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Industry Agglomeration and the Evolution of
Agglomeration Economic Circle

胡晨光 著



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摘 要

集聚经济圈是国家参与国际竞争的重要空间载体。发展集聚经济圈,促进产业集聚是国家提升国际竞争力的有效手段。现有有关产业集聚的文献对集聚经济圈演进过程中产业集聚的动力、效应与演化等规律的研究还存在一些空白和局限,因此,从理论与实证层面研究这些文献,对区域经济学理论发展和集聚经济圈的建设而言,具有重要理论价值和现实意义。

改革开放以来,中国长江三角洲集聚经济圈近 30 年经济的高速增长和产业集聚,为研究集聚经济圈的发展、形成与演变等规律,提供了实证样本和发展典范。本研究立足于集聚经济圈的产业集聚,着眼区域、产业与产业集聚三者相互关系,按照区域要素优势—政府推动—内生集聚—集聚效应—动态演化这样的研究逻辑,研究集聚经济圈发展、形成与演变过程中产业集聚的集聚动力、效应与演化等内在规律,构建反映集聚经济圈产业集聚、演进规律的相关理论体系。

本研究分五个部分,共八章。

第一部分为导论。理论界有关产业集聚的研究,虽然取得了丰硕成果,但仍然存在进一步研究的必要。研究集聚经济圈产业集聚动力、效应与演化规律,须在对现有各种产业集聚理论进行比较的基础上,发现不足,明确进一步研究的方向,这构成项目研究的第一部分,即第 1 章。具体内容包括三方面:一是阐述选题背景和意义,对现有有关产业集聚原因、机制、效应与演化等文献进行综述,明确现有研究的局限;二是对后续研究中使用的集聚经济圈、产业集聚与区域要素优势的范畴进行界定;三是阐述研究目标、研究内容、研究方法和研究创新。

第二部分对集聚经济圈产业集聚动力进行研究,包括第 2 章和第 3 章,分别通过区域要素优势的分析框架和系统的分析方法研究集聚经济圈产业集聚的源动力与外部动力。

第三部分研究集聚经济圈产业集聚的集聚效应,包括第 4 章、第 5 章,

通过理论和实证分析研究集聚经济圈产业集聚的地区经济发展效应、技术进步效应、索洛剩余递增与规模报酬递减效应,以及集聚经济圈点轴增长、分权竞争等因素给集聚经济圈内部带来的非均衡发展效应和产业同构效应。

第四部分从集聚经济圈整体的视角研究经济圈产业集聚演化过程中集群产业的扩散转型,产业在集聚经济圈内部集聚竞争与转移,以及集聚经济圈竞争力的提升等问题,包括第6章与第7章。

第五部分总结前文各章的研究,深化研究的论题,突出研究的理论价值及现实意义,特别是对于中国当前正在实施的中部崛起与西部开发发展战略的理论借鉴与实践参考意义,构成研究第8章。

各章在内容上相对独立,但又具有紧密联系,构成集聚经济圈产业集聚、演进的理论体系。集聚动力、集聚效应、集聚演化构成集聚经济圈产业集聚的主要内容,三者相互联系,相互区别:集聚经济圈的产业集聚建立在集聚动力的基础上,产业一旦集聚就将影响集聚经济圈区域经济的发展环境,促进区域技术进步,改变区域经济增长的空间结构与产业绩效,促成区域产业的产业演化与空间演化。某种程度上,产业集聚的产业演化与空间演化构成集聚经济圈产业集聚效应的一部分。

与国内外现有研究相比,本研究的主要创新有:

1. 研究视角的创新

现有文献没有从集聚经济圈整体及其要素优势的视角去考察集聚经济圈中心—外围式产业集聚的集聚动力、效应与演进特征,本研究从集聚经济圈整体及其要素优势的视角去研究产业集聚的集聚动力与演进特征问题,更能全面地把握集聚经济圈产业集聚的规律性。

2. 研究内容的创新

(1) 提出了社会关系的“逆嵌入性”范畴,基于这一范畴,论述了集聚经济圈产业集聚的源动力以集聚经济圈基于社会关系“嵌入性”的人力资本、技术资本以及实物资本等要素禀赋的“异质性”双重分工优势为内容。这不同于现有通过偶然性扰动、外部性或者区域创新条件等阐述集聚经济圈产业集聚源动力的论述。

(2) 为分析集聚经济圈产业集聚外部动力问题,提供了一个“有为政府”的分析框架,认为政府通过政策手段改变了集聚经济圈产业外在的发展环境,从而改变了其要素禀赋的使用与发展方向,发挥了其要素禀赋在国际分工中的比较优势,促成了集聚经济圈的产业集聚,成为集聚经济圈产业集聚的外部动力。这不同于现有文献对政府在促进产业集聚作用方面比较片面的研究,这些文献认为政府对产业集聚的促进作用不明确,或者

有严格的约束条件。

(3) 在借鉴新古典增长分析框架基础上提出了垄断竞争增长的分析框架,根据时间序列数据从宏观增长的视角研究了集聚经济圈产业集聚的地区发展效应,认为集聚带来经济发展、技术进步和市场竞争三类集聚效应。与新经济地理学有关产业集聚效率源于规模报酬递增观点不同,研究提出和论证了产业集聚地区索洛剩余是市场竞争程度函数的假说,认为产业集聚过程未必存在规模报酬递增。

(4) 基于次区域城市“异质性”比较优势,通过基尼指数、泰勒指数的分析,结合增长收敛解构了集聚经济圈内部次区域产业集聚点轴增长的空间黑箱;同时基于工业化进程的差异,研究了次区域产业同构的机理。研究认为,集聚经济圈内部的产业集聚是一种非均衡增长;城市之间收入差距的存在具有合理性,它反映其内部城市的点轴增长特征,不存在绝对收敛与条件收敛。

(5) 与现有文献强调单一集群产业竞争引起资源稀缺或者制度锁定、路径依赖等因素导致集群产业衰退理论不同,研究认为全球化背景下集聚经济圈多元化集群产业的发展存在由协调发展到竞争排斥的趋势,其工业化进程、产业结构演化和多元化集群产业的集聚竞争是促进集聚经济圈低层次集群产业价值链低端环节向外扩散与集群产业结构转型的主要原因,经济圈集群产业的发展要顺应这一趋势。

(6) 修正区位商统计方法,提出了“区位商—产业部门增长率”主导产业的判断法,基于此提出和论证了集聚经济圈次区域主导产业倒 U 形演进假说,提炼出集聚经济圈次区域主导产业集聚论。研究认为:高速增长集聚经济圈竞争力提升关键在于按次区域主导产业倒 U 形演进规律和次区域之间工业化进程的差异,实现主导产业在次区域之间按“雁行状态”的转移。

3. 研究方法的创新

(1) 基于集聚经济圈要素禀赋在世界经济格局中双重分工优势的分析框架和系统的分析方法等,分析了集聚经济圈产业集聚的集聚动力、效应与演进特征。

(2) 通过成本—收益的分析框架,引入种群竞争模型,揭示了集聚经济圈多种群集群产业由协调发展到扩散转型的内在驱动机制和转型路径、转型条件。

Abstract

Agglomeration Economic Circle is an important carrier for a nation to participate in international economic competition. To develop Agglomeration Economic Circle can help to promote industry agglomeration and strengthen national competitiveness. However, based on literatures about industry agglomeration, like the literatures about the laws of power, effects and evolution of industry agglomeration, the author discovered that the above topics can be extendedly studied. As a matter of fact, these extended researches can contribute to, theoretically and empirically, the development of Regional Economics theory as well as the practice of Agglomeration Economic Circle.

Since China's reform and opening-up, the fast economic growth and industry agglomeration for almost 30 years in the Yangtze River delta have offered an empirical sample and a model of development for studying the laws of formation, development and evolution of Agglomeration Economic Circle.

Based on the industry agglomeration of Agglomeration Economic Circle and the correlation among the region, industry and industry agglomeration, this book mainly studies the inherent laws of industry agglomeration during the process of its formation, development and evolution, such as its power, effects and evolution. And at the same time this book elaborates the relevant theoretical system concerning industry agglomeration of Agglomeration Economic Circle and the law of evolution. The research logic route of this book is that factor endowments comparative advantage of territory comes first, followed by the government's push, endogenous industry agglomeration, agglomeration effect and dynamic evolution.

This book is divided into five parts, including eight chapters.

Part 1 is the introduction part. Though there are many theoretical researches about industry agglomeration, it is necessary to research further the industry agglomeration. To study the laws of power, effects and evolution of Agglomeration Economic Circle, the author needs to compare various theories, find out the current limitations and pinpoint the direction of future researches, which constitute the first part of this book, Chapter 1. Chapter 1 first elaborates the background information and meaning of this study and summarizes related literatures about the power, mechanism, effects, measurement and evolution of industry agglomeration so as to know the limitations clearly. Secondly, it also defines the concepts of Agglomeration Economic Circle, industry agglomeration and factor endowments advantage of territory. Thirdly, it elaborates the research objectives, research contents, research methods and research framework.

The second part of this book studies the power of industry agglomeration of Agglomeration Economic Circle, including chapter 2 and chapter 3. The two chapters study the source power and external power of industry agglomeration respectively in the analysis framework of factor endowments advantage of territory as well as systemic analytical methods.

The third part including chapter 4 and chapter 5, analyzes the agglomeration effect of industrial agglomeration of Agglomeration Economic Circle. Through theoretical and empirical study, it analyses six types of industry agglomeration effects, including the effect of territory economic development and technical progress, the effect of Solow Residual Increasing and Scale-Return Decreasing of Agglomeration Economic Circle, and the effect of unbalanced development and the effect of the industrial isomorphism in Agglomeration Economic Circle which were caused by some factors such as point-axis economy growth and fiscal decentralization.

Based on the perspective of the Agglomeration Economic Circle, Part four, which consists of chapter 6 and chapter 7, analyzes some problems, such as the industry cluster transformation and diffusion, industry agglomeration competition and transfer in sub-region of Agglomeration Economic Circle, and promotion of the competitive ability of Agglomeration Economic Circle.

The fifth part summarizes the related conclusions of previous chapters, deepens this research topic, emphasizes the theory significance of this research, and practice significance on the economic development of countries in the world, especially on the implementation of China's current economic development of the central and the western region. This is in Chapter 8.

The contents of each chapter of this book are relatively independent, but also closely connected, constituting the theory system of agglomeration and evolution of economic circle. The industry agglomeration research content of Agglomeration Economic Circle includes the three aspects: agglomeration power, agglomeration effect and agglomeration evolution, which differ from each other and are often intertwined. The industry agglomeration depends on the agglomeration power. Once the industry agglomeration is launched by the agglomeration power, it will change the development environment of territory economy, facilitating the territory technical progress, improving the industry space structure and performance of agglomeration, and resulting in the industry and space evolution of agglomeration, which makes up part content of agglomeration effect of Agglomeration Economic Circle in some sense.

Compared with literatures, this book may contribute to innovations in following aspects:

(1) Innovation of research perspective

Literatures don't examine the agglomeration force, effect, and evolution characteristics of Agglomeration Economic Circle, which play a core in core-periphery system, from the perspective of the Agglomeration Economic Circle and its factor endowments advantage. This book studies agglomeration power, effects and evolution characteristics from the perspective of the Agglomeration Economic Circle and its factor endowments advantage, so it grasps the industry agglomeration laws of Agglomeration Economic Circle better. The conclusion is different from those literatures interpreting it by the contingency disturbance, externality or regional innovation.

(2) Innovation of research contents

① This book proposes the inverse embedded concept. On the basis of

this concept, this book discusses the driving force of industry agglomeration, which believes the source power of industry agglomeration comes from the territory factor endowments comparative advantage. The advantage of division of production roots in the territory heterogeneity comparative advantage of factor endowments in the double open world market and the dual international division of production, such as human capital, technical capital and physical capital.

② It provides an analysis structure of a capable government to analyze the external power of industry agglomeration of Agglomeration Economic Circle. It believes that through policies the government changes the external environment of Agglomeration Economic Circle industry, thus changing the use and development direction of its factor endowments, exploiting comparative advantages of territory factor endowments in international division of production, and enhancing the agglomeration of Agglomeration Economic Circle. A conclusion can be drawn that government acts as an external power for the agglomeration of Agglomeration Economic Circle. This is different from the partial analysis of literatures on the role played by government in promoting agglomeration, which consider that the government's impact on agglomeration is uncertain or with strict constraints.

③ Based on the neoclassical analysis framework about economic growth, this book puts forward a monopolistic competition growth framework, which, according to time data and from a macro growth perspective, analyzes the territory development effect of industry agglomeration in Agglomeration Economic Circle. It believes that the industry Agglomeration can bring three effects, including economic development, technical progress, and market competition. Unlike some conclusion on agglomeration efficiency related to new economic geography, this book proposes and demonstrates increasing Solow Residual of agglomeration region is the function of market competition degree, and there is not necessarily increase in scale returns in the course of industry agglomeration.

④ Based on the sub-urban heterogeneity factor endowments comparative advantage and combining analyzing tool of convergence, Gini index and Taylor index, this book interprets sub-regional space black box of of

point-axis growth characteristics of industry agglomeration in the Agglomeration Economic Circle. Meanwhile, based on the discrepancy of industrialization process, it studies mechanism of industrial isomorphism in the Agglomeration Economic Circle. According to the author, the industry agglomeration process of agglomeration economic circle is non-balanced growth process and the existence of urban income gap is reasonable, which reflects point-axis characteristics of economic growth, there are no 'absolute' absolute convergence and conditional convergence.

⑤ Unlike those literatures emphasizing that unilateral industrial cluster competition causes resource shortage, or factors as institution locking and route dependence give rise to decline of cluster industry, the book proposes, against the world Globalization, there is relationship of changing from coordination to excluding each other in development of plural cluster industry of Agglomeration Economic Circle. Agglomeration competition of industrialization process, industrial structure evolution, and plural cluster industry in Agglomeration Economic Circle is the main reason for promoting value chain of low-end section of low-level cluster industry of Agglomeration Economic Circle to spreading outside and its structural transformation. And the development of cluster industry needs to comply with this trend.

⑥ improving location quotient statistical method, this book proposes the judgment method of "location quotient- industry department increase rate "dominating industry. Based on that, this book put forwards and demonstrates reverse-U the evolution hypothesis and proposes the agglomeration theory of sub-region dominating industry in Agglomeration Economic Circle. According to the author, the key about competitive promotion of Agglomeration Economic Circle of high-speed growth mainly lies in complying with the reverse-U evolution principle of the sub-region dominating industry and the discrepancy in industrialization process in sub-region, transferring dominating industry in sub-region in accordance with Flying Geese Model.

(3) Innovation of research methods

① Based on the analysis framework of the comparative advantage of factor endowments in dual international division of production system and

systematical analysis methods, this book analyzes agglomeration power, effects and evolution characteristics of Agglomeration Economic Circle.

② Through cost-return analysis framework and introducing population competition model, this book reveals the internal driving mechanism, transformation route and transformation conditions of cluster industry from coordination development to spreading transformation in Agglomeration Economic Circle.

Keywords: Industry agglomeration; Agglomeration Economic Circle; Agglomeration law; Agglomeration effect; Agglomeration evolution

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第1章 导论

1.1 选题背景

1.1.1 全球化中的产业集聚

随着现代交通通讯技术的发展,全球化浪潮已深刻地影响了全球的生产、分配、交换和要素流动。在全球化的浪潮中,世界 GDP 日益集中在少数发达国家。根据《国际统计年鉴》发布的世界各国 GDP 数据,2009 年在世界上 200 多个国家和地区中,处于发达资本主义国家行列的西方七国集团 GDP 以购买力平价计算占全球 GDP 的 40%,以美元计价的 GDP 则占到全球 GDP 的 52.78%;如果从经合组织成员国 21 个国家和地区考察,按购买力平价计算,其成员国 2009 年 GDP 占全球的 52.32%,以美元计价 GDP 占全球 GDP 的 67.87%。发达的西方七国, GDP 又向经济富有活力的经济圈集中。根据美国经济分析局数据,2009 年美国 GDP 排名前 11 的州以占美国 22.76% 的国土面积生产了美国 GDP 总量的 58.16%。^① 根据《日本统计年鉴》数据,2008 年日本大东京区、阪神区、名古屋区三大城市群以占 33.16% 的日本国土面积生产了日本 GDP 总量的 72.65%^②。作为亚太经合组织成员国与世界最大发展中国家的中国,在经济高速增长与发展过程中,也呈现了显著的产业集聚特征。改革开放近 30 年来,中国经济增长的核心主要是沿海发达地区三大产业集聚经济圈,包括长三角经济圈(上海、江苏、浙江)、华南经济圈(广东、福建),环渤海经济圈(京津冀、辽宁、山东)。根据中国和地方省市相关年份的统计数据,2008 年中国三大集聚经济圈用不到中国 11% 的土地生

① 美国 GDP 排名前 11 的州包括加利福尼亚州、得克萨斯州、纽约州、佛罗里达州、伊利诺伊州、宾夕法尼亚州、新泽西州、俄亥俄州、弗吉尼亚州、北卡罗来纳州、佐治亚州,这些州大部分位于美国东部。

② 日本的统计数据来自《日本统计年鉴 2012》,三大城市群涵盖了统计表从茨城到和歌山县按序排列的 23 个地区。