小城镇公共基础设施地区差异与聚集规模研究

XIAOCHENGZHEN
GONGGONG JICHU SHESHI
DIQU CHAYI YU JUJI GUIMO YANJIU

谢长青 著

中国农业出版社

小城镇公共基础设施地区差异与聚集规模研究

谢长青 著

中国农业出版社

图书在版编目（CIP）数据

小城镇公共基础设施地区差异与聚集规模研究 / 谢长青著. —北京：中国农业出版社，2012.10
ISBN 978-7-109-17230-2

Ⅰ.①小… Ⅱ.①谢… Ⅲ.①小城镇-城市公用设施-基础设施建设-研究-中国 Ⅳ.①F299.24

中国版本图书馆 CIP 数据核字（2012）第 230038 号

中国农业出版社出版
（北京市朝阳区农展馆北路 2 号）
（邮政编码 100125）
责任编辑 刘明昌

中国农业出版社印刷厂印刷 新华书店北京发行所发行
2012 年 10 月第 1 版 2012 年 10 月北京第 1 次印刷

开本：850mm×1168mm 1/32 印张：7.125
字数：200 千字
定价：25.00 元
（凡本版图书出现印刷、装订错误，请向出版社发行部调换）

摘 要

诺贝尔奖得主斯蒂格里茨曾预言，中国的城市化与美国的高科技发展将是深刻影响21世纪人类发展的两大课题，中国城市化将成为区域经济增长的火车头。改革开放以来，两亿多农民转移到非农行业，为中国经济增长提供了巨大动力。林毅夫指出，只有减少乡村人口，才能从根本上解决中国农村和农业的发展问题，并为整个经济体制转型创造条件和提供空间。中国的城镇化既包括农村人口向大中城市转移，也包括向农村小城镇转移。多年来，大量农民工不断涌入东南沿海大城市，但小城镇对于转移农村劳动力同样具有十分重要的作用。按照发展经济学和城市经济学理论，公共基础设施对于小城镇以及区域经济具有重要的促进作用，但现实中公共基础设施的落后严重制约了小城镇经济功能的发挥。在此背景下，摸清我国小城镇公共基础设施地区差异、测算最优聚集规模，促进小城镇经济增长具有重要的理论与现实意义。

相关文献较多，但仍存在一些不足：国外对城市经济的研究大都基于发达国家发展模式，而对中国快速城市化背景下的城市规模效应研究不足；国内对城市规模效应的研究主要集中在人口规模方面，而对于基础设施规模的研究较少；对于城市经济的分析主要集中于大中城市，而对小城镇研究的较少；对于基础设施投资流量研究的较多，但对基础设施存量对经济增长贡献的研究较少；尤其是从区域差异视角，对小城镇基础设施存量规模经济效应进行系统的实证研究仍未见到。基于此，本书沿着地区差异—聚集—经济增长思路进行系统探索。

本研究首先运用基尼系数和泰尔指数方法，对我国各地小城

镇公共基础设施存量进行测算和评价，揭示其地区间差异。其次，基于城市经济聚集与规模经济理论，利用收益与成本模型，测算小城镇公共基础设施最优规模，并剖析影响小城镇最优规模的因素。再次，对影响各地区小城镇公共基础设施供给和需求的因素进行探讨，并运用计量经济方法检验影响因素的显著性。最后，利用生产函数模型测算公共基础设施对小城镇经济增长和城镇化（非农人口）的贡献程度，为我国各地区公共基础设施的投资确定重点提供决策支持。

本研究得出如下结论：一是我国小城镇公共基础设施存在着明显的地区差异，经济指标地区差异大于公共基础设施地区差异，按地理维度的地区差异大于按人口测算的地区差异，地理维度基尼系数均超过国际警戒线。二是小城镇公共基础设施规模净收益呈倒“U”形曲线，中西部地区小城镇基础设施政府支出成本较高，而东部地区小城镇居民生活成本支出较高。三是小镇人口规模达5万人左右时规模净收益最大，而我国大部分小城镇规模过小。四是城镇最优规模除了经济因素影响外，还受到诸多因素影响。五是政府财政决定公共基础设施的供给，而当地和域外需求决定公共基础设施的需求，现实中公共基础设施供求经常处于失衡状态。六是东部地区公共基础设施对我国小城镇经济增长贡献较大，民生类基础设施经济贡献度高于道路类基础设施，人口密度对小城镇经济增长作用也较明显。七是公共基础设施投资与小城镇人口非农化之间存在正向曲线关系，中部地区公共基础设施投资对小城镇人口非农化贡献效率较高，公共基础设施投资对小城镇人口非农化的贡献弹性有下降趋势。

由此提出以下对策及建议：一是采取各种手段，平衡小城镇公共基础设施地区差异，促进小城镇公共基础设施与经济协调发展。二是扩大小城镇人口规模，有侧重增加东、中、西地区公共基础设施供给，进一步满足各地区基础设施总量和结构需求。三是完善基层民主，改善小城镇公共基础设施供给与需求的非均衡

状态。四是兼顾公平与效率，调整小城镇投资的优先次序，优先保障民生设施供给。五是从效率角度，增加中部地区小城镇公共基础投资，推进人口城市化化进程；从协调区域发展角度，加大西部地区公共基础设施投资力度。六是控制小城镇数量，适当合并乡镇，扩大规模，实现基础设施资源共享。

本书特色体现在：一是借鉴城市经济学中最优城镇规模分析方法，对我国小城镇公共基础设施最优规模进行测算，发现小城镇也存在倒“U”形规模净收益曲线，为我国小城镇建设理论增加了新的实证材料。二是测算小城镇公共基础设施投资对小城镇非农人口增加的贡献弹性，进行三大经济带区域比较，得出中、西部地区弹性较大的结论，为区域公共投资决策提供了实证依据。三是评价了小城镇公共基础设施存量的地区差异，测算了公共基础设施资源配置的区域公平性，为制定我国区域协调发展政策提供了量化决策支持。

关键词：小城镇；公共产品；基础设施；地区差异；聚集；最优规模

Abstract

The Nobel prize winner Joseph Stiglitz has predicted that the high-tech development of the USA and the urbanization in China will become the most important two major issues which can impact on human development deeply in the 21st century. Since the reform and opening up, more than two hundred million farmers have shifted to non-agricultural industries, and provided a great power to China's economic growth.

Lin-Yifu pointed out that we can only solve the problem of rural and agriculture development fundamentally by reducing the rural population, which can also create conditions and spaces for the economic system transformation.

The urbanization of China includes not only the transfer of rural population to large and medium-sized cities but also the small towns in rural areas. Over the years, a large number of migrant workers swarm into developed southeast coastal big cities. But the small towns also have a very important role in the transfer of rural labor force. In accordance with the development economic and city economic theory, public infrastructure has an important role in promoting the small town and the regional economy, but the reality of public infrastructure backwardness seriously hampered the economic functions the small town. In this context, finding out the regional differences in public infrastructure in small towns in China, estimating the optimal aggregation scale, and promoting the economic growth in small

towns have important theoretical and practical significance.

There are many related literatures, but still some shortcomings: foreign study of the city's economy is largely based on the developed countries mode, but lacking of city size effect of China's rapid urbanization context; domestic research on the effects of city size is mainly concentrated in the population terms, but fewer research on the infrastructure; urban economic analysis focused on the large and medium-sized cities, fewer on small towns; more infrastructure investment flow study. But fewer on the economic contribution to which the stock of infrastructure do. Especially from the perspective of regional differences, systematic empirical studies have not yet seen the stock of economies of scale for small town infrastructure. This book is written along with the clue: regional differences-gathered systematically explore-economic growth ideas.

This study first use the Gene coefficient and Tell index method to measure and evaluate the stock of public infrastructure in small towns all over the country to reveal their regional differences. Secondly, based on urban economic theory of aggregation and economies of scale, using revenue and cost model to estimate the optimal size of the public infrastructure of small towns, we parse the optimal scale factors affecting small towns. Again, we explore the supply and demand factors affecting regional small town public infrastructure, and test the influence of the factors by application of econometric method. Finally, we calculate the contribution which the public infrastructure do to the small cities and towns' economic growth and urbanization (non-agriculture population) using the production function model. It also provides support to decide the

investment of the region public infrastructure in our country.

The study reached the following conclusions: First, the Chinese public infrastructure of small town has significant regional differences, and economic indicator area difference is bigger than the public infrastructure area difference. Furthermore, the regional difference of the geographic dimension is greater than the population estimates of regional differences, and geographic dimension Gene coefficient than the international warning line. The net income of the public infrastructure size in small towns shaped as Inverted U curve. The costs of the government spending of small towns infrastructure in mid-western is higher than the other areas, while the residents living costs of small town in eastern region is higher than the others. Third is that the best population size of a town is about 50,000, but most of our small towns are too small to reach this scale. Fourth, in addition to economic factor, there are other many other factors which affect the optimal scale of small towns. Fifth, the supply and demand of public infrastructure is often in an unbalanced state because the government decides the supply of public infrastructure, and local residents determine the needs of the public infrastructure, in reality, Sixth, in the eastern part of China, the public infrastructure contributes more to the small town economic, and people's livelihood class infrastructure affect the economic contribution than road class infrastructure. On the other way, population density is also obvious role of small-town economic growth. Seventh, there is correlation between the public investment in infrastructure and small town population of non-farm. Invest of central region public infrastructure in small town contribute higher to the urbanization than others. The

elasticity downward trend, that Public infrastructure invest affect the urbanization, has appeared.

Thus we put forward the following suggestions: First, various means were adopted to balance regional differences of public infrastructure in small town, and to promote the coordinated development of the public infrastructure and the small towns economy; Second, the government should expand the population scale of the small towns by increasing the public infrastructure supply to meet the needs of the gross and structure of the public infrastructure differently in different zones. Third is to improve the democracy at the grassroots level, and improve the imbalance situation of public infrastructure in small towns. Forth, focus on both equity and efficiency, investment priority should be adjusted for small town to protect the people's livelihood infrastructure supply.

The fifth suggestion is increasing the investment on middle small town public infrastructure to advance the proceedings of urbanization from the efficiency. From the point of regional economic coordination, we should increase the investment in western public infrastructure. Sixth, in order to share the public infrastructure and expand the scale, the small town should be merged appropriately.

This book has the following features: First, we adds new empirical material for the small towns theory that small towns presence of inverted "U" -type scale net gain curve in the optimal size of the small town public infrastructure, by the method of the optimal urban scale analysis of urban economics. The second, by measuring contribution flexibility between the invest of small town public infrastructure with the increasing of

non-agricultural population of small towns, we draw the conclusion that the central and western regions economic belts have greater flexibility than the eastern one, and provide an empirical basis for the regional public investment decisions. By evaluating the regional differences of public infrastructure stock in small towns, and estimating regional fairness of public infrastructure resource allocation, quantitative decision support have been provided for the development of coordinated regional development policy.

Key words: small towns; public goods; infrastructure; regional differences; aggregation; optimal size

目 录

第一章 导 论

1.1 研究背景与问题提出

“三农”问题是困扰我国经济发展和社会进步的核心问题之一，解决“三农”问题的根本出路在于大量减少农民数量，吸纳农村剩余劳动力，实现城镇化战略（牛文元，2005）。改革开放以来，我国城市化水平不断提高（2011 年城市化率达 51.3%），但目前我国城市（镇）人口和世界上其他同等人均收入的国家相比较，我国城市化水平还低许多。而且我国“城镇地区”实际上包括 2 万个小城镇。也就是说，在我国现有的 4 亿城镇人口中，有将近 2 亿人住在镇上[①]（王小鲁，2002），这说明我国现有城市化水平质量还有待提高。为加快我国城市化发展，一些学者（王小鲁，夏小林，1999）主张我国应该发展大中城市[②]，也有不少学者（费孝通等）主张发展农村小城镇，理论分歧很大。从改革开放的实践看，农村小城镇不断壮大。在全国城市人口中，建制镇非农业人口 2.56 亿人，占 49.2%，说明实践中，城市化水平有一半是靠小城镇支撑着。

---

① 王小鲁．让大城市多起来．中国改革，2002（7）．

② 武力．中国城市化进程研究．2004．转引世界银行出版的《1984 年世界发展报告》观点，城镇只有达到 15 万人的规模才会出现集聚效益，并且“从来还不清楚地证实城镇大到什么程度会出现不经济的现象”。从国际经验来看，人均 GDP 在 3 000 美元以下时，如果没有特殊的限制或壁垒，人口和经济主要是向大城市集中，这是城市化的一般规律。