The Micro-Analysis of Regional Economy in China

A Perspective of Firm Relocation

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by Wei Houkai, Wang Yeqiang and Bai Mei

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A Perspective of Firm Relocation

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Preface

(I)

Since the reform and opening-up, the Chinese economy has grown at a rapid and continuous pace. From 1979 to 2011, China's Gross Domestic Product (GDP) grew by 9.9% annually. Even when faced with the impact of the global financial crisis and the European debt crisis, the growth rate of China's GDP between 2009 and 2011 was as high as 9.6%. If we calculate according to the speed of growth of each province, autonomous region, and municipality, the average growth rate of Gross Regional Product (GRP) of each region has reached 12.2% among the three years. With the rapid growth of economy, the living standard of the people has significantly improved. The comprehensive national power and competitiveness have been strengthened incessantly. The national economic aggregate rose from the tenth place globally to the second place in 2010. Impoverished population numbers were substantially reduced, decreasing from 0.25 billion at the early stage of the reform and opening-up to 26.88 million¹ in 2010. The academia at home and abroad term the stunning accomplishment and rapid growth of Chinese economy since the reform and opening-up alternatively as "Chinese miracle", "Chinese model", and "Chinese experience".

Obviously, the fast growth of the Chinese economy is supported by regional economic prosperity. We can safely state that, without the common prosperity of each region's economy, the unrelenting rapid growth of the national economy cannot be sustained. Since the reform and opening-up, although the regional economic growth rate differs from region to region, large-scale growth on the whole has been achieved, and every regional economy has the tendency to grow rapidly. Based on our measurement, from 1980 to 2009, the annual average growth rate of the 31 provinces, autonomous regions, and municipalities has reached 11.1%, among which the eastern region's growth rate stands at 12.1%, the northeastern region

¹Measured according to the 1274 Yuan poverty standard in 2010.

9.6%, the central region 10.5%, and the western region 10.2%. This illustrates that since the reform and opening-up, no matter whether eastern region, the central and western region, or the northeastern region, the economic growth rate is fairly rapid, presenting the feature of typical high growth. The rapid growth rate of more than 9% for the past 30 years in each region is unprecedented, which is very rare from an international perspective.

It is predictable that, in the coming decade or two, the Chinese regional economy will maintain this fast growth. First, influenced by the lack of industrial land and increase of factor price and environmental protection standards, although the eastern region slacks off its economic growth, with the acceleration of the economic transition and upgrade, it will soon enter a new round of sustainable fast growth. Second, the central and western region's resources are rich, the cost of the factor price is low, the supply of labor is adequate, and the space and potential for future development is ample; thus, in recent years, this region shows a strong growth. The GRP growth rate of central and western regions, respectively, reached up to 12.7% and 13.7% from 2008 to 2011, which were much high than that of the eastern region (11.2%) and the entire country (12.1%). Third, with the powerful support of the national policy, the Northeast Industrial Base was pulled out of "relative degradation" since the reform and opening-up. The annual average GRP growth rate reached 13.4% during 2006–2011 and 13.1% during 2008–2011. It's quite hopeful to realize the goal of overall revitalization. Fourth, in the past, the rapid economic growth of the Chinese was supported mainly by the few regions like Yangtze River Delta (YRD) region and the Pearl River Delta (PRD) region. In recent years, with the promotion of the urbanization and industrialization, a climax of boosting urban agglomeration development has swept the whole nation. The Beijing–Tianjin–Hebei metropolitan area, Shandong peninsula urban agglomeration, Liaoning coastal economic belt, Zhongyuan urban agglomeration, Wanjiajiang urban belt, Changsha–Zhuzhou–Xiangtan "3 + 5" urban agglomeration, Chengdu–Chongqing economic region, Guanzhong–Tianshui economic region, Beibu Gulf economic region, etc., have the potential to become the pillars of rapid growth of Chinese economy as the new dominant regions, thereby forming a diversified competitive pattern of "rise of various regions".

(II)

However, we should understand that the fast growth of regional economy since the reform and opening-up has been realized at the expense of high consumption, high emission, in coordination, and unplanned exploitation, of which high consumption comes at the top. In 2010, China's GDP accounted for 9.5% of the world's total, yet the consumption of cements took up 56.2% of the global quantity,² the primary energy consumption took up 20.3%, among which the coal occupied 48.2%,³ the apparent consumption of the steel took up 44.9%.⁴ According to the WDI database of the World Bank, in 2007, China's energy consumption per ten thousand USD of GDP reached 7.96 ton oil equivalent, which is 2.71 times the average level of the world, and 4.28 times of the high-income countries.⁵ Especially in the central and western region and northeastern region, influenced by the industrial structure and the technologic and management level, the feature of high consumption of resources and energy is more manifest. In 2009, energy consumption per 10,000 Yuan of GDP in the western region takes up 1.57 ton coal equivalent, which is 41.4% higher than the national average and 80.5% higher than the eastern region. Even in the developed eastern region, the per unit GDP's consumption strength of resources and energy is a far cry from the developed countries.

What comes second is the high emission. According to the data issued by the International Energy Agency (IEA), the emission of carbon dioxide of China in 2009 has taken up 23.6% of the world's total. Although the per capita carbon dioxide emission of China equals that of the world average and it is equivalent to 52.2% of the OECD countries, its emission strength per unit GDP is 3.19 times that of the world average and 5.68 times that of the OECD countries.⁶ Per unit GDP's emission strength of sulfur dioxide is far higher than the level of the developed countries. In 2006, China's sulfur dioxide emission per 10,000 Yuan of GDP is 0.012015 tons, which

²International Cement Review (ICR) (2011). *Global Cement Report*, (10).

³BP Company (2011). *BP World Energy Statistics 2011*, June.

⁴World Steel Association (WSA) (2011). *World Steel Short Range Outlook*, WSA.

⁵National Bureau of Statistics of China (NBSC) (2011). *International Statistical Yearbook*, China: China Statistics Press.

⁶International Energy Agency, *Key World Energy Statistics 2011*, OECD/IEA, 2011.

is 59.6 times that of the US and 19.8 times that of Japan.⁷ If judged from region to region, although 50% of the total quantity of industrial waste air and waste water is concentrated in the eastern region, the “three wastes” emission per unit industrial value-added in the central and western region is far higher than that of the eastern region, presenting a typical high emission feature. In 2007, the waste water, waste air, and waste solid’s emission per 100 million Yuan industrial value-added in the western region is 1.79 times, 2.46 times, and 48 times that of the eastern region, respectively. Thus, we can conclude that the task of emission reduction of the central and western region is arduous.

The third is the in coordination, mainly shown in the following aspects: (1) Pursuing the GDP growth blindly and ignoring the structural upgrade, technologic innovation, social development, and construction of ecological environment, which gives rise to the in coordination of the economic and social development and the construction of ecological environment; (2) The in coordination of regional development: Since the reform and opening-up, the developmental difference between the eastern region and the central and western region is widening and has been improved in recent years; (3) The in coordination of urban and rural development: Since the mid 1980s, apart from few years, the income difference between urban and rural residents is always widening. In 2011, the ratio of the per capita disposable income of the urban households to per capita net income of rural households reaches 3.13:1, much higher than the 2.48:1 in 1997 and 1.86:1 in 1985; (4) The in coordination between the population and industry distribution: In recent years, while industries have concentrated in some cities and metropolitan areas, the population does not concentrate accordingly, which has given rise to a serious mismatching between the job vacancies and population distribution. Although 150 million rural migrant workers have worked in urban region,⁸ they have not received a fair share of the accomplishments of urbanization. For example, in 2010, the population of

⁷Tie, Z. (2010). China’s Ecological Civilization Construction Enters Quantization Age, *Scientific Times*, 5, February.

⁸In 2011, according to the calculation of the sampling investigation data of the NBSC, the amount of national migrant workers is 252.78 million, among which the out-migrant workers are 158.63 million. These out-migrant workers mainly work in urban regions.

China's three metropolitan areas (the YRD, the PRD, and Beijing–Tianjin–Hebei regions) took up 16.57% of the total, but the GRP took up 33.78%, the ratio between which was 1:2.04. However, the northeast mega-region's population took up 17% of the US, the GDP 20%, the ratio between which was only 1:1.18. In developed countries like Japan, the national population distribution basically matches the allocation of economic activities.

Fourth is unplanned exploitation as revealed in the following aspects: (1) Blind exploitation of the countryside causes the sharp decrease of the arable land and the supply of the agricultural products faced with threat; (2) Reckless exploitation of the ecological area has aggravates the integral function of the ecological system, with the result that more and more land is becoming non-inhabitable space; (3) the over-exploitation of the urban areas makes the pressure of resources and environment bigger and bigger. The result of unplanned exploitation is the disorder of territorial development and inappropriateness of spatial structure. From the perspective of production and its impact on ecology and life, the former takes up more space, leaving little to the ecology and life. From the angle of countryside and urban area, the habitancy space of countryside becomes more and that of the urban areas becomes less. Judging from the interior of the city, the industrial space is more and the habitable space becomes less.⁹ Especially in recent years, some areas produce “garden factories” and conduct “land enclosure” and the rapid economic growth is mainly dependant on the usage of land expansion. Therefore, from the angle of land exploitation, we can state that, in the past, the industrialization of not a few regions was at the expense of the inhabitant welfare. The industrial land's scale is too big, the proportion is high and the use efficiency is too low.

(III)

Recalling the process of the regional development since the reform and opening-up, we can clearly see that, in the past, each regional development was on the traditional development path of high growth rate, high consumption, high emission, unplanned exploitation, and in coordination. Under the restriction of the resources and environment, this traditional

⁹Yang W. (2008). Promote the Establishment of Main Functional Area, Optimize the Pattern of Spatial Exploitation. *Economic Review*, (5).

development model is at its wits end. It is neither sustainable nor in compliance with the spirit of the scientific outlook on development. In particular, the international financial crisis since the second half of 2008 has accelerated the collapse of the traditional development model. Under new circumstances, the regions cannot and should not pursue development depending on the large consumption, high emission of “three wastes”, and great exportation of cheap products. They must establish a new scientific outlook on development and continue to developing scientifically and unswervingly. It is safe to state that the regional development with a scientific view will become the core concept of China’s regional development in the future. Future regional development will enter into a new epoch, highlighting development with scientific view.

Aiming at the past traditional development model, early in October 2003, the Third Plenary Session of the 16th Central Committee of Communist Party of China (CPC) proposed scientific outlook on overall development that is human-oriented, harmonious, and sustainable. Overall development, harmonious development, and sustainable development are the three core concepts of scientific outlook on development. Therefore, the path of regional development with scientific view insists upon the overall, harmonious, and sustainable development based on human-oriented. It underscores the intensive development, innovation development, harmonious development, and improvement of the regional sustainable development ability. From the perspective of scientific outlook on development, we must accelerate the transformation of regional development pattern and the transition of development model, changing from the traditional development model into the new development model with scientific view as soon as possible. This regional development transition includes the diversified and comprehensive transition of economic, social, cultural, and thinking concepts, the development strategy, and policies. On the whole, the regional development transition in present-day China includes six aspects: First, the transition of growth pattern from the extensive to intensive; Second, the transition of development focus from the economic growth to the improvement of quality, the social development and the improvement of livelihood; Third, the transition of industrial structure from the lower end of industrial chain to the middle and higher end; Fourth, the transition of urban and rural relations from dual division to integration; Fifth, the transition

of motivation source from the input-driven to innovation-driven (including the technological innovation, institutional innovation, management innovation and brand innovation); Sixthly, the transition of spatial structure from unplanned exploitation to orderly exploitation.

Hence, we must implement five new strategies, accelerating the overall transition of regional development strategy. First is the implementation of new industrialization strategy. Judging from the large area, the regions suitable for industrialization can be identified from the local situation, highlight its features and advantages, and embark on the resource-saving, environmentally-friendly, high productivity, creativity-oriented industrialization path which gives full play to human resources and shares the development accomplishment.¹⁰ Second is the implementation of the new urbanization strategy. The key is to establish a new urban ecological outlook, to highlight the urban features, to underscore the improvement of urban efficiency, and to persist with balancing urban and rural development. It must emphasize the improvement of the urban spatial structure and embark on the new, human-based, intensive, open, harmonious, diversified, and sustainable urbanization path. Third is the implementation of new exploitation strategy. On one hand, we should divide the control line of spatial exploitation scientifically, implement strict spatial governance and plan the spatial exploitation order reasonably; on the other, we should promote the synergistic agglomeration of population and industries, the coordination between population distribution and economic activity allocation, as well as the adaptability of population, economy and carrying capacity of resources and environment. Fourth is the implementation of a new opening strategy. The key is to balance opening-up to the outside world and domestic development is to start with the promotion of reform, development, upgrade, coordination, and harmony by opening-up, comprehensively improving the open economy level and promoting the economic and social development and the construction of a harmonious society. Fifth is the strengthening of the new social management. We should highlight the community management, give full play to the important role of intermediary organizations and public

¹⁰In China, the industrialization strategy is not suited for every region. At the same time, the industrialization strategy aims at the bigger areas, for the smaller areas, especially the geographic units below counties shall emphasize the thinking of functional division and specialization.

participation, and explore the new social management system which adapts to the scientific outlook on development.

(IV)

Since the reform and opening-up, China's regional development has achieved quite a few accomplishments, but there are several problems pertaining to development. In the course of development, we shall not underplay the considerable achievement of reform and opening-up because of these problems. It is just because of the new problems and new phenomena which crop up in the pursuance of regional development, do various regions explore and innovate in the reform and opening-up practice, creating positively new models, experience, and ways; in reality, these have provided colorful and rich materials for the research of China's and even world's regional development theories. It has also offered favorable conditions for the China's regional economics to stand at the summit of the world.

Chinese academia has always highlighted the research of China's regional development. In recent years, this kind of research is conducted in three directions, the first is the comprehensive research at the national level, which mainly explores the basic features, evolution tendency, and existing problems, dynamic mechanisms, strategy models, policy choice, and so on; the second is the specific study of each field, which covers almost every field concerning the whole regional economic, social, scientific, education, and cultural development and the construction of ecological environment, and so on. The third is research at the local level, the four levels of regional development: provincial development, municipal development; and county-level development; and township, village, and industrial zone development, which have become the hot subjects of the academic research. The research of development strategy planning on various-level region is always on the bloom.

The Chinese Academy of Social Sciences (CASS) has the tradition of highlighting the problems faced in reality. The construction of the regional economics discipline has underscored the positive exploration on the reality problems in China's regional development. From 2003 to 2008, I was honored to chair the construction project of regional economics discipline of "Key Discipline Construction Projects" at the CASS. Since 2008, based on

the key discipline construction, the specialists and scholars of the CASS as the main body, with the enormous support of the Economy and Management Publishing House, jointly compiled China's Modern Regional Development Series. The first batch has 12 books. The smooth publication of the series is the result of the enormous support of the Chief Editor Zhiyu Shen, the President Shixian Zhang of the Economy and Management Publishing House, and friends and scholars from domestic and overseas academia. To them I present my sincere thanks!

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Wei Houkai

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List of Abbreviations

BSR	Bohai Sea Rim
CASS	Chinese Academy of Social Sciences
CPC	Communist Party of China
CV	Coefficient of Variation
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GRP	Gross Regional Product
HQs	Headquarters
ICR	International Cement Review
IEA	International Energy Agency
NBSC	National Bureau of Statistics of China
NDRC	National Development and Reform Commission
ODM	Original Design Manufacturer
OEM	Original Equipment Manufacturer
PRC	People's Republic of China
PRD	Pearl River Delta
R&D	Research and Development
S&T	Science and Technology
SIC	Standard Industrial Classification
SMEs	Small and Medium Enterprises
UNIDO	United Nations Industrial Development Organization
WSA	World Steel Association
YRD	Yangtze River Delta
ZSP	Zhongguancun Science Park