



中国浦东干部学院博士文库（第二辑）

中国信息产业集群 发展研究

李 怡·著

Research on China's Information Industry Cluster Development



上海社会科学院出版社



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总 序

P R E F A C E

创办中国浦东、井冈山、延安干部学院，是党中央从推进中国特色社会主义伟大事业和党的建设新的伟大工程全局出发作出的一项重大决策。

中国浦东干部学院自2005年3月正式开办以来，按照胡锦涛总书记提出的联系实际创新路、加强培训求实效的指示精神，秉承实事求是、与时俱进、艰苦奋斗、执政为民的办学要求，以把学院办成中国共产党领导骨干的信念教育和开放教育基地、全国干部教育培训体制改革创新基地、中国干部教育培训国际化基地为目标，努力探索干部教育培训的浦东模式，取得了较为突出的业绩，正在向世界一流的执政党骨干和国家公务员培训学院的方向稳步迈进。

办好一所学院的关键是教师。人才是事业之本，人才兴则事业兴、事业旺。“所谓大学者，非大楼之谓也，有大师之谓也”，这句话对中国浦东干部学院来讲同样有指导意义。中国浦东干部学院汇集了一批优秀的教师，他们当中，既有国外学成归来的学子，也有来自国内著名高校、科研机

构的青年才俊。他们有火热的创业激情,有对干部教育培训事业的执著和热爱。他们大多拥有博士学位,在自己所属的学科领域已崭露头角。这支队伍是建设好中国浦东干部学院的人才支持和智力保证。为他们搭建平台,促进他们成长,引领他们发展,是学院义不容辞的职责。

支撑一所学院的基础是学术。学院之称,有学科、学养、学理之意蕴。没有了学术,学院也就失却了原动力和根基。中国浦东干部学院创办以来,坚决贯彻并创造性地执行中央的战略决策和一系列办学要求,明确了教育培训、科学研究、咨询服务、领导测评、网络教育五位一体的功能定位,突出强调了学术研究、学科建设在学院发展中的重要地位。整合学术资源、加强学科建设对学院发展至关重要。

体现一所学院办学水平的重要标志是品牌。品牌汇集了办学的智慧,凝聚了办学的精华,同时也提升了学院的美誉度。中国浦东干部学院以问题为核心,以能力为导向,以现场教学资源为依托,自创办以来培训了大批学员,培训成果显著,一批具有较高质量的课程品牌、教学品牌正在形成。从一所学院的发展来看,既要有教学的品牌,也要有科研的品牌;既要有品牌学员,也要有品牌教员;而这一切都需要长期积累。求木之长必先固其本。积累品牌素材,探寻品牌来源,滋养品牌发展,是学院发展的长远大计。

基于上述认识,我们组织出版了这套中国浦东干部学院博士文库。入选文库的书稿均为学院青年教研人员的博

士学位论文,并经过了严格的“双盲”评审。作者根据评审意见和所论问题的发展以及研究的深化,都进行了认真修改,可以说基本反映了所论问题的学科前沿。我们希望,这套分辑出版的文库能开启和激励我们的后续研究,促进学院自身研究特色和学术传统的形成,促进相关学科领域的建设,促进学术交流与繁荣。

文库的出版得到了上海社会科学院出版社领导和编辑同志的鼎力支持和帮助,借此表示诚挚谢意。同时,对为文库的建设作出贡献的评审专家和付出辛劳的同志表示诚挚的感谢。

文库中存在的不足,敬恳广大读者批评指正。

中国浦东干部学院博士文库编委会

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前 言

信息产业是中国近年来增长最快、利用外资最多行业之一，加之政府对信息产业的重点扶持和对走“以信息化带动工业化，以工业化促进信息化”的新型工业化道路的极力倡导，使得学界对国内外信息产业发展脉络、信息产业集群形成、存在形式和演变规律，以及未来中国信息产业发展的路径选择等问题作出精心梳理和深入研究，就显得尤为紧迫和必要。

本书锁定于中国信息产业集群作为研究对象，并以西方的经济学家、管理学家、社会学家和心理学家诸如克鲁格曼新经济地理学、波特钻石理论、经济社会学的社会资本和社会网络理论等产业集群理论为支撑，容纳了东方管理学派的某些思想，提出所谓的“信息产业集群”，是指大量信息技术设备制造业和信息服务企业及相关支撑企业在一定地域范围内的集聚和集中乃至于耦合。

基于此，书中将中国与欧美、宏观与微观有机结合并着重从三个层面对信息产业集群进行剖析：理论层面上，依据信息产业的经济技术特性，试图以利润驱动、技术创新与商业意识、创业精神、以信息企业为主的创新网络、风险投资等资金的可获得性、社会资本与信任机制、路径依赖与历史偶然、劳动力素质 8 个要素去建立一个信息产业集群“多因素分析模型”。并对信息产业集



群的动态平衡过程、生命周期及其网络结构加以探究。

定量分析层面,采用了美国经济学家艾利森(Ellison)和格莱赛(Glaeser)的地理集中指数来测定中国信息产业集群集聚程度。并且根据我国发布的统计资料,对此方法作了适应性的调整和修正,同时还借用市场集中度CR指标的计算方法,提出了5省市集中度的概念,对地理集中指数进行了验证。计算结果一方面表明,电子及通信设备制造业与其他制造行业相比,产业集聚程度最高;另一方面也证实了信息产业集群程度与工业总产值之间存在高度正相关性。以此定量分析为基础,对珠江三角洲、长江三角洲、京津环渤海和厦门福州沿海地区四大信息产业集群格局成因进行分析,及中国信息产业结构布局未来走向提出可行性的合理化建议。

个案分析上,对比分析和评价了美国硅谷、北京中关村、上海漕河泾三地的信息产业集群发展态势。认为美国硅谷是世界信息产业的核心区,也是迄今为止发展最为成熟的信息产业集群。其发展给我们带来了正反两方面的经验:一方面,它的成功因素值得我们借鉴,尤其是其完善的市场制度和创新环境的培育。另一方面,市场机制过度发挥也会带来非理性投资和生产过剩问题。此外,经济的发展还需考虑到社会因素,只有全面追求人与自然的和谐才能持续发展。北京中关村和上海漕河泾是我国信息产业集群发展较好的案例,对于分析我国信息产业集群形成因素和外资的作用具有代表性。两者的管理模式不大相同,前者属于政府管理型,后者属于公司管理型。总体而言,它们都是在政府政策优势的基础上“导入”产生的。与硅谷相比,还存在重复建设、创新力弱等问题。

最后,对信息产业集群进行了政策层面上的分析,强调在信

息产业集群发展的不同阶段,正确定位政府的角色;具体制定政策时要以超边际分析、东方管理哲学和因地制宜为指导思想;健全我国风险投资机制;解决信息产业集群制度创新问题;克服重复建设所带来的恶性竞争;区域政策与产业政策相结合;强化企业间合作和提高创新网络的本地根植性。

Abstract

At present, the information industry is one of the industry in our country which increases fastest and utilizes the most of the foreign capitals. And it has already become the pillar industry of our country. Show according to the statistics that Chinese Ministry of Information Industry announce, in the past 10 years, China IT industry's average annual growth rate has exceeded 32%. Meanwhile, our government regards information industry as the trade developed especially too. Point out in report of 16th National Congress of Communist Party of China, our country will take the new industrialized development path and insist on using informationization to bring along industrialization, promote the informationization with industrialization. So, develop the information industry, foster new growth engines is an urgent strategic task to promote the economic development of our country and social progress. Make a general survey of the domestic and international information industry develop journey, the information industry develops and participates in the market competition in the form of cluster, demonstrating great economic vigor.

This text establishes the cluster of Chinese information indus-

try as the research object, which involves two concepts: Information industry and cluster of the industry. Industry's cluster is the hot subject which the domestic and international academia studies in recent years. Economist, management scholars, sociologist and psychologist go on deep research to industry's cluster. The main representative's theory is as follows: new economic geography of Krugman, Potter's diamond theory, the social capital and social network theory of economic sociology. This text has draw lessons from some thoughts of the eastern management, and analyzed our country's unique social economic system background deeply in order to make the western industry cluster theory localization. It is a global trend to develop the information industry. But there has not had an authoritative and unified definition to the information industry yet. According to the research purpose of this text, we think the information industry include the products manufacturing industry of information and service trade of information. Products manufacturing industry of information refers to information and micro-electric technique, such relevant information equipment and device manufacturing as the photoelectron technology, technology of the computer, multimedia technology, communication technology, etc. , if radar manufacturing industry, the equipment manufacturing industry of the broadcast and television, manufacturing industry of electronic utensil of daily do not belong to the category of research in this text. In fact, the products manufacturing industry of information can think it is the department offering the hardware for service trade of information. The service trade of information refers to software service trade, computer information processing indus-

try, database industry, network service trade, consultation, etc. , do not include such service departments of information as post and telecommunications industry, financial circles, insurance, education industry, broadcast and television industry, library, patent, museum, government office, etc. . And then draw the concept of the cluster of information industry: The one that refers to a large number of information technical equipment manufacturing industries and information service enterprises and correlated with supporting enterprises within the range of certain region gather and centralized.

From the theoretical analysis, we structure the model influencing the information industry cluster on the basis of technological and economic characteristic of the information industry. This text have analyzed eight factors in detail: profits driven, technological innovation and commercial consciousness, enterprising spirit, innovative network relying mainly on information enterprise, risk investment, social capital and believe in mechanism, route rely on with history accidental, workforce quality, etc. . And, the author have explained the dynamic equilibrium course of the cluster of information industry and divided the life cycle of the cluster of information industry, also analyzed the network organization of the cluster of information industry.

From the view of quantitative analysis, we adopt American Economist Ellison and Glaeser's cluster index to measure information industry agglomeration degree. And according to the statistical data that our country release, we have done adjustment and revision of adaptability to this method, still used the CR index computing concentration degree of five provinces at the same time to

prove the method. The result of calculation indicates, the electron and communication equipment manufacturing industry compare with other manufacturing, industry concentration degree to be most high, this accords with our experience judgement too. In addition, we have also calculated the electron and communication equipment manufacturing industry the coefficient correlation of concentration degree and total industrial output value, verifying that highly straight dependence exists between its cluster degree and total industrial output value.

Analyzing the respect in the real example, this text launches from two angles of macroscopic and microcosmic. On the macroscopical aspect, we have analyzed the overall pattern of cluster of information industry of our country, and described the four major information industries cluster: Zhujiang River Delta, the Changjiang Delta, Beijing and Tianjin and surround the Bohai Sea and coastal area of Fuzhou and Xiamen. We explore the origin cause of formation of the existing pattern and come to the following conclusion. Because the eastern coastal area has higher markets bearing strength, convenient traffic condition and superior soft hardware environment, the eastern coastal area attracts a large number of international IT giants to make the investment, combining with the advantages of the workforces of these areas, thus our country information industry cluster pattern was caused. That is centering in the eastern region following the line of the sea mainly, scattering in the west regions. According to the disequilibrium increase theory, because of the function of market strength, the polarizing effect is remarkable and the dispersing effect is faint, the gap of development of information industry of the area of the west-

ern and eastern is greater and greater. So, we need government interference and adopt certain industrial policy and economic means providing guidance to regional overall arrangement or adjustment. We think the comparatively rational information industrial overall regional arrangement should be that along "east—Middle part—West" direction, value chain of information industry is from high end to low end, instead of polarization. In order to form this pattern, some manufactures of the information industry must move to the western area gradually. With the deepening of the national strategy to develop western regions, the western economy has very great improvement, have already possessed certain accepting the foundation and shifting the condition. At the same time this kind of transformation accords with the cost minimizing too. Look from the world range, our country is in the low end in value chain of the world information industry generally, and as the industry merges and outsourcing trend, the future of industry cluster is the new industry's cluster of incorporating living beings, information, nano-technology into an organic whole probably.

At the micro aspect, we analyze the current situations and characteristics of Silicon Valley, Zhong guancun and Cao hejing, etc. in detail, and have made a comparison. Silicon Valley of U. S. A. is the key district of a world information industry, which is the ripest cluster of information industry up until now too. Though Silicon Valley of new century run into cybereconomy bubble bursting and sudden change, the labor productivity of Silicon Valley continues rising, and creating more wealth with less cost. The development of Silicon Valley has brought the experience of both



sides to us; On one hand, its successful factor is worth our drawing lessons from, especially the cultivation of its perfect market system and innovative environment. On the other hand, market mechanism transition can bring the investment irrationally and issue of overproduction. In addition, economic development need consideration of social factors also, only human and nature develop harmony we can get the sustainable development. Zhong guancun of Beijing and Cao hejing of Shanghai is better case of our country information industry cluster for analysing the factors of our country industry cluster formation and the function of foreign investment. The management mode of the two is not the same, the former belongs to government's managing type, the latter belongs to company's managing type. In general, they are all that "channeling into" on the basis of government policy advantage. Compared with Silicon Valley, such questions as repeated construction, innovative strength are weak that exist.

The end of the article, we have also carried on the analysis on the policy to the cluster of information industry and propose several suggestions. At different stages for development of cluster of information industry, government's role are confirmed; Management philosophy should be guided by inframarginal economics analysis and the thought of Eastern Management and the local conditions; Perfect the mechanism of risk investment of our country; Solve the cluster system innovation problem of information industry; Overcome the malignant competition that repeated construction brings; Combine area policy with industry policy; Strengthen and cooperate among enterprises and raise the embeddedness of the innovative network.