

THE GOVERNMENTAL STRATEGY

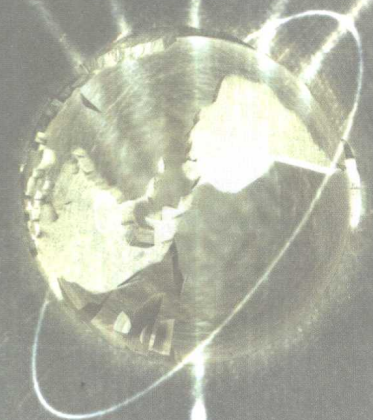
&

THE DEVELOPMENT OF INFORMATION INDUSTRY

国家战略 与信息产业发展

—— 韩国信息技术和产业发展透视

李孝全 著



经济科学出版社

国家战略与信息产业发展

——韩国信息技术和产业发展透视

李孝全 著

经济科学出版社

责任编辑：吕 萍 周秀霞

责任校对：董蔚挺

版式设计：代小卫

技术编辑：王世伟

国家战略与信息产业发展

——韩国信息技术和产业发展透视

李孝全 著

经济科学出版社出版、发行 新华书店经销

社址：北京海淀区阜成路甲 28 号 邮编：100036

总编室电话：88191217 发行部电话：88191540

网址：[www. esp. com. cn](http://www.esp.com.cn)

电子邮件：[esp@esp. com. cn](mailto:esp@esp.com.cn)

北京天宇星印刷厂印刷

河北三河永明装订厂装订

880×1230 32 开 7 印张 200000 字

2001 年 10 月第一版 2001 年 10 月第一次印刷

印数：0001—2000 册

ISBN 7-5058-2709-X/F·2101 定价：12.80 元

(图书出现印装问题，本社负责调换)

(版权所有 翻印必究)

图书在版编目 (CIP) 数据

国家战略与信息产业发展：韩国信息技术和产业发展
透视/李孝全著. —北京：经济科学出版社，2001.10
ISBN 7-5058-2709-X

I. 国… II. 李… III. 信息技术－高技术产业－
经济发展－研究－韩国 IV. F49

中国版本图书馆 CIP 数据核字 (2001) 第 075163 号

内 容 提 要

冷战结束后，苏联已不复存在，两大阵营的对峙宣告结束，市场经济一统天下，为经济全球化高潮创造了制度条件。跨国公司的全球战略调整又为经济全球化奠定了良好的微观运行基础。和平与发展已成为各国政府和人民的共同愿望。在这种背景下，世界各国尤其是美俄等大国开始削减军费开支，对原有的国防工业和军事经济进行调整和改革，从而在世界范围内形成军转民热潮，以分享冷战结束后的“和平红利”。美国率先将军事领域先进的信息技术转为民用，并以此为契机，于1993年9月克林顿政府提出建设“信息高速公路”的计划。随后，世界各国纷纷掀起了建设“信息高速公路”热潮，信息化浪潮在全球兴起。

经济全球化和信息化浪潮使整个世界经济形成了一种新的格局，既为世界各国提供了一种前所未有的发展机遇，又使世界各国面临着许多严肃而又无法回避的重大现实问题。经济全球化最根本的运行机制是市场经济，它本身具有无序性和盲目性的特点。因此，经济全球化既对许多国家尤其是发展中国家的主权和民族工业等带来了巨大冲击，又带来了巨大的风险，增加了国家调控经济的难度。1997年的亚洲金融危机就是这些风险问题的总爆发。由此引发了国内外对经济全球化背景下的国家与市场关系问题的讨论。

当今，经济全球化和信息化浪潮使原来国家的作用在减弱。跨国公司已经形成了强大的国际网络和新的经济帝国，传统意义上的国家作用受到挑战。国家把一部分主权让渡给国际性组织和区域性经济集团，国家权力也开始下放。相反，市场的作用在扩大，市场的力量在加强，全球市场结成有机整体。然而，市场失灵和市

场震荡又加大了市场风险和经济运行的不稳定性，加之信息的不对称使“数字鸿沟”出现，又对国家解决市场失灵问题和避免市场风险提出了更高的要求。同时，信息技术和产业等新兴产业的发展又与国家竞争力密切相关。国家与市场的关系问题再次成为当今值得探讨的重大理论问题。因此，如何在国家与市场这两者作用之间建立一个“平衡点”，已显得既迫切又重要。

本书就是基于这样一种出发点，以国家在信息技术和产业发展中的作用作为切入点，选择在信息技术和产业发展方面比较有代表性的韩国作为实证分析对象，运用理论分析、实证分析、演绎分析和比较分析等研究方法，以马克思主义为指导，通过对国家在发展信息技术和产业中作用的剖析和总结，探讨在国家与市场两者作用中间如何建立“平衡点”的合理实现机制。

本书根据以下思路安排内容体系：

第一章，“信息技术革命及其对世界经济的影响”，主要分析战后信息技术革命的特征，对世界经济发展所带来的机遇和负面影响。

第二章，“韩国信息技术和产业发展现状”，主要分析韩国政府运用国家战略，抓住信息技术革命带来的发展机遇，推动信息技术开发和信息产业现状。

第三章，“韩国国家信息技术研究开发创新体系的建立和支持”，主要分析韩国政府为推动信息技术开发，国家采取了哪些支持措施建立起了国家信息技术研究开发创新体系。

第四章，“韩国信息主导产业的选择和培育”，主要分析韩国政府在建立信息技术研究开发创新体系之后，如何根据自身优势和国际市场竞争需要选择和培育本国信息主导产业。

第五章，“韩国的国家信息基础设施建设”，重点分析韩国政府在推进信息技术开发和加快信息产业发展的基础上，以建设“21世纪网络韩国”为目标，采取国家主导的战略，进行信息基础设施——“国家超高速信息通信网”建设，为迈向“世界信息强国”行

列奠定了基础。

第六章，“韩国发展信息技术和产业的优惠政策与法律体系”，主要分析韩国政府为促进信息技术开发和信息产业发展而进行的制度建设，为信息产业的发展提供了政策支持和法律保障。

第七章，“韩国信息技术和产业人力资源开发”，主要分析韩国政府为保证信息产业发展对人力资本的需求，采取的开发人力资源战略措施。

第八章，“政府和企业在韩国信息技术和产业发展中的关系”，对全书进行总结，也是结论部分。主要分析韩国政府在信息产业发展过程中，是怎样处理与企业关系的，在此基础上又是如何建立起二者平衡的最佳机制的。

第九章，“对中国的启示”，实际上是中国如何借鉴韩国充分发挥国家与市场在信息技术和产业发展中的作用，实施政府主导的国家信息化战略的经验，为中国实现国民经济信息化服务。

通过上述分析，本书提出以下观点：

1. 信息技术和产业的发展，是韩国经济繁荣的重要动力。它改变了韩国的经济结构、社会结构和社会经济形态，产生了新的基本经济部门，形成了新的经济基础，推动了经济社会的快速发展。

2. 韩国的信息技术和产业之所以能够迅速发展，关键是在发挥国家作用的同时，正确处理与市场的关系，确定了国家与市场的“平衡点”，即国家根据市场的需求，战略性地选择和利用了信息技术，对信息技术和产业的发展采取了国家引导和重点扶持的战略。国家通过技术政策和支持措施，基本建立起了国家信息技术研究开发创新体系；通过产业政策选择和培育了韩国的以半导体、计算机、通信和软件四大领域为主体的信息主导产业；采取各种措施筹集资金，加速韩国信息基础设施建设步伐；通过制定优惠政策和健全法律体系以及开发人力资源，充分发挥企业的作用，极大地促进了韩国信息技术和产业的发展。

3. 韩国通过“干中学”以及重视“研究与开发”和“人力资

本”的作用，现已在信息技术和产业领域建立起了可持续发展优势，形成了国家、企业整合联动的增长机制。这为许多发展中国家提供了许多值得借鉴的经验。尤其一些“后来居上的国家”可以借助信息技术和产业的后发优势，尽快缩小与发达国家的差距，为发展中国家打破经济和技术发展恶性循环提供了一个契机。

4. 韩国的经验证明，发挥国家的作用，不能采取单一政策，而应将不同政策组合起来，让“政策经济”的效应得到充分发挥，以增强国家的竞争力，其中包括制定灵活的规划，多层次地学习，战略分配和集中国家资源，系统开发网络和建立核心竞争能力等。

5. 韩国的经验还证明，在一个相当长的时期内，在发挥国家与市场各自不可替代作用的同时，还应抑制它们的副作用和消极后果。国家应该制定正确的经济和社会政策，市场要不断建立完善的竞争机制。要不断调整国家与市场之间的关系，在国家与市场之间保持平衡和不断建立新的平衡。对信息技术和信息产业以及其他的新兴产业来讲，在其扩散和发展初期，应充分发挥国家的作用，进行重点引导、支持和培育，同时制定有效的公共政策和总体战略，以形成良好的制度框架；待其发展到一定程度后，应充分发挥市场的作用，以市场引导和调节为主。

6. 韩国的经验还证明，制度创新十分重要。但是，创新过程是复杂、动态和交互式的，容易出现市场失灵。正如很多研究所证明的，当企业不能在市场上获得技术、信息、资金和其他资源时，国家的干预是正当的，国家可以影响技术学习过程、企业对技术变革的需求和学习的性质、速度和方向。在朝阳产业的飞速发展时期，政府决策对产业发展有着很强的影响力，尤其是 IT 产业。政府应从长远出发，直接参与其经济运行的作用应当逐渐淡化，着重于提供和维护一种有利于创新的环境，同时根据市场需求促进专业化信息服务机构的发展。

本书主要有以下几个方面的创新：

1. 通过对韩国信息技术和产业实践的实证分析，探

讨了国家与市场在发展信息技术和产业中相互作用的合理实现机制，即在二者之间建立一个“平衡点”。

2. 本书提出上述的“平衡点”是博弈的结果。国家调节和市场调节既对立又统一，互为补充，尤其在经济全球化条件下，两者如何在博弈中实现新的平衡，已成为国际社会关注的热点课题。

3. 韩国信息产业的迅速发展在很大程度上得益于政府有效的政策组合，因此，本书提出了“政策经济”的概念。

4. 较为全面地总结了韩国发展信息技术和产业的实践经验，并系统分析了国家在其中的作用（通过制定国家战略），为我国信息技术和产业发展提供了丰富的经验与教训。

5. 同时，针对我国信息技术和产业发展以及信息化建设中存在的问题，提出了一些有益的政策建议。

但是，由于水平有限，本书还存在一些不足之处，敬请赐教，本人深表谢意。

ABSTRACT

With the end of the Cold War and the extinction of USSR, the confrontation of the East and West camps came to a close, and the domination of the market economy over the world has offered system prerequisites for the coming economic globalization. Meanwhile, the adjustment of global strategies implemented in multinational companies has laid a solid micro-operational foundation for the economic globalization. Peace and development have become a common desire for the whole world. It is under this background that all countries, especially big powers such as U. S. A. and Russia, have begun to reduce their military expenses and restructure their original national defense industry and military economy. Therefore, many countries are transferring their military-oriented technology to civil use in order to share the peace profit after the Cold War. The United States took the lead in this transferring campaign. In September 1993, Clinton Administration took this opportunity to put forward a scheme of Information Highway. Then, other countries followed the US example and started their own information highway schemes. As a result, the informationization wave began to roll around the world.

Economic globalization and informationization wave have molded the world economy into a brand-new one, not only offering the world a golden opportunity of development, but also making it faced with many severe problems which can not be avoided. The primary operational mechanism of the economic globalization is market economy,

which in itself is characteristic of randomness and blindness. Therefore, economic globalization has not only resulted in the great shock to but also brought great risk to the sovereignty and national industry of many countries, especially those of developing countries, and added the additional burden to their state control over economy. The case in point is the financial crisis that happened in Southeast Asia in 1997 and initiated a heated discussion, home and abroad, on the relation between governmental administration and market under the background of economic globalization.

At present, economic globalization and informationization wave are weakening the traditional functions of a state. Multinational companies have established a powerful international network and a new economic empire, which is presenting a serious challenge to state function in the traditional sense. A state has to give up part of its sovereignty to some international organizations or regional economic groups, with its administrative power transferred to lower levels. On the other hand, the function of market is being extended and reinforced, and markets around the world have been integrated into an organic unity. However, the failure and instability of market will add more risk and instability to economic operation, while the asymmetry of information will result in the digital gap that imposes more stringent requirements upon the governmental administration to solve the problem of market failure and to avoid market risk. At the same time, the development of new industries such as information technology and industry is closely related to the competitiveness of a state. The problem on the relation between state and market has again become one of the most important theoretical one that needs further studies. Therefore, it seems urgent and critical how to establish a balancing point between state function and market function.

Setting the above view as my starting point, and the government's effect on developing information technology and industry as my point of tangency, taking South Korea – a typical country in the field of information technology and industry development – as a case of my positive analysis, I will explore in this book how to establish the reasonable and practical mechanism of the balancing point between governmental administration and market, with the help of such research approaches as theoretical analysis, positive analysis, deductive analysis and comparative analysis, under the guide of the leading principles of Marxism, and by analyzing and summarizing state function in developing information technology and industry.

The book is outlined as follows.

In Chapter One – *information technology revolution and its effect on the world economy*, I mainly explore the features of information technology revolution after the World War II, and the opportunity as well as the negative effects it has brought to the economic development around the world.

In Chapter Two – *the status quo of information technology and industry development in South Korea*, I am mainly concerned with how S. Korean government took the opportunity information technology revolution had offered and how it promoted the development of information technology. Then I discuss the status quo of information technology development and information industry development in South Korea.

In Chapter Three – *establishment of and support to national information technology R&D system in South Korea*, I mainly analyze what measures S. Korea government took to establish its own information technology R&D system with state as its main factor in order to promote its information technology development.

In Chapter Four – *selection and cultivation of the leading information industry in South Korea*, I mainly explore the way in which S. Korean

government chose and cultivated its leading information industry in accordance to its own advantages and the practical demands of international market competition after it had established its own information technology R&D system.

In Chapter Five – *construction of basic information facilities in S. Korea*, I mainly analyze how S. Korean government has constructed its basic information facilities, on the basis of promoting information technology development and speeding up the development of information industry, by employing the strategy of taking the state as the leading factor, and with the goal of constructing network Korea in 21st century. All this laid a solid foundation for S. Korea becoming one of the big information powers in the world.

In Chapter Six – *preferential policies and legal system related to information technology and industry development in S. Korea*, I mainly analyze how S. Korean government made related policies and provided legal protection for the development of information industry to speed up the development of information technology and information industry.

Chapter Seven – *development of human resource in information technology and industry in S. Korea* – concentrates on what strategy S. Korea took to develop its own human resources in order to meet the demand of human capital in the development of its information industry.

Chapter Eight – *relation between governmental administration and enterprises in developing information technology and industry in South Korea* – is the conclusive chapter, mainly focusing on how Korea has developed its information industry and how the best mechanism had been established to balance the relation.

Chapter Nine – *a nudge to China* – concentrates on how China can

draw on successful Korean experience in implementing its informationization strategy of taking the state as a leading factor by giving full scope to the government and market in the development of information technology and industry, in order to achieve the informationization of China's national economy.

Through the above analysis, I put forward the following views in this book.

1. The development of information technology and industry is the motive power of economic prosperity in S. Korea. It has changed the economic and social structure and the socio-economic formation of S. Korea, given birth to new basic economic organizations, laid a new economic foundation and promoted the rapid development of its economic society.

2. The rapid development of information technology and industry in S. Korea lies in the fact that while giving full scope to the effect of governmental administration, S. Korean government has intelligently dealt with its relation with market, successfully set a balancing point between governmental administration and market. In other words, the government has strategically chosen and employed information technology in accordance with the need of market, and then taken the strategy of developing its information technology and industry under the guide of the government and the strategy of being typically cultivated by the government. The technological policies and supporting measures taken by the Korean government helped to frame their national information technology and industry R&D system. Their industrial policies helped to select and cultivate the dominant industry composed mainly of semi-conductor, computer, telecommunication and software. Every measure was taken to collect funds in order to speed up their construction of basic information facilities. With the preferential policy and the related legal system and by developing human resources, the development of Korean information technology and industry has been greatly promoted and the initiative

of enterprises brought into play.

3. By learning by doing and paying much attention to the research and development and human capital, S. Korea has set their advantage of sustainable development in the field of information technology and industry, and established a development mechanism of integrating coordinatively the state with enterprises. This experience may be borrowed by many developing countries. Especially those that are catching up from behind may narrow their gaps with developed countries as soon as possible with the help of the catching-up advantage of the information technology and industry, and, at the same time, offer an opportunity for developing countries to break the vicious cycle in the economic and technological development.

4. It is learned from Korean experience that if full scope is given to the governmental administration, a unitary policy will account for nothing. A series of policies, such as working out flexible schemes, learning at different levels, strategically distributing and pooling the national resources, systematically developing network and strengthening its kernel competitiveness, should be combined with each other to raise the state competitiveness.

5. It is also learned from Korean experience that within a considerably long period of time, the side effect and negative consequence of both government and market should be kept under control while their non-replaceable effects are brought respectively into positive play. The government must make proper economic and social policies while market should continuously improve its own competitive system. The relation between government and market should be readjusted now and then in order to keep balance and reset a new balance between government and market. As far as information technology and industry and other new industries are concerned, full scope should be given to the effect of the government at the initial stage of diffusion and de-

velopment, with the special stress on directing, supporting and cultivating those promising enterprises. Meanwhile, effective public policies and overall strategies should be made to establish a sound system. After a considerable development of these industries, full scope should be given to the effect of market, with the direction and regulation of market as its dominant factor.

6. It is further learned from Korean experience that system innovation is vital. However, because the process of system innovation is complex, dynamic and interactive, market may not work properly at this time. Many research findings show that when an enterprise has no way to get information, capital and other materials from market technology, the administrative intervention will become necessary. The government may influence the process of technological learning, the demand of technological innovation of enterprises as well as the nature, speed and direction of learning. Within the rapid development period of promising industries, policy-making will definitely exert a strong effect upon the development of industries, esp. IT industry. In the long run, government should gradually withdraw from its direct participation in economic activities, paying attention to offering and maintaining a favorable innovation climate and promoting the development of specialized information-service organizations in accordance with the need of market.

New ideas presented in this book are as follows.

1. By analyzing positively S. Korean practice in information technology and industry development, I have explored the reasonable and practical mechanism of interaction between government and market in developing information technology and industry, i. e. setting a balancing point between the two.

2. The balance mentioned above is the result of the game between government and market. Governmental administration and market

regulation are a unity of complementary opposites. Especially in the climate of the economic globalization, it has become a hot topic around the world how both of them set a new balance by gaming.

3. The rapid development of information industry in S. Korea resulted from the effective policy combination made by the government. Therefore, I have put forward the concept of policy economy in the book.

4. On my summary of the Korean experience, I have comprehensively analyzed the effect of government in developing information technology and industry, and tried to afford us useful experience and lessons in developing our own information technology and industry in China.

5. In view of the existing problems in the information technology and industry development and the informationization in China, some useful suggestions have been put forward on policy-making in the book.