

# **URBAN COMPETITIVENESS OF CHINA**

**NI PENGFEI**



SOCIAL SCIENCES ACADEMIC PRESS (CHINA)

**URBAN  
COMPETITIVENESS  
OF CHINA**

**NI PENGFEI**

**图书在版编目 (CIP) 数据**

中国城市竞争力 = Urban Competitiveness of China: 英文/倪鹏飞著. - 北京: 社会科学文献出版社, 2007. 12

ISBN 978 - 7 - 80230 - 932 - 6

I. 中… II. 倪… III. 城市经济 - 经济评价 - 研究 - 中国 - 英文 IV. F299.23

中国版本图书馆 CIP 数据核字 (2007) 第 183625 号

Cataloguing in Publication Data

---

Urban Competitiveness of China

Ni Pengfei

December 2007

ISBN 978 - 7 - 80230 - 932 - 6/F · 230

Published by Social Sciences Academic Press (China)

No. 10, Xianxiao Bystreet, Dongcheng District

Beijing, China

Postcode: 100005

© 2007 by Social Sciences Academic Press (China)

Editor: Deng Yonghong Wu Yun Ren Wenwu Cao Yiheng

Cover designer: Wu Yanping

Printed in Beijing, China

---

All rights reserved. No part of this book may be reproduced by any means without written permission from the publisher.

# CONTENTS

## **Chapter 1 Urban Competitiveness of China: Theoretical Hypotheses / 1**

- 1. 1 Introduction / 1
- 1. 2 Basic Hypotheses of Urban Competitiveness / 9
- 1. 3 The Components of Urban Competitiveness / 22
- 1. 4 Test of Hypotheses of Urban Competitiveness of China / 40

## **Chapter 2 Urban Competitiveness of China: Empirical Test / 58**

- 2. 1 The Principle of Fuzzy Curves / 58
- 2. 2 Basic Test Procedures of the Hypotheses of Urban Competitiveness of China / 60
- 2. 3 Analysis of Outcome / 60
- 2. 4 Urban Competitiveness Measurement Model Depending on Important Components / 79
- 2. 5 Policy Suggestions / 80

## **Chapter 3 Urban Competitiveness of China: New Empirical Test / 85**

- 3. 1 The Theoretical Expression and Quantitative Analysis of Urban Competitiveness / 85
- 3. 2 The Results of Quantitative and Positive Analysis on Urban Competitiveness of China / 92

3.3 Comparison and Analysis on the Quantification Results of Chinese Urban Competitiveness / 98

3.4 Basic Conclusions and Policy Implications / 109

**Chapter 4 The Core Competitiveness of Chinese City: Industrial Cluster / 110**

4.1 Survey on Industrial Cluster: Chinese Emerging Economic Engine / 110

4.2 Industrial Cluster in China: Industrial Cluster Maps of 18 Industries / 136

**Chapter 5 The International Background of Urban Competitiveness of China: the Urban Competitiveness Comparison of Global Cities / 161**

5.1 Urban Competitiveness and Measurement: Literature Review / 161

5.2 Urban Competitiveness and Its Measurement: Theoretical / 169

5.3 Data and Research Methods / 173

5.4 Analysis on Results / 175

Appendix / 180

**Chapter 6 Urban Competitiveness of China: Pattern, Phase and Driving Force / 185**

6.1 Introduction / 185

6.2 Theory of Urban Competitiveness of China / 187

6.3 Patterns of Urban Competitiveness of China / 189

6.4 Urban Competitiveness of China: Phase and Driving Force / 201

6.5 The Policy Proposals on the Improvement of International Competitiveness of Chinese Cities / 220

**References / 225**



# **Chapter 1**

## **Urban Competitiveness of China: Theoretical Hypotheses**

### **1. 1 Introduction**

#### **1. 1. 1 International Backgroud**

Since 1990s, science & technology has been changing with each passing day; global economical integration has been going ahead by leaps and bounds; man has been facing not only a new era of information and knowledge, a new era of globalization of economy and science & technology, but also a new era of global competition. The global competition means the multi-leveling of competitive subjects and the complicating of competitive ways as well as the internationalization of competitive ranges and the all-side of competitive fields.

Urban competition is long-standing. In industrial society, there always is competition to some extent among cities, moreover, at the same time, a city's ability to develop and compete can also exert the important influence on competition and development of subjects of various economic activities. Although enterprises are the most basic organizational subjects for economic activities, the assembly economic effect always induces economical activities to assemble towards favorable space in the forms of industries or industrial groups. The cities or regions, as this kind of assembly space, naturally became into the

economic units with relative independence. There are many differences in social and economic activities' content, method, performance, environment and interests pursuit between cities and enterprises or governments, and between cities and cities. For enterprises and industries, cities provide them with the competitiveness basis of localization. The conditions and environments specially owned by cities, such as resources, place, technology, knowledge and culture, are the important sources for enterprises to win comparable advantages and competitive edges. Countries realize international exchanges and participate in international competitions not only through enterprises but also through cities, thus, cities are the vital basis of national competitiveness. In a giant country's economy, the national competitiveness is the overall space of the competitiveness of all its cities and regions. Concerning the relationships between cities and regions, cities are the central cores of regions. The competitions among regions, which depend on history, current situation and potential of cities, are through cities and reflected in the form of urban competitions.

The arrival of science & technology, information and global economy times, is profoundly changing the space concept and decision-making arrangement of global economy, science & technology and social activities. With the formation, enlargement and adjustment of world city system, the place of cities in international economy become more important, the trend of urban global competitions become obviously enhanced, the competitions among various-level international and national cities become fiercer and fiercer. First, economic and global integration makes country boundaries less important and thus limits the national power to interfere in economy. On the one hand, the decision-makings of trades and investment, which used to belong to the fields of national decision-makings, are gradually instead made by international agreements or international institutions. On the other hand, the power of local governments is eclipsing that of central governments. Especially, urban

governments are playing important roles in supplying support to local strategy planning, facilities construction and enormous and diversified economical elements (including: education, information of new enterprises, health of middle-and-small-scale enterprises, establishment of effective technological connections among universities, companies and research centers). Cities begin to gradually master the dominant power in many fields. Second, the changes of traffic and communication are weakening national protectionism interference, tying cities all over the world into network system, shortening intercity distances and building closer intercity contacts, at the same time, are allowing more cities to realize freer contentions in larger ranges for markets, capitals, technologies, talents and resources. Third, the technological changes in production, distribution, traffic and communication are turning economic activities into new international geographical division of labor, therefore, global economic activities are conducted under both conditions of centralized assembly and decentralized assembly: on the one hand, the activities based on knowledge as basic industries, including conception and design of technological products, sample making, trial production and manufacturing of key components of products, are centralized in the special regions which can attract high-quality labors. The top decision-making centers and superior production and service industries of enterprises are gathered in the regions that have advanced and perfect communication and information equipment. On the other hand, under the situation that the remote supervision and control of production process comes into reality, the assembly, test and production of knowledge products and the production of non-knowledge products decentralizedly gathered in the cities that have favorable investment environment, low-priced labor force and land and convenient traffic and communication network. These two kinds of trends simultaneously create new economic space that not only enlarges the world urban system, but also reconsiders the centers and boundaries of the original



urban system. The new space fights with the old one, the new centers challenge against the old, thus, intercity relationships due to competitions are constantly worsened. After 1970s, that a host of Asia-Pacific cities like Los Angeles, Tokyo, Singapore and Hong Kong have rapidly become the cities and regions of the strongest competitiveness in the world, is a strong example.

The new era of fierce global competitions presents cities with close-related fortunes and misfortunes. Opportunities are accompanied challenges, hopes are by difficulties, success is by failure, and rising is by declination. In this competitive times, countries and regions all over the world, especially the governments of regions on both banks of the Pacific Ocean, in order to realize the most favorable global strategy contentions in the new century, are actively engaging in checking, cultivating and improving their urban competitiveness. Compared with foreign countries, the issues on checking, cultivating and improving urban competitiveness for China cities are more urgent.

### **1.1.2 Internal Background**

As the economic existences only inferior to the state, China's cities have extra importance. China is a large economic country with large area of land, where cities are hubs for interaction between central government and extensive basic levels, and where urban governments are the representatives of the central to manage and control the locals. China's state-owned economy dominates the national economy, that is to say, the government on the one hand is the representative of state-owned assets and has important power to make decisions on, manage and control the operation of state-owned assets, on the other hand exerts economic and administrative management and intervention in national overall economic operation. In 1980s, China conducted the decentralizing-power-to-the-local reform, and urban governments, as the

primary-level local governments, began to possess more power. Urban governments, as the representatives of local state-owned assets, are responsible for the operation of local state-owned assets, at the same time, exert important interference in local economic operation with dominant power on production, investment and facilities construction, etc. Particularly in recent years, after the central government implemented the reform policy to utilize cities to help counties and to utilize central cities to pull regional economic development, the position of cities in the country has become more important. The industrialization, marketing transformation and internationalization of China's economy have enhanced the development of China's urban economy. When China's economy reaches the new stage that urban development is being accelerated, China's cities, as regional even national economic focus and pioneer, will play more important roles.

Scientific & technological revolution and global economy provide Asia-Pacific regions including China with unprecedented opportunities and challenges. Participating in global economy and international division of labor, preliminarily linked with world urban network system, many China's cities, especially the coast cities, are first affected by the pressure to be controlled by international cities. With industrial goods coming into like tidewater from developed countries, China's traditional industrial cities are declining. Compared with China's coast cities, many other Asian cities anticipated or surpassed the old-timers as the latecomers in absorbing industries, technologies, funds and trades transferred from foreign industrial countries. In front of the fleeting opportunities, at the key time to decide urban future position and prospect, China's coast cities are facing huge competitive pressure from surrounding countries and cities.

Due to limited integration in China, compared with the competitions between China's cities and oversea cities, the competitions among China's domestic cities are dominant. However, the blind development and ill

contentions of many China's cities seriously restrict the development and improvement of urban competitiveness of China's cities, enterprises and the state.

In attracting international funds, technologies and industries, many domestic cities blindly contest to put forward preferential policies, presumptuously reduce or remit taxation and transfer the use right of land at low prices. Some individual cities even transfer the use right of land free. This kind of negative interaction of the preferential policies in various cities allows international funds to gain profits from it and make the state and cities lose their interests.

In positioning functions, many China urban governments overstate blindly their advantages and build up their own functional positions at will. In 1990s, there were more than 40 cities that put forward the slogan to build international city; there were hundreds of middle and small cities aiming to set up big metropolis. Blindly positioning created the pre-construction and reconstruction of facilities and led to the idleness and uneconomical using of facilities.

In selecting dominant industries, many cities ignore their own advantages, disadvantages and the complementary inter-city relationships, engage in "small but complete, big and complete", or are eager to be after the well-profitable projects. From the arrangement plan of dominant industries of China's main cities during the ninth 5-year period, it can be found out that the dominant industries chosen by these cities heavily-similarly centralized in machinery, automobile (motor), chemical, medical and electronic industries. The similar industry structures result in urban industry's reconstruction, over-competition and serious waste of resources.

In urban development paces, eastern cities develop at constantly accelerated speed, but at the same time, middle and western cities grow at relative slower speed. Therefore, productive elements move further towards eastern cities and the differentials between eastern and middle-and-western cities become larger and larger. The unbalance of inter-city development brings about serious social

problems.

The 21st century is the century of urban development and competition. Facing common opportunities and general problems, China's urban governments not only need to understand the key in global times to determine and influence urban competition and development, but also need to be clear about their own positions and situations as well as their advantages and disadvantages. In order to capture the top position, China's cities need to check existed competitive and development strategy and need to master the edges and tactics of victory.

National competitiveness now becomes the most concerned matter by economic departments, industrial departments, financial departments and labor departments of the governments of various countries. In the 21<sup>st</sup> century, economic competitions among countries are mainly reflected in urban competitions. To great extent, China's global competitiveness will depend on whether we can establish a batch of cities and city groups that have global competitiveness<sup>①</sup>. To deal with global competitions and to raise China's international competitiveness, China's central government urgently need to learn the situation of various cities to formulate and perfect China's region pattern and developmental strategy.

In the 21<sup>st</sup> century, with development and competition more global and international, the role and influence of transnational corporations will be realized mainly through the urban global competition. Cities will become into the more important sources of enterprises competitive advantages<sup>②</sup>. To realize

---

① Wang Maolin, "Summarize 50-year developmental Practice, Study the 21<sup>st</sup> Century's Developmental Strategy, Enhance Fully China's Urbanization and Modernization-Report on the 3<sup>rd</sup> Representatives' Conference of China Urban Economy Association" .

② Wang Maolin, "Summarize 50-year developing Practice, Study the 21<sup>st</sup> Century's Development Strategy, Enhance Fully China's Urbanization and Modernization-Files of the 3<sup>rd</sup> Representatives' Conference of China Urban Economy Association" .

the victory of competition and the success of development, domestic and oversea cities need to understand thoroughly the current situation and potentials of urban competitiveness, to absorb advantages and to grasp opportunities.

In the 21<sup>st</sup> century, a human's development and competition will be more overall and complicated, and cities will more and more become the main sources of citizens' power. People can gain more free developmental opportunities and enjoy more value and welfare only from the cities that have stronger competitiveness.

### **1.1.3 The Line and Method of the Research on Urban Competitiveness of China**

The research on urban competitiveness will be a hot international subject. It is a exploiting action of important realistic significance to research on China urban competitiveness.

This paper employs the form of positive analysis, and strictly complies with: a. putting forward the theoretical hypotheses and the relevant hypothetical conditions; b. establishing the theoretical models and resulting in the main concrete conclusions; c. testing the experience of the theoretical hypotheses and models; d. putting forward the new models.

During testing the basic theoretical hypotheses and conducting the positive analysis, the paper mainly employs two measuremental and analyzing methods.

The Principal Component Analysis is employed to calculate and analyze the resultant force and component forces of the competitiveness.

The Fuzzy Curve method is employed to test and analyze the relationship among urban competitiveness' resultant force, component forces and their concrete elements.

The indexes involved in this paper consist of two classes of the qualitative

and the quantitative. The quantitative indexes are mainly from national standard statistics figures and the data assessed by professionals. The qualitative indexes are gained through inquiry survey of professionals and residents. The figures have been processed standardizedly and quantitatively.

## **1.2 Basic Hypotheses of Urban Competitiveness**

### **1.2.1 Urban Income and Urban Competitiveness**

#### **1.2.1.1 Urban Value Income**

Income issue is all the time the most generally-existed and the most concerned issue in the society. To gain income, namely profit, is the basic economics research issue as well as the pursued objective, competitive focus and conduct dynamics of conduct subjects. The amount of income is also the external reflections of performance and ability of conduct subjects. The income of general-existence and extreme importance is the general basis and common dimension by which the conduct subjects compare with one another in various aspects.

A city is a relatively independent conduct subject, which usually pursues development for interests and participates in competitions for benefits. As a compared concept, income condition is a multi-dimensional and comprehensive concept, including income components, income scale, income efficiency, income growth rate, and growth sustainability. Income efficiency means the income per unit of cost; urban income scale means the size of amount of income output within a certain period; income components mean the urban currency income components (such as urban reputation, place, image, natural environmental quality etc); the income growth rate is the ratio of the income scale in reported base period to the income scale in base period. They

can be expressed as below.

The urban income scale and components are:  $P = P_i$ , in which,  $P$  is the income scale,  $P_i$  is a certain concrete income.

The urban income growth rate is:  $R = P_m/P_0 \times 100\%$ , in which,  $P_0$  is the income scale in base period,  $P_m$  is the income scale in reported period, and  $R$  is the income growth rate.

The urban income efficiency  $T = P/C$ ,  $T$  is the income efficiency,  $C$  is the total cost,  $C_i$  is a certain concrete cost,  $P$  is the total income, and  $P_i$  is a certain concrete income.

The income condition of a city can be described at different angles. In macroscopic and overall dimension, it includes the total currency income and total non-currency income. The urban GDP and its growth reflect the urban currency income, which is the most important component of urban income, is also the basis and the important source of urban non-currency income, and thus plays a vital role in urban performance. Without overall growth of GDP, urban full employment, education, public health, entertainment even urban image and residents' human right can't be improved accordingly. Many urban incomes always are the transformed forms of GDP, namely the transformed forms of currency income. Naturally, while considering the improvement that GDP and its growth bring about to income condition, we should also consider the investment of element cost. On the other hand, when the growth results in increased crowedness, pollution and inventory and even welfare loss more than income, the pure GDP growth will on the contrary result in the decrease of net income. At this time, the contribution of GDP and its growth to urban income is negative, which equals to the GDP income minus the loss caused by GDP and its growth.

The income that a city gains through external competitions is the important component of its income. The substance of urban competition is to fight for resources and capture markets. It is concretely reflected in the moving and



transfer of funds, resources, talents, service objects, service fields, information etc among cities, regions and countries, in accordance with the maximum profit principle. At the output angle, competitive income mainly means the competitive income in the aspects of regional trade investment, service etc. Due to the development of global economy and transnational corporations and the springing-up and development of internal trade and other non-trade activities of firms, the forms of urban trade income is more and more complicated and difficult to measure. However, urban foreign trade is the main income source of competitive income of many cities, which also have important pulling role in increasing urban income. The indexes reflecting trade performance should be a system that includes trade scale, structure growth or market share, trade added-value and growth rate. But, in general, the contribution of trade to urban competition and increased income is falling down. Because investment consists of both domestic and foreign investment, the investment income is also reflected in two parts, namely the domestic investment income that is part of internal increased income construction, and the foreign investment income that is not included within the increased income construction but can be reflected in residents' income construction.

From microscopic view, urban income is the collection of various conduct subjects' income. First, a city is a collection of population. Therefore, urban income condition can be reflected through the residents' income condition of cities and towns. Microeconomics has a basic hypothesis that economical persons pursue maximum profit, namely maximum income. The income can come from currency elements such as goods and services in the market, as well as from other non-currency elements such as reputation, dignity, leisure, fresh air, clear environment etc. The problem lies in that the economical persons' income consists of these currency and non-currency elements, but different person has different preference, different maximum profit construction and different understanding about the maximum profit,

that is to say, only individual knows what his or her maximum profit means. Moreover, at the same time, there exists dilemma conflict among various variables in economic life, therefore, the selfish decision-makings in front of individuals' interactive conflicts will result in very complicated interactions, namely, a person's income increase always led to another one's income decrease, so, the collection of individuals' maximum profits is probably neither the maximum urban income nor the most perfect urban economic performance. <sup>①</sup>Although the theory that urban income condition is the collection of urban residents' income is perfect, it hasn't gained the sole solution in practices, naturally, however, the residents' income condition is the microscopic basis of urban income.

Cities are the collection of industries as well as population. Especially since the industrial society began, the urban competition and development have been mainly realized through city industries, and the main body of urban economic income should been made up of the developmental and competitive income collection of all urban enterprises and industries. The industrial income means the value-added income gained by industries creating valuable products. It is worth to notice that industrial income doesn't include urban natural income, moreover, non-perfected industrial growth might also result in the loss of nature and inherent income and regenerated income, and the industrial income doesn't include other non-currency incomes. We define urban industrial income as the value collection and the net added value created and realized by internal and external industries controlled by a certain city. The urban industrial income means urban industries value increasing scale, increasing rate, gained income and sustainable extent. As a result, the collection of enterprises' value income comprises the income body of urban

---

<sup>①</sup> Yang xiaokai, Zhang Yongsheng, "Introduction of New Classical Developmental Economics", *Research on Economy*, 15, 7, 1999.