised Capitalism: Crisis and Financial Expropriation', Research on Money & Finance, Discussion Paper 1, SOAS.

²² Ibid.

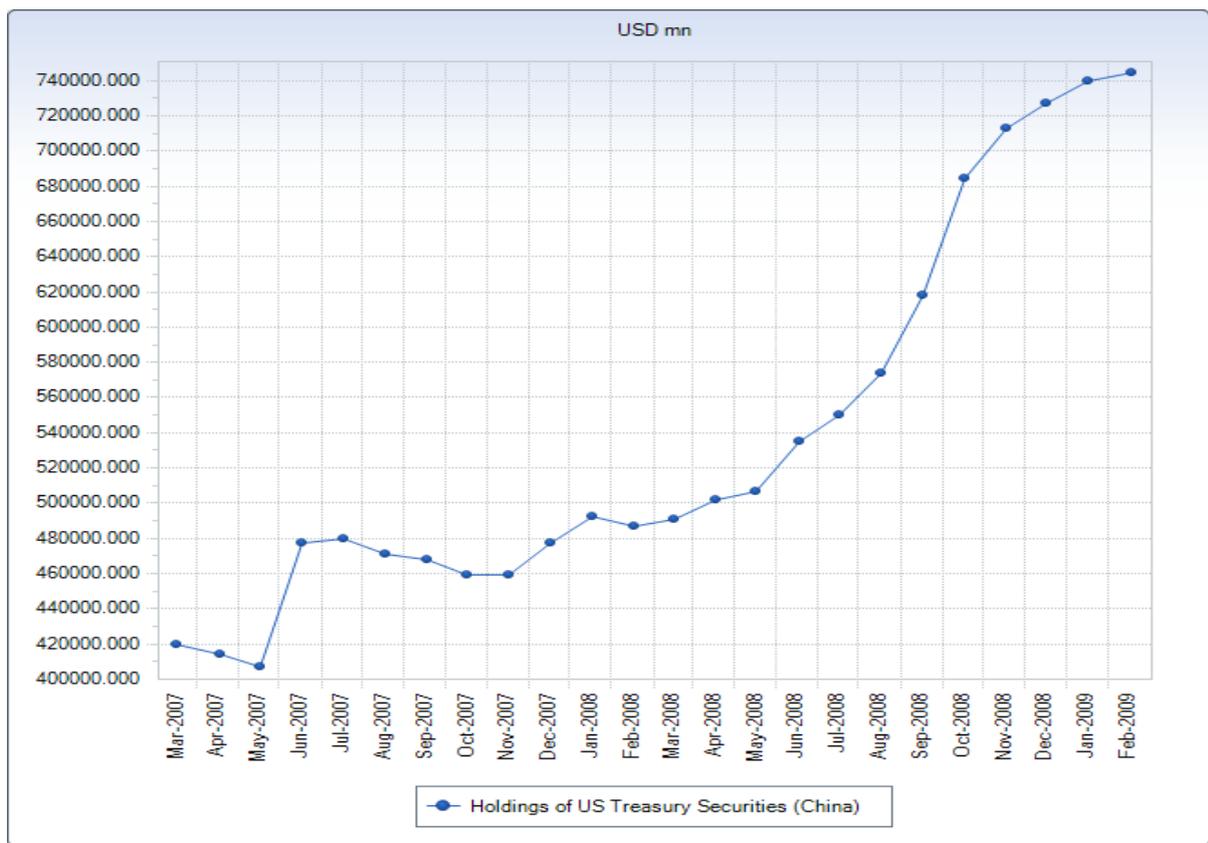


Figure 3: China’s Holdings of US Treasury Securities – May 2007 to February 2009

Source: www.ceicdata.com

An interesting aspect of Chinese overseas investments post 09/09 was that the holdings of US treasury bonds by the Chinese government continued to expand as can be seen from Figure 3. As exports began to collapse, leaving millions of workers without jobs in exporting regions such as Guangdong and Shenzhen, the Chinese government announced a stimulus package which involved increased spending in 10 key areas²³ which included Housing, Rural Infrastructure, Transportation, Health and Education, Environment, Industry, Disaster Rebuilding, Incomes, Taxes and Finance. With regards to economic development, these categories of spend can be more specifically defined. For example, housing, health & education, disaster rebuilding can be defined in terms of the redistribution of wealth. Rural infrastructure and transportation can be defined in terms of the integration of China’s economy, easing the distinction between Coastal, Central, Western, rural and urban economies. The fiscal stimuli addressing the environment can be related to sustainable development while incomes, taxes and finances can be related to institutional development. In short the fiscal stimulus of November 2008 is related to facilitating China’s economic growth through the redistribution of wealth, market integration, sustainable and institutional development.

²³ http://news.xinhuanet.com/english/2008-11/09/content_10332422.htm, downloaded 10th May 2009.

One clearly discernible measure of economic activity in the Chinese economy are changes in the Purchasing Managers Index. The result of stimulus spending by the government has resulted in increased economic activity which can be seen by the changes in the Purchasing Managers Index in Figure 4 below. Both indices for manufacturing and employment began to fall in March 2008, indicating decreased economic activity. However, having hit a trough in November 2008, both indices have been increasing since then, suggesting increased economic activity and thus economic expansion of the Chinese economy. This may perhaps be due to the impact of the November 08 economic stimulus.

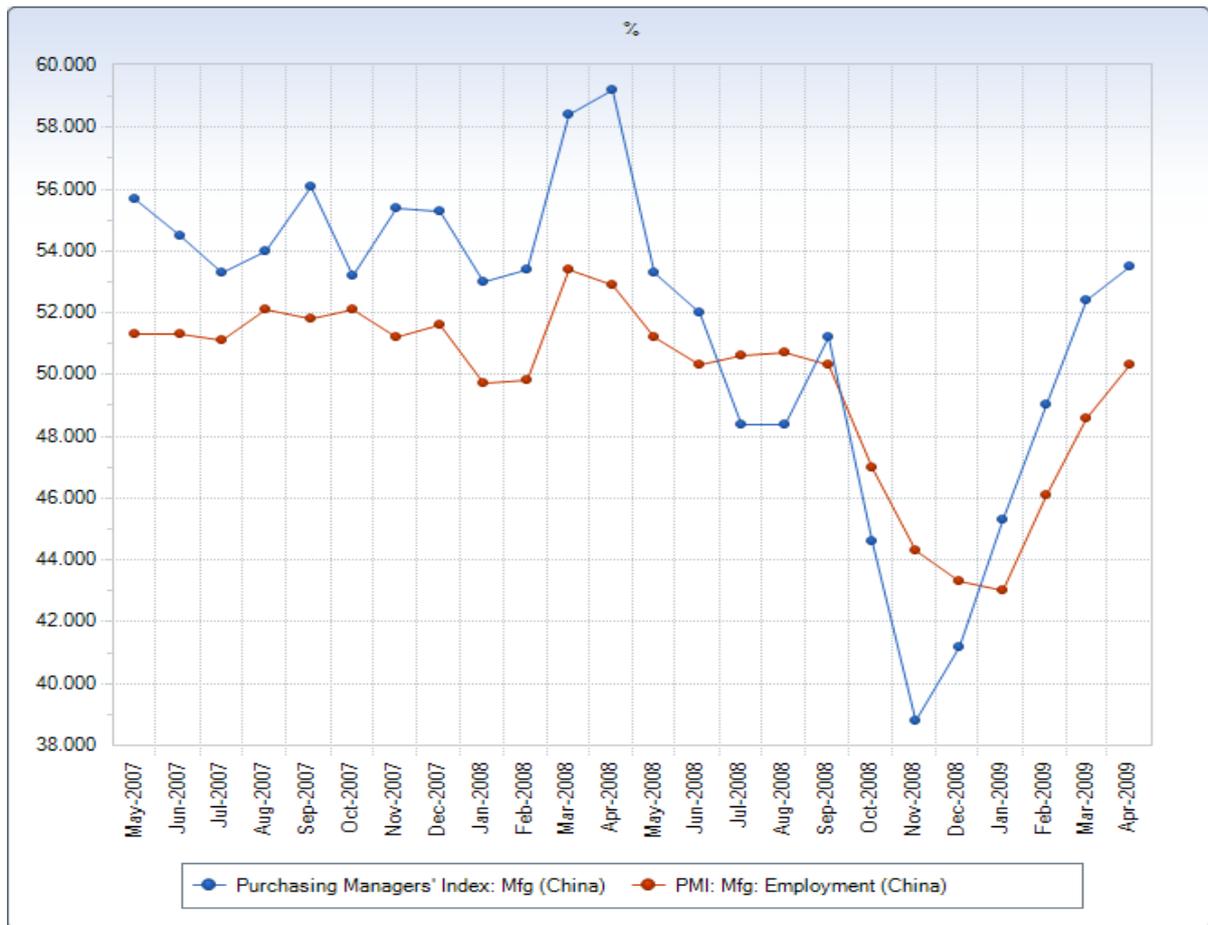


Figure 4: Purchasing Managers Index (China) – Manufacturing and Employment.

Source: www.ceicdata.com

It must be emphasised that despite the problems associated with bad corporate and individual debts which have characterised western banks, Chinese banks themselves are in better shape. This has been due essentially for three reasons. Firstly, the Chinese government took early steps to remove non-performing loans from the books of Chinese banks. Secondly, Chinese banks when making loans to purchase homes asked for larger deposits than did their western counterparts. Finally, Chinese banks did not have a significant exposure to America's sub-primes market. Consequently, Chinese banks have been able and willing to lend to Chinese consumers with the levels of short, medium and long

term loans increasing. This can be seen in Figure 5 below; and is in sharp contrast to the liquidity problems experienced by western banks.



Figure 5: Short, Medium and Long Term Consumer Loans in China

Source: www.ceicdata.com

It can be clearly seen from Figure 5 that, from the 1st quarter of 2006 to the 1st quarter of 2009, the levels of short and medium and long term consumer loans have shown steady increases. The short term loans may be for goods such as cars whereas the medium and long term loans maybe for the purchase of items with a higher capital value such as an apartment. The consumer loan feature of the Chinese economy is indicative of the fact that bank lending to consumers in China is elastic. This feature of the Chinese economy must be clearly indicative of the fact that the demand of the Chinese consumer is not only buoyant but that it is also increasing.

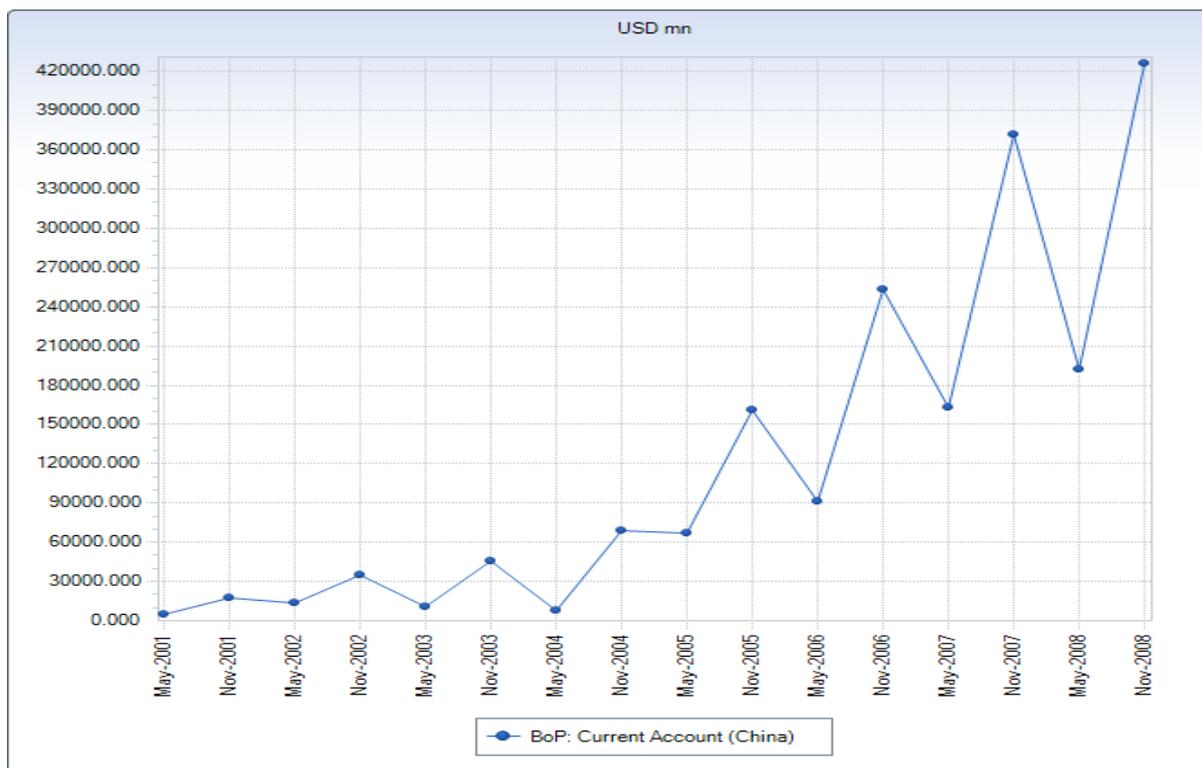


Figure 6: China's Current Account Balance of Payments

Source: www.ceicdata.com

Yet another feature of China's economy which shows its relative health to other economies is the balance of payments on the current account which shows an upward trend. This is shown in Figure 6. In addition to the increase in consumer loans, this can only bode well for China's economic growth which many pundits have suggested will only grow by a maximum of 6% in 2009. However, the evidence presented in this paper on the macroeconomic health of the Chinese economy suggests that Chinese economic growth in 2009 may hit 6% and perhaps also exceed it even without the support of the former levels of exports to overseas markets. Therefore, a combination of the global economic crisis, tougher labor and environmental legislation maybe the catalyst which provides for the increased economic development of China's interior provinces. It may be the case that the economic prosperity due to the post-1978 economic reforms which has locked itself into China's coastal regions for the past 30 years may finally have started to move westward, the continental drift of China's economic development.

Continental Drift

A number of regional development theories exist which portray how economic development spreads from one region of a country to another. However, while these theories are specific generalisations none give a clear idea of the specific mechanisms for the continental drift of economic development. It is the contention of this paper that the combination of enhanced labour legislation, environmental

protection in the coastal regions; and the global economic crisis which are driving the drift in economic development from China's coastal regions to its interior. The specific mechanisms are increased labour costs, tougher enforcement of environmental protection by provincial governments in the coastal provinces; and a government fiscal stimulus which focuses on the redistribution of wealth, market integration, sustainable development and institutional development.

China's post 1978 economic development was regionally based with the coastal provinces and their SEZ's and open coastal cities playing a leading role. The SEZ's would facilitate economic growth through the manufacture of exports. Indeed, regional economics depends largely on locational theory and international trade theory²⁴. It has often been associated with the regional policy pursued by a sovereign state in pursuit of national economic growth. Indeed a specific regional policy has constituted the development strategy of many developing countries. In China, regional policy in the post-1978 reform years was one of urban bias and the development of the Coastal regions. It was anticipated that the prosperity from the Coastal regions would trickle down to the Chinese hinterland. In terms of location, this policy meant that one region has been discriminated against in terms of the allocation of resources and power.²⁵ The Coastal regions of China received a very big developmental impulse as government policy meant that the Coastal regions received a high proportion of FDI; and many of the initial economic reforms were focused on opening up the Coastal regions to international markets. In addition, enterprises in the Coastal regions were able to have ease of access to world markets for manufactured goods and incentives to import capital goods. The costs associated with moving goods, people and information have been identified as a key variable in regional economics.²⁶ Some of the key theorists in regional development theory include Myrdal and Friedmann. Myrdal (1957) argues that once a particular region experiences development then this development will have a momentum of its own drawing in resources, labour and capital from poorer surrounding areas. Indeed the greater the mobility of labour, capital, resources and trade, then the greater will be what Myrdal (1957) calls the 'backwash' effects. These backwash effects relate to periphery regions losing labour through migration to richer regions and capital due to greater investment returns in richer regions. These backwash effects are akin to negative externalities i.e. pollution. In the case of China, since economic reform was started in 1979, there has been a net migration of labour from the rural sector in the hinterland regions to the booming regions in the coast. Furthermore, Myrdal (1957) defines the positive effects of development as spread effects. For example, the building of an army base in a town may result in more infrastructures being built. Myrdal (1957) argues that spread effects

²⁴ Gore, C. (1984). 'Regions in Question: Space, Development Theory and Regional Policy', Methuen, London.

²⁵ Ibid.

²⁶ Ibid.

are greater in developed countries than in developing countries. On the other hand, Friedmann (1966) argues that once a centre-periphery relationship is established market forces dictate that there will be a divergence in the economic growth rate of centre and periphery. The centre will grow much faster than the periphery leading to an income disparity between the two. In the domestic Chinese economy if one considers the centre to be the Coastal regions of China and the periphery to be the Central and Western regions, then in terms of income disparities between centre and periphery, reality is what theory dictates. Furthermore, in the context of the global economy, the Coastal region of China can be considered to be the periphery as the international market is the centre.

It is due to the weakness of market forces to bring about a convergence in the incomes of centre and periphery that, Friedmann (1966) argues, there is a role for government economic policy to ensure such convergence takes place. In an attempt to balance the growth of the Western and Central regions with that of the Coastal region, the 2000 – 2005 [10th] five year plan focuses on investing in infrastructure in the Western regions of China. Thus by attempting to reduce and eliminate income disparities between regions, government regional policy attempts to reconfigure the spatial distribution of factors and units of production so that there is an equal distribution of productive assets in the spatial economy. In essence, the distinction between periphery and centre disappears and fragmented markets become fully integrated. Furthermore, the combination of tougher labour and environmental legislation in association with the government's fiscal stimulus [09/08 and the Western Development plan] is also assisting in blurring the distinction between the core Coastal region and the periphery interior and Western regions. These mechanisms of homogeneous economic growth form an effective regional policy. An effective regional policy has two characteristics.²⁷ The first is that interconnected urban regions replace the periphery. The second characteristic of an effective regional policy is that the fragmented markets in the space economy are integrated into one market. This integration is best brought about through a programme of investment in infrastructure. Due to the building of roads, bridges and railways, fragmented markets will be connected leading to the transmission of information, market signals, resources and goods from one market to another. Nevertheless, Gore (1984) argues that spatial equilibrium may not be Pareto optimal for two reasons. The first is that an activity may generate externalities [pollution and the exploitation of labour] which may not be measurable in terms of cost or price; and is essentially characterised by market failure. The free market mechanism cannot effectively allocate resources in the presence of externalities. There is thus a case for government intervention with the implementation of Environmental Protection laws and enhanced labour legislation. The second reason that spatial equilibrium may not be Pareto optimal is that competition will not be perfect because of the existence of transport costs between locations. Thus, in the presence of market imperfections such as externalities and transports costs

²⁷ Ibid.

between locations the implication is that in spatial terms general equilibrium cannot be Pareto optimal. If perfect competition cannot be possible across spatial points then general equilibrium theory and the spatial economy are incompatible.²⁸ The locational interdependence of firms is further exhibited by what are called agglomeration economies. This is a type of externality which causes other firms to save costs in a market due to the presence of increasing returns to scale to one firm in the market.

Chinese economic development has been uneven because the Coastal regions have received the biggest stimulus for economic growth through the implementation of favourable government preferential economic policies. This has resulted in a spatial pattern of productive units, which is characterised by concentration of those units in the Coastal regions. This may not be the spatial pattern that optimally maximises the national growth rate or the spatial pattern which facilitates an equal distribution of income through society. The Western Development policy favours investment in the Western regions at the expense of investment in the Coastal regions. The type of investment the government is promoting in the Western regions is investment in 'core infrastructure', i.e. the building of roads, bridges and railways. Where interregional income inequity is addressed by dispersing industry, as was done under the 'Third Front' program, then in the short run this can be seen as a trade off between higher national growth rate and greater interregional income equity.²⁹ In the long run, structural transformation in the spatial economy, i.e. greater investment in core infrastructure, will bring about sustained economic growth and greater interregional income equality. Hirschmann (1958) sees disparities in regional income as the inevitable consequence of economic growth. Indeed, government policies designed to address imbalances in spatial development patterns within a country by promoting growth in poorer regions may lead to greater disparities between regions.³⁰

The Coastal regions of China have experienced rapid economic growth over the last 25 years. Accompanying this rapid economic growth has been rapid urbanisation of China's Coastal cities and towns. This rapid urbanisation has brought with it the migration of millions of rural people to the urban centres, looking for work and a share of the prosperity. However, the paradox is that the Hukou system acts to prevent the movement of peoples from one region of the country to another. Nevertheless, this system has not had the supposed effect on the movement of labour in China because of the actual movement of labour from the hinterland to the Coastal regions. The effects of

²⁸ Richardson, H. W. (1969). 'Regional Economics: Location Theory, Urban Structure and Regional Change'. New York, Praeger.

²⁹ Ibid.

³⁰ Barkin, D. (1972). 'A Case Study of the Beneficiaries of Regional Development'. *International Social Development Review* 4: 84-94.

rapid urbanisation of the Coastal regions has been an increase in demand for housing, infrastructure capacity, social services and increased crime. However, due to existing infrastructure such as ports, railways and roads firms will be able to gain benefits from investments they themselves have not made. These are termed agglomeration economies and the formation of these economies is fundamental to Krugman (1991) and his 'New Geographical Economics'.

Friedmann (1972) developed a general theory of polarized development. Central to Friedmann's theory is that impulses of innovation are transmitted from the core regions to the periphery regions; and that the domination of the periphery regions by the core causes a conflict between those in positions of authority in the core and the periphery. Thus, Friedmann (1972) adds a political dimension to regional development analysis. The process occurs in three stages. Firstly, the core region imposes on the periphery region, what Gore (1984) terms a state of 'organised dependency'. Secondly, the core region reinforces the state of 'organised dependency' through six feedback effects of core region growth. These effects include the dominance, information, psychological, modernisation, linkage and production effects. Thirdly, core region growth will result in the flow of information to the periphery because of the introduction of core region innovations into the dominated periphery. This results in unforeseen side effects of core region dominance.³¹ If the periphery region successfully challenges the independence of the dominating core region, then the probability of information exchange and the probability of innovation will increase over the whole spatial economy. This will induce Myrdal spread effects, a weakening of the core order political hierarchy, establishment of new core regions and gradual integration of the dominated periphery regions with core regions. Therefore, fragmented markets will become integrated in the spatial economy to a single homogenous market. However, Friedmann's theory is deficient as it ignores the role of infrastructure. Without infrastructure the third stage is muted if not negated.

The New Economic Geography seeks to explain the formation of economic agglomerations in the spatial economy under a general equilibrium framework. At one end of the spectrum lies the global core-periphery structure, represented, in the main by the three trading blocks of Europe, North America and East Asia. At the other edge of the spectrum are the regional income disparities that occur within the spatial economy of the nation state, as in the case of China where regional income disparities occur between the Western, Central and Coastal regions. Furthermore, regional and urban agglomerations are reflected by existence of a number of cities in which nest various industries. Within the cities, industrial activities tend to agglomerate within certain areas and service industries within their own areas.

³¹ Ibid.

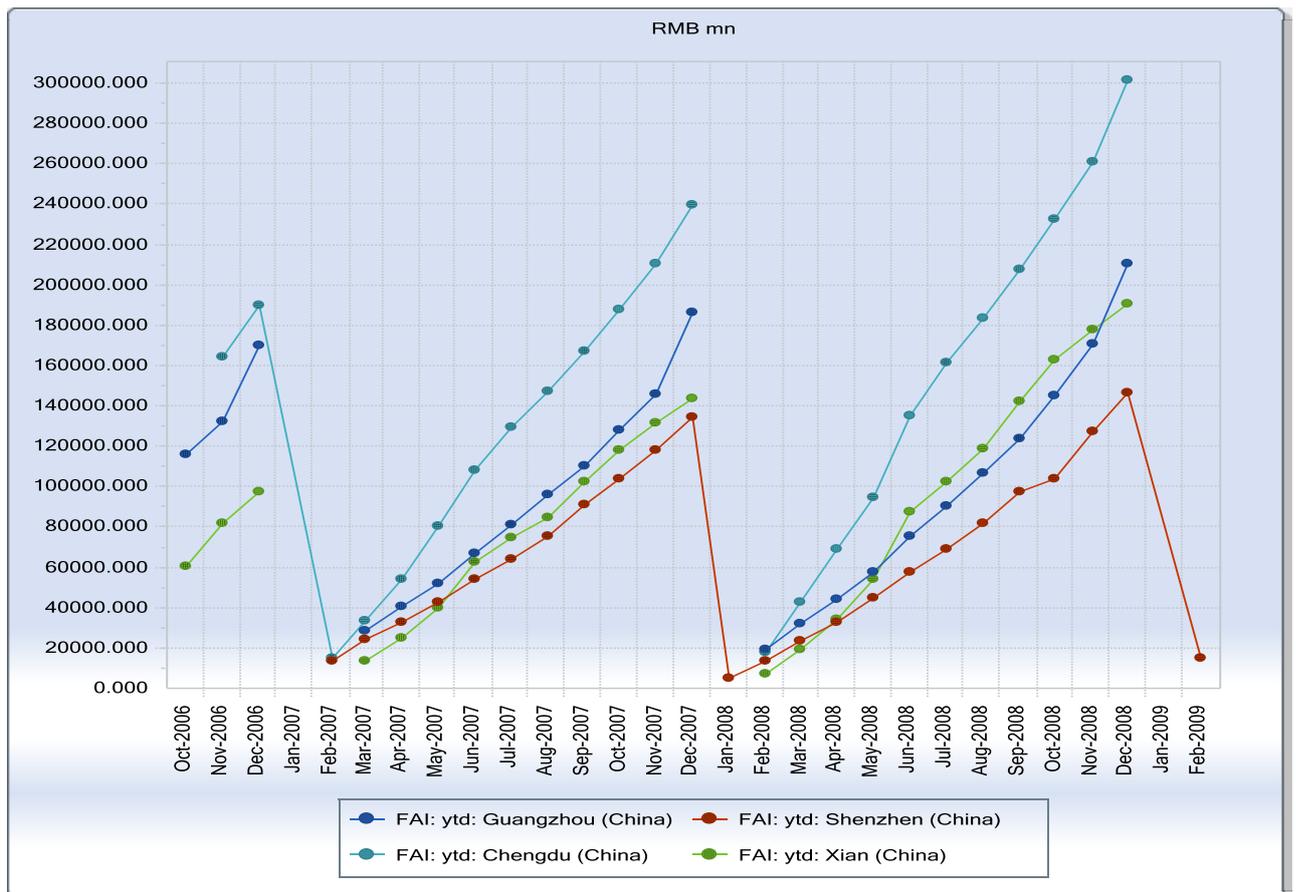


Figure 7: Fixed Asset investment: Guangzhou, Shenzhen, Chengdu and Xian.

Source: www.ceicdata.com

The distribution of economic activity in the city spatial economy is highly dependent on the local geographical topography, but the distribution of economic activity is not difficult to explain within competitive economic theory.³² However, the same framework cannot be used to explain why the dispersion of industries occurs. In this regard the mechanisms of dispersion of industry from China's coastal regions to the interior elucidated in this paper provides an insight on the specific factors which may cause industry to disperse in the course of economic development; and thus provide for balanced regional development. The picture of economic activity within China can be assessed by evaluating monthly data for Fixed Asset Investment [FAI], Property Price [PP], Gross Output Value of Construction [GOVC] and provincial Income per Capita [IC]. In Figure 7 above, the monthly FAI for Guangzhou, Shenzhen, Chengdu and Xian can be seen. Chengdu has the largest FAI from February 2008. It must be noted that the Sichuan Earthquake did not strike until August 2008. From May 08 to November 08; FAI in Xian is greater than that in Guangzhou. The FAI in Shenzhen has shown a lower trajectory of growth since January 2008. This is the picture of economic activity presented by

³²Fujita, M. and Mori, T (2005). 'Frontiers of the New Economic Geography'. Institute of Developing Economies Discussion Paper (27).

FAI data, after the implementation of environmental protection legislation and employment legislation but before the fiscal stimulus of November 2008. It may then be possible to infer that the first two mechanisms of the dispersion of economic activity were already having a significant impact on continental drift even before the government's four pillars of economic stimulus [wealth redistribution, market integration, sustainable development and institutional development] became active. Monthly data relating to Provincial Income per Capita [IC] is also a good indicator of the strength of economic activity. This is reflected in Figure 8 which shows the Income per Capita from the first quarter of 2007 to the fourth quarter of 2008 for Changsha, Hefei, Lanzhou, Xining, Yinchuan and Urumqi. The IC for Changsha and Hefei, both in Central China, are higher in all quarters compared to the other provinces of which three are in Western China. However, it is not possible to discern whether the higher IC's of the Central provinces can be explained by a 'trickle-down' effect of prosperity from the Coastal provinces or tougher environmental protection in the Coastal provinces forcing firms to move further inland. The impact of tougher labour legislation would not have impacted on firms until after January 2008; and the November 2008 fiscal stimulus had not even been proposed.

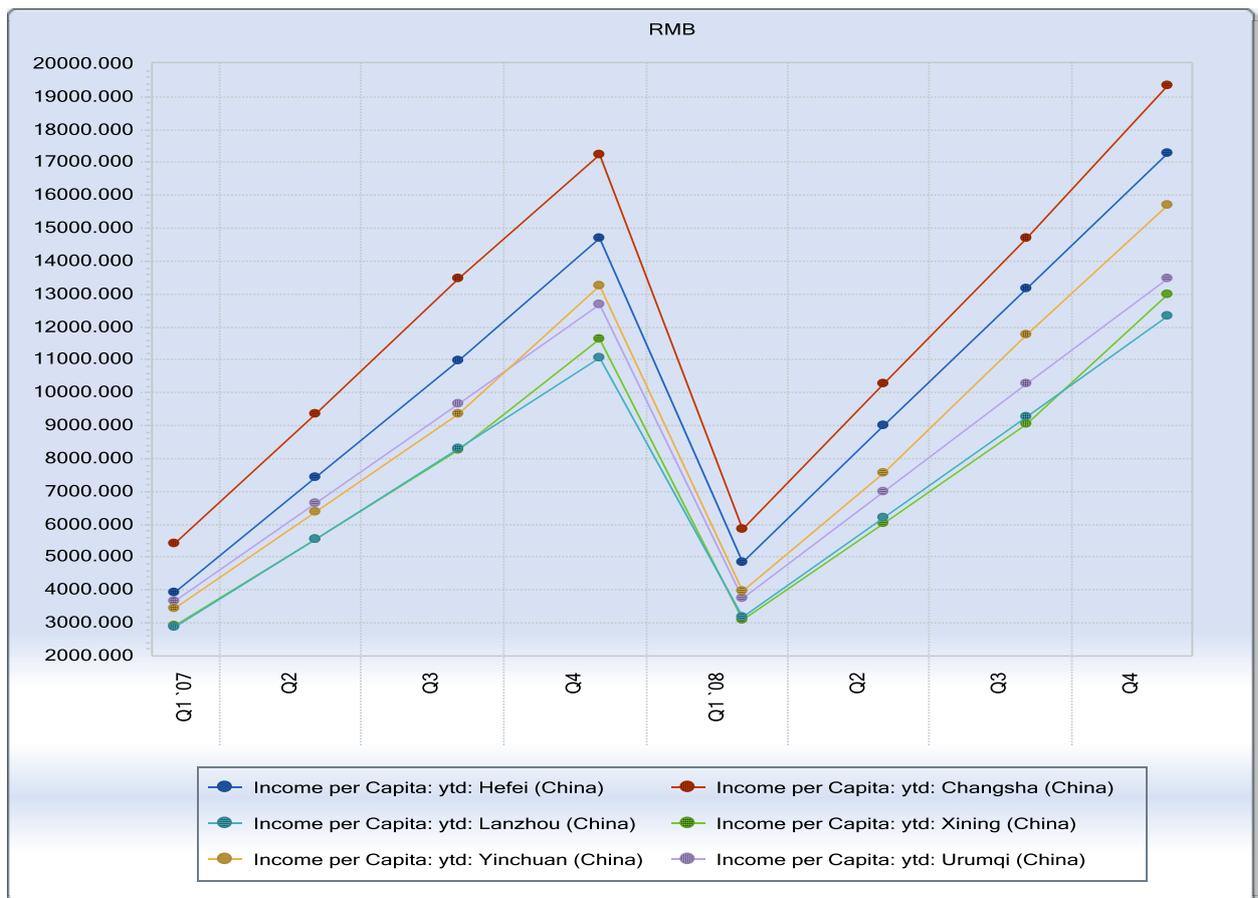


Figure 8: Income per Capita – Hefei, Changsha, Lanzhou, Yinchuan, Xining and Urumqi.

Source: www.ceicdata.com

Changes in Property Prices reflect changes in the demand for property;and is in itself a sign of the stability of provincial economic activity.Figure 9,below, shows the montly property prices for the whole of China and the provincial cities of Hefei, Nanchang, Xian, Urumqi,Changsha and Xining. The data for the whole of China suggests that Property Prices for the whole of China, whilst showing an upward trend, have been relatively stable since April 2007. Moreover,monthly Property Price data for Hefei shows and upward trend, while the data for Changsha has shown an upward trend since April 2008. This may reflect a movement of economic activity from other parts of China, perhaps the coastal regions where firms and people have had to shift from one region to another due perhaps due to tougher environmental protection as this was prevalent before tougher labour legislation and the governments fiscal stimulus.

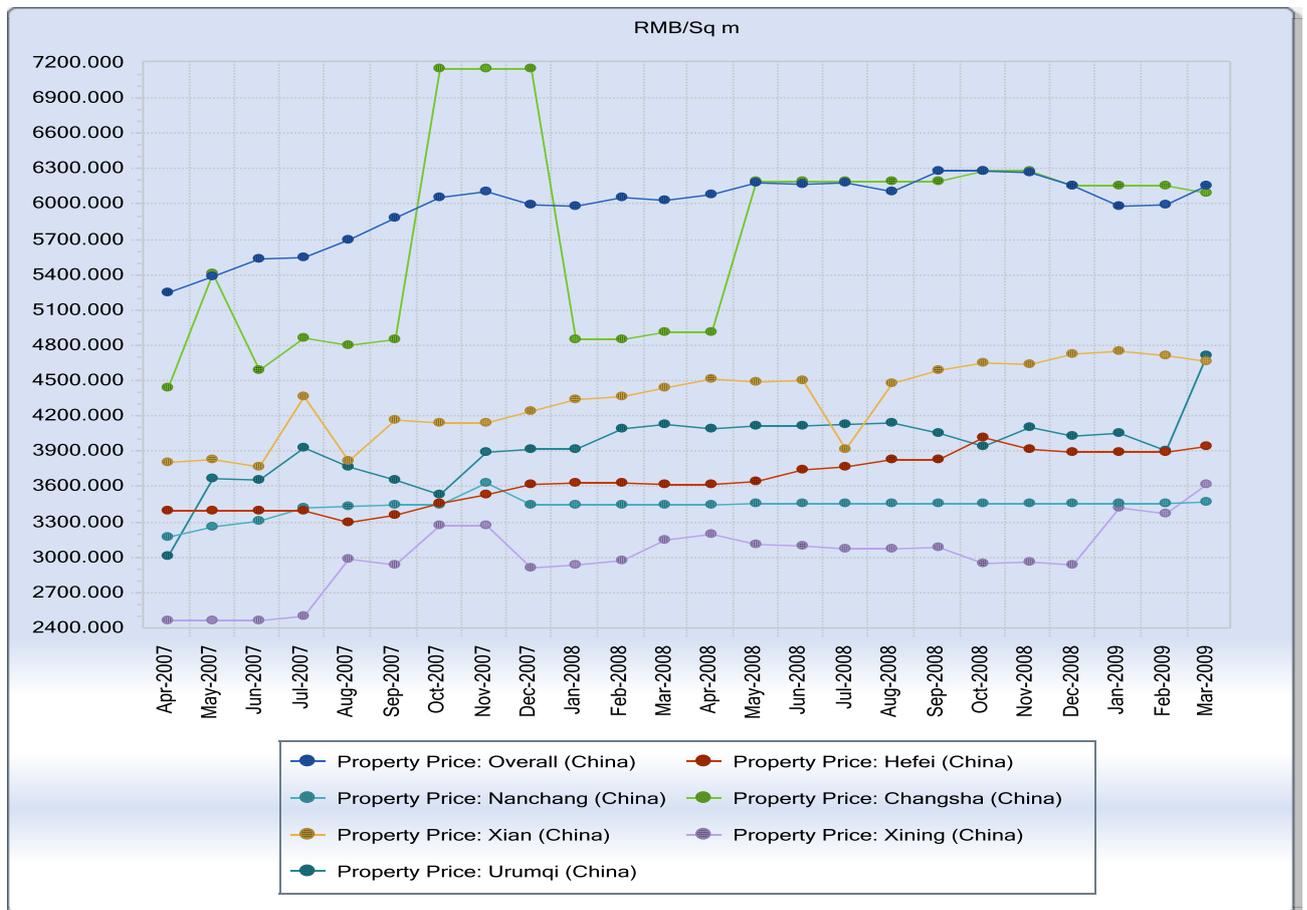


Figure 9: Property Prices: China, Hefei, Nanchang, Xian, Urumqi, Hefei, Changsha and Xining

Source: www.ceicdata.com

As of the 1st August 2008, China’s Gross Output Value of Construction was up in the first half of 2008 by 24.4% compared to the first half of 2007.³³At the provincial level Figure 10, below, shows quarterly data for the Gross Output Value of Construction [GOVC]for Jiangsu, Anhui, Henan, Hubei, Hunan and Guangdong from the last quarter of 2005 to the last quarter of 2008.The GOVC includes

³³ <http://www.chinadaily.com.cn/bizchina/2008-08/01/content-6897589.htm>

the value of projects related to the installation of equipment and the value of construction of buildings as well as the value of repair to buildings.³⁴ It can be clearly seen from Figure 10 that the coastal provinces such as Guangdong and Jiangsu have the largest GOVC in every quarter. Nevertheless, the central provinces such as Henan, Hubei and Hunan follow with the next largest set of GOVC's. This observation appears to be at odds with the notion that tougher environmental and labour legislation are sending firms further inland. However, this paradox maybe solved by arguing that perhaps it is due to tougher environmental protection enforcement that firms and MNC's are having to upgrade their facilities or build environmentally compliant factories from scratch. Due to a lack of data it is not possible to discern whether this alternate argument is water tight in favoring the continental drift of economic development.



Figure 10: Gross Output Value of Construction: Jiangsu, Anhui, Henan, Hubei, Hunan and Guangdong.

Source: www.ceicdata.com

³⁴ Ibid.

Conclusion

This paper has put forward the notion of the continental drift of economic development from China's Coastal regions to its interior due to tougher environmental protection enforcement in China's Coastal provinces, increased costs of employment to firms in the Coastal regions due to enhanced labour legislation; and the economic stimulus proposed by the Chinese government in November 2008. Due to the fact that exports to America and Europe from China fell due to the global economic crisis, the only way in which China's economy can grow at growth rates at or above 6% is to light the fires of domestic consumption. This can happen by two mechanisms. Firstly, tougher enforcement of Environmental Protection legislation in the Coastal provinces; and secondly the increased costs associated with improved legal protection of workers as made firms either move away from China's Coastal provinces to the interior or to countries such as Vietnam. If firms move into China then this will surely act as a boost to the domestic economy by creating jobs in places which have not seen the kind of prosperity seen by the Coastal provinces. Moreover, the fiscal boost of November 2008 will also act to boost domestic Chinese consumption through four pillars – wealth redistribution, the effects of market integration, sustainable development and institutional development.

It may be argued that the data analysed in this paper may not be as robust as to support the notion of continental drift. However, there is sufficient evidence that economic activity in China is robust; and perhaps that tougher enforcement of environmental protection in China's coastal provinces may be having a bigger impact on continental drift than tougher labour legislation or the fiscal stimulus of November 2008 whose impact may be evidenced by the movements of the Purchasing Managers Index in Figure 4. Nevertheless, it is suggested that the use of surveys to determine the impact of the tougher enforcement of Environmental Protection legislation; and enhanced labour legislation on firms and their intentions will provide robust evidence in favour of continental drift.

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