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摘　要

本书试图旧瓶装新酒，由一个老话题而引发新思考。当前，关于产业集聚研究的文献，可谓卷帙浩繁，但其关注焦点还主要局限于产业集聚的正面效应，如对经济增长的促进作用。而对其负面效应，如对区域差距的影响，却鲜有谈及。而本书就关注这一问题，尝试填补该领域研究的空白。

产业集聚带来了地区经济增长，但同时也扩大了区域差距。如同著名的“马歇尔冲突”一般，追求规模经济必然导致垄断，而垄断反过来又扼杀竞争活力。发展产业集群带来了地区经济增长，但也扩大了区域差距，而过大的区域差距反过来会影响经济发展的整体效率。应该说，在一定的时空范围内，区域差距必须保持在一定的限度内，否则就会滋生一系列问题，甚至引发社会动荡。这方面，拉美国家的教训是非常深刻的。

目前，中国的区域差距问题正日益凸显，且引起多方关注。尤其是以东、中、西部三大地理区域划分的东部与西部之间的差距，已是相当严重。这不仅引起学术界，而且引起了中央政府的高度关注，并对此作出了积极响应。中央提出构建和谐社会，

“五个统筹”，以及在“十一五”规划中明确指出要构建差距趋向缩小的区域协调发展格局，都说明了中央对这一问题的高度重视。

本书是以实证研究为主，综合使用了多种计量方法，建立了多个计量经济模型。本书交叉使用了五种数学与统计软件来完成大量的数据处理工作，其中数学软件 Maple 10 和 MATLAB 7.01 用于数据计算，统计软件 SPSS 13.0、Eviews 5.0 和 Stata 8.0 分别用于多元统计、时间序列分析和面板数据处理。

全文共分 7 章，主要内容如下：

第 1 章导论部分阐述选题背景，并对全书进行总体介绍和框架性说明。

第 2 章和第 3 章是理论基础部分，分别对产业集聚和区域经济增长的相关理论进行梳理和回顾，并作出评价。这两章共同构筑本书的理论基础，后续研究都以此为理论依托而展开。

第 4—6 章是本书的核心内容，也是技术性较强的部分，具体介绍如下：

第 4 章对中国制造业集聚进行实证研究。

我们通过艾利森和格莱赛（Ellision and Glaeser，1997）建立的产业地理集中指数和自定义的五省市集中度的方法对中国 20 个制造行业 1993、1997、2002、2003 年的集聚程度进行了精确测定。计算结果表明，1993—1997 年中国制造业的集聚程度总体保持下降趋势，1997—2002—2003 年制造业的地理集中程度不断提高，集聚和地方化呈增长趋势。

1993—2003 年的 11 年间，20 个制造行业中有 15 个行业的地理集中指数增长，5 个行业的地理集中指数下降。增幅较大的

行业大都属于新兴的技术密集型产业，也有少量成熟型的老产业。下降的行业基本上属于资源密集型产业，且其下降的幅度远低于其他行业增长的幅度。由此可见，制造业集聚程度的提高还是主要的变动方向和发展趋势。

从集聚的行业来看，电子及通信设备制造业、仪器仪表及文化办公机械制造业、电气机械及器材制造业成为产业地理集中的“前三甲”，尤其是电子及通信设备制造业，更是成为独树一帜的“排头兵”，与其他行业远远拉开差距。而集聚程度由低到高的行业分布基本上与劳动密集型产业—资本密集型产业—技术密集型产业的路径一致。

从集聚的地域来看，江苏、广东、山东、浙江、上海五省市成为制造业的主要聚集地区，河南、辽宁、河北、北京、福建则是制造业集聚的“第二梯队”。技术含量较高的行业主要分布在这些地区，且比较集中。而在其他省市的分布，却是极其零散的。特别是西部边远地区，更是榜上无名。这种鲜明反差说明中国经济发展的地区差距已经相当严重。产业集群在带来经济发展的同时，也加剧了地区的两极分化。经济发展的严重失衡最终会影响经济发展的效率。因此，如何强化增长极的扩散效应，缩小地域经济发展的差距，已成为产业集群发展过程中亟待解决的重要问题。

电子及通信设备制造业的集聚程度最高，是产业集群的典型代表，其集聚程度与工业总产值呈现出高度的正相关性。总体上看，制造业的集聚程度与工业增长表现为较强的正相关。不同行业集聚程度的变化对工业增长的影响力不同，我们定义了增长集聚弹性来反映这一不同。弹性较大的行业大都表现出较强的规模

效应，增长集聚弹性可以为我们评价和发展产业集群提供参考。

第5章对产业集聚与区域经济增长进行理论和实证分析。

首先，从理论上看，产业集聚有其作用于区域经济增长的内在机制。产业集聚实际上是把产业发展与区域经济，通过分工专业化与交易的便利性有效地结合起来，形成一种高效的生产组织方式，从而推动区域经济增长，实现区域创新，提升区域竞争力。

其次，经验实证的结果也为我们的肯定回答提供了有力证据。我们选取了江苏省的纺织业、广东省的电子及通信设备制造业、山东省的食品加工业、浙江省的化学纤维制造业和上海市的交通运输设备制造业作为样本，利用1987—2003年17年的时间序列数据对产业集聚和区域经济增长的关系进行实证研究。结果表明，除了上海市因统计数据质量的原因没有通过协整检验外，其他四个省份相应行业的产业集聚水平均与本省的经济增长存在长期稳定的均衡关系。实证证明，产业集聚与区域经济增长及区域差距扩大表现出较强的正相关性，产业集聚在带动区域经济增长的同时也扩大了区域经济发展的差距。

无论是从理论分析还是经验实证的角度来看，产业集聚带来了经济增长，同时也扩大了区域差距，这一结论得到了相关证据的有力支持。目前，中国还处于工业化阶段，以制造业为主体的工业在相当长的一段时期内，仍然是而且还将是经济发展的主要推动力。而制造业又往往是以集聚形态存在的，因此制造业集聚就成为经济增长的主要存在形式。从现实情况来看，大部分产业集聚特别是制造业集聚主要集中在东部地区，西部地区则分布寥寥（此点在第4章中有详尽说明），这样东部地区依赖集聚加速

了经济增长，而西部地区却缺乏集聚的推动，经济增长缓慢，于是东西部的差距必然会越来越大，形成两极分化的局面。

第 6 章对中国区域经济发展差距进行实证分析。

本章第 1 节对中国区域发展差距的历史演变进行描述性的统计分析，通过 GDP 增长率、GDP 绝对值及人均 GDP 三项指标来比较东、中、西部三大地区的经济发展水平。1979—1990 年，东、中、西部地区在三项指标上的差距并不大，而 1991—2004 年，东部逐渐与中西部地区拉开差距，并且差距呈加速扩大趋势。1990 年是区域差距由下降趋势转为上升趋势的分水岭。

第 2 节采用以人口加权的变异系数 CV_w 对中国区域差距的变动进行了具体测度。实证分析表明：1978—1990 年，中国区域差距基本上表现出下降趋势。1990 年后，区域差距明显扩大，尽管其间有小幅波动，但上升是总的趋势和方向。尤其是东、中、西部三大地区间的差距扩大趋势，是非常明显的，值得重视。同时，我们还对区域差距进行了国际比较。各发达国家历史上地区差距最严重的国家是 1930 年的瑞典，其加权变异系数为 0.539。而 2003 年，中国的省际 CV_w 高达 0.6104，虽然 2004 年略有下降，但也仍然保持在 0.59 以上，远超过各发达国家历史上地区差距最严重时期的水平。可见，中国区域经济发展的非均衡程度已是相当之大，必须采取措施遏制并改善这种局面。

第 3 节采用区域发展差距函数和面板数据（panel data）方法，对中国区域发展差距的变动趋势进行了实证检验。检验表明，威廉姆森（Williamson，1965）的“倒 U 形”假说在中国并不成立，至少到目前为止，中国的区域差距还未表现出先扩大后缩小的趋势，反倒是先缩小后扩大，符合阿莫斯（Amos，1988）

的“倒S形”模式。这说明中国经济出现了空间的再结构化。20世纪80年代，发达国家也出现空间经济再结构化现象，主要是缘于以高新技术为主的新兴产业向特定区域集中，而中国的空间经济再结构化则主要是因为20世纪90年代以来工业特别是制造业的集中发展，两者有所区别。应该说，中国正循着发达国家走过的道路前进。

阿莫斯关于新产业发展与区域经济不平衡增长的观点是有其形成条件的。首先，在一定的时空范围内，不平衡的程度必须保持在一定的限度内。其次，在由不平衡转向平衡的过程中，需要政府引导甚至主导这一过程。否则，单纯依靠市场调节，阿莫斯所说的平衡与不平衡交替发展的局面能否看到，恐怕还值得商榷。

最后一章提出产业集聚与区域协调发展的政策建议。该章以信息产业集群为例，对当前中国产业集群的分布格局及其形成原因进行分析，对现有格局进行反思，并就产业集群的布局调整及西部工业发展提出了针对性的政策建议。

关键词： 产业集聚　经济增长　区域差距　非均衡
制造业　集群　极化　扩散

Abstract

This dissertation aims at drilling new content from an old topic. It is so much to talk about the positive effect of industrial agglomeration, such as the promotion for the economic growth. However, it is rarely to be discussed for its negative effect such as the acceleration for the regional disparity. The dissertation focuses on this issue and tries to fill up the blank in this research field.

Industrial agglomeration brings about the regional economic growth as well as the regional disparity. It is the same as the well known 'Marshall Conflict' which means the efforts on the scale economy would lead to the monopoly, whereas the monopoly would restrain the competition vigor. The development of industrial agglomeration would contribute to the regional economic growth, but also enlarges the regional disparity which would do harm to the whole economy efficiency. The regional disparity should be refined in a certain degree, or a series of problem

would happen even the social turbulence just as the Latin America's evidence.

At present, China's regional disparity is becoming so serious that attracts much attention. In accordance with the 'east-middle-west' three geographical division, the disparity between the east and the west is especially sharp which made the central government attach highly importance and take quick response, such as the harmonious society's construction, 'five balance' policy and the design in the 'eleventh five years' development strategy for the region's harmonious growth so as to reduce the disparity.

The empirical research is the core of the dissertation. Several kinds of econometric methods are synthetically applied and econometric models are constructed. The job on the data's analysis is too much so that five kinds of mathematics and statistics software help to accomplish it. The software of Maple 10 and MATLAB7.01 is used for data's computation, the SPSS13.0, Eviews 5.0 and Stata 8.0 respectively responsible for multiple statistical analysis, time series analysis and panel data model.

The dissertation is divided into seven chapters, the main idea for each is as follows:

The first chapter is the guideline sector. It states the background of theme and makes a whole introduction for the dissertation.

The second and third chapter are theoretical foundation sectors, respectively give an introduction and review of the relative

theory for industrial agglomeration and regional economic growth. The two chapters provide the theoretical support for the latter research.

The fourth to Sixth chapter are hard cores of the dissertation, of course, it is also the part of strong technology. The detailed contents are as follows:

The fourth chapter makes an empirical research on China's manufacturing industrial agglomeration.

This chapter measures the agglomeration degree of China's twenty manufacturing industries in 1993, 1997, 2002 and 2003 by means of the index of industry concentration constructed by Ellision and Glaeser and concentration degree of the regions whose manufacture sales incomes rank the top five. The conclusion indicates that the agglomeration degree descended from 1993 -1997 and ascended from 1997 - 2002 - 2003. The raise of the agglomeration degree is the main development trend.

In the eleven years from 1993 to 2003, for the 15 of 20 industries, the index of industry concentration ascends, the other five descends. The industries with sharp rising degree mostly belongs to technology intensive industry, little to the mature industry. The ones with descending degree are basically resource intensive industry. It's easy to say the agglomeration degree's ascending is the main development trend because the ascending degree excels the descending degree.

From the point view of the agglomeration industry, Manu-

facture of Electronic and Communication Equipment, Manufacture of Measuring Instruments and Machinery for Cultural Activity and Office Work, Manufacture of Electrical Machinery and Equipment ranked the top three of industrial agglomeration degree. Especially the Manufacture of Electronic and Communication Equipment got the top one. The industries are sorted to the following categories: technology intensive industry-capital intensive industry-labor intensive industry by the descending agglomeration degree.

From the view of the agglomerate region, the regional distribution is sharply unbalanced and polarization is serious. The five provinces of Jiangsu, Guangdong, Shandong, Zhejiang, Shanghai are the main manufacturing agglomerate regions, the other provinces as Henan, Liaoning, Hebei, Beijing, Fujian are called the following team. The technology intensive industries are distributed more in the above regions, seldom in the others, especially least in the western remote areas. While the economy development is stimulated by industrial agglomeration, the polarization among regions also comes out and finally attributes to the efficiency comedown. How to strengthen the spread effect to reduce the regional disparity has been the key problem for industrial agglomeration development.

The Manufacture of Electronic and Communication Equipment is the typical industrial cluster with the highest agglomeration degree. As a whole, the agglomeration degree of manufac-

turing industry has a strong positive correlation with the industry growth. It's defined the growth-agglomeration elasticity to reflect the different impact for the industry growth from the different agglomeration degree which can give us more reference to evaluate the cluster.

The fifth chapter made the theoretical and practical analysis to industrial agglomeration and the region economic growth.

Firstly, industrial agglomeration has the internal system to promote the region economic growth. Industrial agglomeration is basically one kind of production organization approach with great efficiency which combines the industry development and the region economy through division specialization and the transaction convenience.

Secondly, the empirical research also convicts our answer. We choose the Manufacture of Textile in Jiangsu, the Manufacture of Electronic and Communication Equipment in Guangdong, the Processing Food in Shandong, the Manufacture of Chemical Fibers in Zhejiang, the Manufacture of Transport Equipment in Shanghai as the samples and make a empirical research for the relation between industrial agglomeration and region economic growth by the use of the 17 years' time serial data from 1987 to 2003. The result indicates that the other four provinces industrial agglomeration level has a long-term stable equilibrium relation with their economic growth except that shanghai can't pass the co-integration test because of the problem of data quality. It

proves that industrial agglomeration has a strong positive correlation with regional economic growth. Industrial agglomeration promotes economic growth as well as sharpen regional disparity.

Now we are still in the industrialization, the manufacture plays a principle part in industries, which is still the main impetus for the economy development. The manufacture always exists in the shape of agglomeration, so the agglomeration becomes the main form to boost economy. In China, most of the clusters converge in the east, seldom in the west (elaborated in the fourth chapter). The east gets the fast economic growth depending on agglomeration, while the western growth is slower lack of the agglomeration effect, so that the disparity becomes more serious, then the polarization comes into being.

The sixth chapter makes an empirical analysis on china's regional disparity.

The first section made a statistical analysis on the disparity's historical evolvement. The east-middle-west economic growth level has been compared through three indexes, which are rate of GDP, GDP absolute value and per capita GDP. From 1979 to 1990, the disparity index is not large, but from 1991 to 2004, the middle and the west start to accelerate to lag the east. The year of 1990 is the shed for the disparity trend turns from increasing to decreasing.

The second section made a detailed measure for the regional disparity by CV_w (Coefficient of Variance weighed by popula-

tion) . The result is as same as the former section. After 1990, the disparity between three areas has a ascending trend, which is worthy of our great regard. Meanwhile, we made an international comparison, which indicated China's CV_w had already greatly exceeded that of any other developed countries' worst time. Obviously, something must be taken to deal with the issue.

The third section made a empirical research on fluctuation trend of China's regional disparity with the function of regional disparity and panel data model. It turns out china's reality doesn't match with Williamson's 'reverse U' mode, until now, the disparity in China has not developed as enlarging firstly reducing secondly, whereas it's accord with the Amos's 'reverse S' imagination as reducing firstly enlarging secondly. It's explained the space restructured in China which also happened in the developed countries that derived from the rising industries with new technology convergence to certain areas. China's space restructure is just because of the manufacture agglomeration since 1990 which should be regarded as a sign for China's development following developed countries' path.

Amos's 'reverse S' mode should be defined under several premise. Firstly, the disequilibria level should remain a certain degree. Secondly, during the converting process from disequilibrium to equilibrium, the government should lead even dominate it, or it can't work out just depending on the market adjustment.

The last chapter puts forward the suggestions for industrial

agglomeration and region development harmoniously.

The chapter analyses the distribution of China's industrial agglomeration and its form reason as an example of information industry and puts forward the policy recommendations of pertinence on arrangement adjustment of industrial clusters and western industrial development.

Key words: Industrial Agglomeration; Economic Growth; Regional Disparity; Disequilibrium; Manufacturing Industry; Cluster; Polarization; Spread