Recent Advance in Modern Economics Methods, Global Finance Crisis and Related Areas

现代经济学方法与全球金融危机

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Preface

As a rich culture legacy city, Xi' an had been the most prosperous and famous city in the world for more than two thousands years. On May 23 of 2009, Humanity, Economics and Law of Northwestern Polytechnical University had welcomed more than 7 countries' scholars in the world for International Symposium which is presided by Postdoctorate Feiliang Niu, where we have collected many high quality papers.

Qinghua Huang and I organize these papers, which covered 3 main fields: recent advance in economiccs theory, international finance crisis, economics application.

Papers on modern economics methods are put in Part I, which is an active area that researchers achieved in recent years.

In Part II, which includes a variety papers on international finance crisis and policy. These articles reflect the success in economics on how to settel down the times bewilderment in the worldwide.

Part III pays more attention on current economy policy and social science. Modern economics and its methods are widely used in many branches of social science, which is a progress of modern economics. Due to continuously economic booming since 1978, many authors study international trade and related industry structure in China. As world emerging manufacturing center, traditional industries have been transformed gradually into more efficiency and energy saving mode. I edit these papers in Part III also.

For reviewing, we divide these papers into 3 categories:

- Part I Modern Economics Methods
- Part II International Finance Crisis and Policy
- Part III Economy Policy and Its Application in Social Science

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Feiliang Niu

June 2, 2009

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Part I

Modern Economics Methods

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China's Regional Elements Flow and the Perfection Regional Function

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Abstract: This paper, through briefly reviewing the history of China's regional elements flow since 1978, points out policy stimulation's key role on regional elements flow. While analyzing local governments' strategies from the perspective of both regions spreading elements and regions receiving elements, this paper also discusses the great challenges brought by this pattern of flow, on coordinating regional development and improving regional function.

Keywords: mobile elements, regional function, division

1   Introduction

The spatial imbalances of economic elements such as energy, raw materials, labor, capital, as well as the diversified yield of different elements in different places, together lead to the frequent flow of these elements, which also makes such flow the most common phenomenon in the whole economy world.

Because elements great impact on economic develpoment and the imbalanced spatial distribution, all types of economic entities are trying their best to turn the flow into a favorable direation for themselves. Internationally this appears as different kinds of preferential policies to attract foreign direct investment (FDI), senior talents, etc. Domesticly, different regions are also competing harshly in order to attract inflows and

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elements. From this point of view, China's development history of regional economy since 1978 can also be seen as a history of element competetion.

For those reasons mentioned above, there are very few researching documents containing words like "flowing elements". The earliest study on flowing elements is in the theory of international trade. Absolute advantage theory, comparative advantage theory and factor endowment theory all have discussed international dibision of labor and coorperation from the view of international commodity trade and elementflowing. In their theories, trade barriers are assumed not be exsiting, goods and elements being free to flow anywhere. The analysis of element in the theory of international trade is significant for element flowing in domestic regions. Concepts like "increaing profits", "imcomplete market competition" and "iceberg transportation cost" are brought into the analysis by New Economic Geograohy. In the model of "center-perophery", New Economic Geography asserts that if there are the market price index effect and the market approaching effect, elements flow will further deepen the extent of the division of the inflow region. (Krugman, 1991; Masahisa Fujita, Krugman, Venables, 2005)

Various economic factors in accordance with profit-driven, guided by the laws of the market concentration in a particular region, deepening the division of labor in the region, promotes economic development in the region, which is in line with the principle of efficiency. However, for developing countries without a perfect market economy, like China, the elements flow, faced with lots of limitations, cannot reach the full-flowing degree supposed by economists. It is worse for the competition among regions within in the country, which means that in China, a country in transformation, the elements flow will also appear with the characteristic of transformation. In this situation, China, under the pressure of lessening the diversity among regions and improving the quality of environment, has adopted a development strategy to further improve the division of work in regions, and has established the policy of "main-function region". It is noteworthy that, does such elements flow with the Chinese characteristics have conflicts with the "main-function" policy?

Here is the structure of this paper:

The second part briefly reviews the history of China's regional element

flow;

The third part tries to summarize the characteristic of China's regional element flow, which is in the transformation period;

The fourth part analyzes the challenge brought by current model of regional elements flow to the regional function perfection;

The fifth part is the summary and some inspirations.

2 The history of China's Regional Factors Flow: a Simple Review

Traditionally, the factors in economics are generally production factors. In other words, they are all kinds of tangible and intangible investment on the material production (Ma Hong, Sun Shangqing, 1985). In light of Du Kentang and Dai Shigen's conclusion, in the regional economics the regional factors mainly contain two kinds: one is the components constructing regional elements, such as economic center, economic hinterland and economic network that are called the regional factors; the other refers to various factors and resources influencing the development of regional economy, including natural resources, labor, capital, science technology, organization and management, information, location and environment. From the angle of liquidity, land, mineral, and location cannot be removed under the normal situation; from the angle of statistical elements, the factors like information, organization and management cannot be got precisely. Therefore, this paper discusses the history of factors flow, mainly focusing on the capital and labor.

2.1 Capital Flow

In a country, there are many forms of regional capital flow, such as the central government's transfer payment to different regions, the regional transfer from the low yield of capital to high yield of capital under the commercial bank's internal operation, where the capital market will play a promoting role, and some investors' decisions in different regions. Therefore, it is very hard to measure the capital flow among regions precisely. In the following parts, the paper will analyze the situation of

capital flow in the east, central and west parts, mainly from the angle of the capital formation share, social investment in fixed assets, and the bank's new balance of deposit and loan. From the three areas of capital structure (Table 1), the total capital in east, central and west has been largely raised. However, the occupied share is fluctuated. East share increases, but the Midwest one declines. From 1979 to 2006, the total capital formation of eastern region increases most, and occupies most part of the country's total capital formation, almost maintaining 50% to 60%. However, the implementation of the western development strategy somewhat promotes the western region's capital formation.

Table 1   The Capital Formation in Three Areas   (Unit: a hundred million; %)

	2006		2005		2000		1999		1995	
	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion
East	64173	57	55168	58	24911	60	22574	60	15451	61
Center	26097	23	20836	22	9442	23	8884	23	5694	22
West	22664	20	18539	20	7105	17	6375	17	4272	17
	1990		1989		1985		1980		1979	
	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion
East	3694	56	3463	56	1721	54	602	51	532	48
Center	1785	27	1584	26	910	28	323	27	318	29
West	1170	18	1090	18	581	18	251	21	261	23

p. s. : **Because only take two decimals, the sum of the three areas may not be one after rounding up.**
Resources: *China Statistical Data Collection of Five Decade* , *China Statistical Yearbook.*

Judging from the whole society's fixed assets investment share in the three areas (Table 2), the eastern region has obvious advantages. Its whole society's fixed assets investment share almost remains 50% to 60% of the whole country's level.

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Table 2　The Whole Society's Fixed Assets Investment Formation in Three Areas

（Unit：a hundred million；%）

	2006		2005		2000		1999		1995	
	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion
East	60327	56	49827	57	18753	59	17331	60	12369	64
Center	25727	24	19624	23	7034	22	6217	21	3958	20
West	21997	20	17645	20	6111	19	5422	19	3046	16
	1990		1989		1985		1980		1979	
	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion	absolute amount	propor-tion
East	2345	57	2168	57	1275	52	391	55	286	55
Center	1048	25	960	25	704	29	191	27	135	26
West	733	18	674	18	458	19	133	19	101	19

Resources：*China Statistical Data Collection of Five Decades* ,*China Statistical Yearbook.*

In a sense,（the）bank deposit can reflect the production value of a region and （the）loan fund is the input to this region. According to this，the new additional balance between the deposit and the loan fund could reflect the capital flow of the bank：positive stands for capital out-flow and negative stands for capital in-flow. We have calculated that the new additional balance between the deposit and the loan fund from 1980 to 2006 in the east，the middle and the west regions is 7,261,500 million yuan，2,457,000 million yuan and 2,065,100 million yuan respectively. According to our statistics，the bank capital in these three regions all shows a net out-flow. And the net out-flow in the east is higher than that of the west region(See Table 3).

Table 3　The Bank's New Balance of Deposit and Loan in Three Areas

（Unit：a hundred million）

	2006	2005	2000	1999	1995	1990	1989	1985	1981	1980
East	9542	16361	−62818	8813.3	2248.2	−5.5	163.4	−299.3	−118.9	−66.3
Center	7831.9	6729.3	1435.5	1973.4	111.1	−249	−119.5	−275	−51.6	−42.5
West	7620.8	3239.8	499.8	509.2	84	22.1	−65.2	−76	66.4	10.45

Resources：*China Statistical Data Collection of Five Decade* ,*China Statistical Yearbook.*

But does the data show the fact? The flow direction of the loan fund must be taken into consideration. Because the return on investment (ROI) in the east region is higher than that of the middle and the west region that quite a part of the loan fund in the two regions has not left but transferred to the east region. In addition, China runs the head office and branch offices system among the commercial banks. The head office which is motivated by benefits would transfer the capital among the branch offices and invest the capital into the east region in a variety of forms under the circumstance that the ROI is different among the east region and the middle and the west region. Moreover, the ability of bringing in capital in the middle and the west region is far weaker than the east region, considering several aspects such as the direct investment from foreign business and direct financing of capital market.

2.2　Labor Mobility

Labor mobility is difficult to monitor. Perhaps these three major regions' portion of population can give us some clues. From 1982 to 2006, the change of the portion in East region increased rapidly from 37.0% to 39.6%. Comparatively, the share in Midwest part decreased continually from 33.8% to 32.4%, and west region from 28.7% to 28.0%. We may come to the conclusion that the Development of the West Regions has not attracted the labor effectively(See Table 4).

Table 4　Portion of Population in Three Major Regions

	2006		2005		2000		1999		1990		1982	
	Pop.	Share	Pop.	Share	Pop.	Share	Pop.	Share	Pop.	Share	Pop.	Share
East	51177	39.6	50609	39.4	49133	38.9	46394	37.3	42588	37.7	37663	37.5
Middle	41797	32.4	41738	32.5	41564	32.9	41979	33.8	38266	33.8	33960	33.8
West	36157	28.0	35976	28.1	35531	28.2	35846	28.9	32212	28.5	28774	28.7

Note: 1990's and 1982's data is not the current years' data. They are the 3rd and 4th census respectively.

Source: Each year's *China Statistical Yearbook*, *National Bureau of Statistics People's Republic of China on the* 1990 *Census Main Bulletin*, *National Bureau of Statistics People's Republic of China on Major Figures of the* 1982 *Census Bulletin*.

Indeed, there are many factors affect the changes in the proportion of the population. It is not only caused by the labor mobility, but it also has relation to the trend of the labor flow to coastal areas.

2.3 Brief Comments

The above analysis on capital and labor flow in China shows that factors of production of different kinds are moving to the east part of China and this trend will last for some time.

Many researchers have proved that the market segmentation, redundant projects widely exist among different part of China. They have a strong effect on the flow of the production factors. However, factors of production are still moving to the east region. The reasons are that: First, the Development Strategy of China has a great impact. Under Deng Xiaoping's Guiding ideology, "to make a group of people, some parts of China become prosperous first," China takes the efficiency-based development strategy which is disequilibrium (Gao Xincai, 2008). During the process, China usually takes some areas as pilots, thus, the east part of China has an advanced construction on market economy. Together with the predominant geological location, better infrastructure, the production factors naturally flow to the east.

Second, the "advanced" east China accelerates the flow and it provided a strong base in east China's development, such as, transportation, communication, cooperation in production, Abundant capital, Centralized markets, and stronger Scientific research, etc.. These facts are pushing the efficiency of production and thus benefits from the above.

Third, multiplier effect will reinforce the central status in development of east area. The congregation of industry requires the annexed industries (both service and non-service industry). The service industry will increase the population in the east. This will expand the market in return. The multiplier effect plays a part in the expanding repeatedly and this is how labor forces, capital, technology, information flow to the east part of China.

3 Regional Elements Flow of Chinese Model

The above are the simple comments on the representation of China's regional elements flow, but this cannot bring us any enlightenment. What we are more concerned about is the unique characteristics China's regional elements flow has carried since 1987. After all, it is destined to be unique when China succeeded in transferring the planned economy to the market economy.

3.1 Policy Incentives and the Elements of Mobility: Analysis of Framework

According to Ricardo's comparative advantage theory, the input and output of the elements are elements that search for comparative advantages as the purpose to transfer in different regions. If the cost of the elements flow is not considered, factors of production would flow from the areas with low marginal returns to the high marginal returns areas. However, in reality, the cost of elements flow should not be ignored between any countries or regions. It is one of the important influencing factors of the elements flow and industrial regional division.

The influence which the cost of elements flow has on regions of elements flow can be illustrated by Figure 1 "scissors graphics". Supposing that the original configuration of elements is in Point A, the elements return in Region 1 which is Point E_1 is higher than Region 2 which is E_2. In the condition of perfect competition, full information and no cost of elements flow, AB unit element will shift from Region 2 to Region 1 until the two regions' elements have the same return which is Point E_0. That is to say that the elements will move from the low marginal returns area to the high marginal returns areas. But actually, the elements flow between two regions is not without costs, and the segmentation and imperfection of the element market, the movement cost, tax control and so on all will have an effect on the return of elements flow which afterwards influence on the flow level of elements between regions. As shown in Figure 1, because of the transportation costs and the Government control of the elements flow, even if the element flows from Region 2 to Region 1, its return still will drop

which shows in the figure when the return curve drops from C *to* C_1 intersectant in E_3 with the return curve of Region 2 and at the same time only Element AB_1 flows to Region 1 which is lower than the equilibrium level AB.

This also means that as long as there is an obstacle to the elements flow between different regions, the elements flow will be smaller than the optimal amount in the theoretical analysis. Combined with the situation of China which owns a vast territory and intense competition in local governments, the promotion competition of local government officials will inevitably lead them to prevent the outflow of production factors by a variety of means and attract the inflow of factors of production. Analysis below will show the close relationship between regional elements flow and policy incentives in China.

Based on the above framework, the following will analyse the characteristics of the China's regional elements flow in two aspects which are the elements' spread region and joint region.
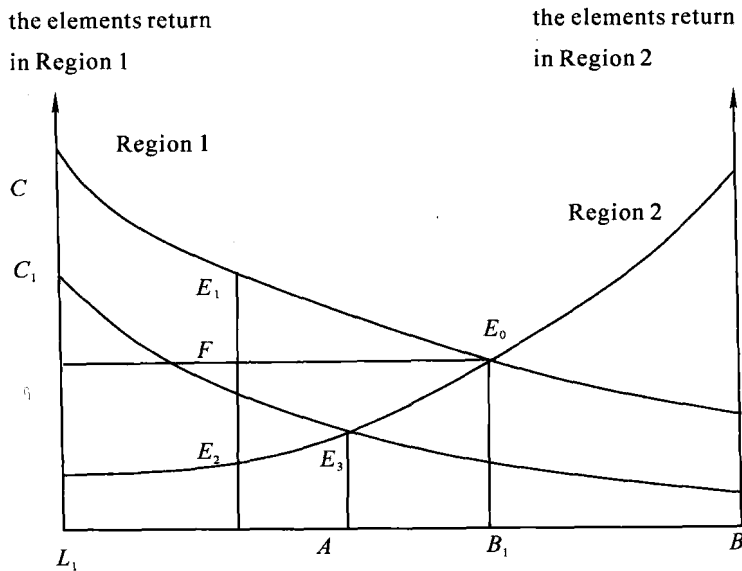

Figure 1   Regional Elements Flow in the Condition of the Existence of Flow Cost

3.2 The Alternative of Trade and Investment: Strategies for Areas with Factors Spread

In the international economic field, scholars hold many controversies over the relationship between trade and direct investment. Mundell (1957) researched this relationship in earlier times, and he put forward an alternative model of trade and investment. Mundell concluded that when barriers to international trade exist, if direct investment companies launch foreign direct investment according to Rybczynski line, in that way foreign direct investment can replace merchandize trade based on relatively the best efficiency or the lowest cost of transference of factors for production. Later research challenged this point; Markuson (1983) came to a conclusion that foreign trade and foreign direct investment promote each other on the condition that assumptions of Mundell's model have been loosened; Kojima (1987) considered that early theory of international direct investment ignored the principle of the international division of labor, meanwhile he unified foreign trade and foreign direct investment through the international division of labor then came to a conclusion that there is complementary effect between them; Bhagwati (1987, 1992) etc. and Dinopoulos (1991) etc. analyzed the relationship between international trade and FDI from the perspective of political economics, and they thought that game among different interest groups would result in alternative and supplement between foreign trade and investment, i. e. supplementary investment; Petri categorized direct investment into three types according to different motives for direct investment: market-oriented, production-oriented, trade-promotion, and he also pointed out that relationship between trade and investment would be different because of the varied motives.

Compared with international competitions, competitions among different areas in China are not inferior to them and even more intense than them. Malpractices such as local protectionism, "feudal economy" and duplicate construction are frequent. These results from championship promotion mentioned above. Under such a background, the analytic framework of relationship between trade and investment in the international economic field can be applied to regional economy of China.