

New Mode of Capitalist  
Production Organization

Research On Modularity Production Network

# 资本主义 新型生产组织方式

模块化生产网络研究

陈硕颖 著

中国社会科学出版社

国家一级出版社 ★ 全国百佳图书出版单位

**New Mode of Capitalist  
Production Organization**

Research On Modularity Production I

1885847

# 资本主义 新型生产组织方式

## 模块化生产网络研究

陈颖颖 著

中国社会科学出版社

国家一级出版社★全国百佳图书出版单位

## 内 容 简 介

本书内容分上、下两篇。上篇为体育理论基础,系统地介绍了体育的基本知识,包括体育概论、体育与健康、大学生体质健康评价、常见运动性病症与损伤的预防和处理、奥林匹克运动与文化。下篇为体育运动实践,主要针对广大学生的兴趣和爱好,有选择地介绍了常见运动项目的有关知识,包括田径运动、球类运动、游泳运动、塑形美体运动、重竞技运动和民族传统体育运动项目。

本书实用性强,内容易懂易学,除可作为教学用书外,亦可作为日常锻炼与健身的参考用书,为广大读者的终身体育和后续体育锻炼奠定基础。

---

### 图书在版编目(CIP)数据

体育与健康/胡晓红,朱新良主编. —北京:科学出版社,2011

(普通高等教育“十二五”重点规划教材·公共课系列·中国科学院教材建设专家委员会“十二五”规划教材)

ISBN 978-7-03-032375-0

I. ①体… II. ①胡… ②朱… III. ①体育-高等学校-教材 ②健康教育-高等学校-教材 IV. ①G807.4

中国版本图书馆CIP数据核字(2011)第191015号

---

策划:杨 阳

责任编辑:王纯刚 张振华 / 责任校对:柏连海

责任印制:吕春珉 / 封面设计:科地亚盟

科学出版社出版

北京东黄城根北街16号

邮政编码:100717

<http://www.sciencep.com>

北京鑫丰华彩印有限公司印刷

科学出版社发行 各地新华书店经销

\*

2011年10月第 一 版 开本:787×1092 1/16

2011年10月第一次印刷 印张:17 3/4

印数:1—3 000 字数:399 400

定价:30.00元

(如有印装质量问题,我社负责调换<鑫丰华>)

销售部电话 010-62134988 编辑部电话 010-62148322

版权所有,侵权必究.

举报电话:010-64030229; 010-64034315; 13501151303



# 内容提要

NEIRONGTIIYAO

资本主义生产方式历经两百多年的发展之后，呈现出一种新的形态——网络经济。传统生产组织方式的主要特征是最终产品生产者的垂直控制，而新型生产组织方式则以信息通信网络为技术支撑，围绕产品标准在全球范围内有效配置资源，形成标准控制下的模块生产与组合。如果说第二次产业革命把科学引进直接生产过程，使资本第一次站在属于自己本性的物质基础之上，那么今天以自组计算机为终端、以光纤光缆为主干、以数字化技术为载体的技术网络，则再一次构成了符合当代市场经济主体本性要求的技术基础。全球生产网络不但模糊了企业的组织边界，而且还整合了国家和地方的经济，造成跨国生产网络与本地社会网络相互嵌套的复杂的地理-经济。网络结构所内含的网络效应颠覆了市场竞争的负反馈机制，导致多态均衡、路径依赖和锁定，增大了经济系统的速变和不确定性。

模块化是使事物的构成具有层次性、构成要素（模块）的功能具有典型性和通用性的处理复杂系统的方法。在复杂和不确定的网络经济背景下，模块化的优势日益显现，一种既具备整体功能、又在子系统之间保持相对独立性的分层式产业结构——模块化生产网络应运而生。模块化生产网络是技术性的设计规则和制度性的交易及分配规则的复合物。它的技术本质是以设计规则为载体，借助设计规则知识产权赋予的非股权控制、通过模块操作

符的排列组合来降低建立网络联结的复杂度、促进复杂产品系统演进，从而兼顾网络结点活性和网络整体有序性的层次递进的企业拓扑结构。它的经济本质是有利于跨国垄断资本在复杂多变的经济环境中获取利润的，由跨国公司所主导的当代中心—外围国际分工体系。

模块化生产网络蕴涵着客观世界普遍存在的矛盾二重性，具体表现为：1. 分工二重性，即组织之间的分工与组织内部的分工并存。2. 演进二重性，包括：产品建构变化趋势的二重性，即核心部件的集成化与产品系统的模块化并存以及产品建构在模块型和集成型之间的循环往复；知识转化方向的二重性，即模块供应商致力于挖掘模块内部的隐性知识，而标准制定者把存在于不同组织边界内的隐性知识提炼出来，形成符码化的显性知识；企业组织演进趋势的二重性，即纵向分离与横向一体化并存。模块化是一种嵌套式的层级体系，以模块化原理为依据而形成的生产网络，其组织结构也表现出层次性。模块化生产网络的中心是制定设计规则的跨国公司，亦称为最终组装商、平台领导或网络旗舰。围绕中心的第一层级是专用模块制造商和通用模块合同制造商等一级供应商。位于边缘的是中小规模的底层供应商。网络旗舰与其他网络成员之间的关系既是市场交换，又是科层控制，前者要求网络中的所有企业都参与网络剩余的分配，后者导致剩余索取权和剩余控制权分布的不对称性。网络旗舰借助模块关联规则的知识产权，实现对一级供应商的非股权控制。一级供应商则通过物质资产所有权以及中间层垄断地位来控制底层供应商。

伴随着供应商的分层，劳动力也日益分化为核心劳动力群体与边缘劳动力群体。对于核心劳动力，资方以激励和控制等多种手段来诱导员工对工作的努力付出，双方体现为一种表面上的合作关系。对于边缘劳动力，资方在生产旺季将这些工人的劳动生产效率推到极限，在生产淡季时则停止雇用，借助边缘劳动力群

体的数量弹性来抵御市场波动的风险。于是，通过对工人的分而治之，加之国家对劳工保护的弱化，资本重新取得了对劳动力的压倒性优势地位。劳动力的分化使工人在一定程度上失去了集体认同，工人的阶级意识淡化，劳工政党的发展陷入困境，核心劳动力与边缘劳动力的收入差距不断扩大。左翼的理论家和实践家需要重新检视工人阶级和工人运动，以便应对生产全球化所带来的种种变化。

国际分工体系的演化在产业结构方面导致的结果是，服务业，尤其是生产性服务业成为发达国家国民经济中占主导地位的产业，而发展中国家的产业结构则以高能耗、高污染和低利润的加工制造业为主，发达国家对于生产性服务业并没有像制造业那样给中国留出多少发展空间。在模块化时代，中国企业只有逆转标准化流程，把开放的模块化生产结构转变为一体化结构，然后再制定设计规则，将集成型建构的产品系统模块化，以利用全球性供应商的制造能力，构建自主的模块化生产网络，才能创造中国生产性服务业的需求源泉。中国政府只有不断强化地区间的分工协作、赋予中国企业整合供应链的商业生态环境，才有可能实现产业链工序升级与产业结构升级的目标。

本书的篇章安排如下：第一章前言，表明研究的起因、价值、方法和框架。第二章国外研究现状，梳理了模块化生产网络理论的文献，以及与其相关的企业网络理论、全球生产网络理论和全球价值链理论，旨在洞悉网络组织研究的整体脉络。在简要评论既有文献的基础上，指出本书的独特视角。第三章资本主义经济形态的演变与模块化生产网络的兴起，通过考察经济形态的大尺度演变以及资本主义经济形态内部的变形、变态过程，勾勒出模块化生产网络的形成背景。由经济形态的演变引发对经济学思维范式转换的探讨，强调了统帅模块化生产网络研究方法论的科学世界观和发展观，并站在科学世界观和发展观的高度，界定

了模块化与模块化生产网络的概念，揭示出模块化生产网络的技术本质和经济本质。第四章模块化生产网络的二重属性，基于模块化生产网络组织与自组织、混沌与有序并存的技术本质及其作为当代中心-外围国际分工体系的经济本质，归纳出模块化生产网络在分工和演进等方面既相互对立，又相互依存、相互转化的二重属性。在此基础上，说明这些二重性对中国参与模块化生产网络分工的影响，以及如何根据模块化生产网络内在的二重性因势利导，提升我国企业的国际竞争力。第五章模块化生产网络的治理结构，首先概述了模块化生产网络具有中心的、层级递进的治理结构，然后说明模块化生产网络的组织治理结构是如何服务于网络旗舰内部不同任务单元以及网络各层级组织在网络中的功能定位的，指明在网络的不同层次上经济主体之间相异的权力关系。最后，从模块化生产网络的组织治理结构延伸至相应的融资治理结构，阐述了模块化生产网络在发展的不同阶段和网络的不同层次上所呈现出的不同的融资模式。第六章模块化生产网络的定价机制，依据模块化生产网络的系统平台性质，研究了网络核心企业如何通过双边定价来管理复杂互动的双边市场。第七章模块化生产网络的发展对劳资关系的影响，描述了模块化生产网络背景下劳动力的新景观——劳动力日益分化为核心群体与边缘群体，研究了劳动力分化的社会经济影响以及劳资关系的嬗变对当代工人运动的含义。第八章模块化对中国发展生产性服务业的启示，基于上述理论分析，提出中国发展生产性服务业的政策建议。

**关键词：**模块化；模块化生产网络；二重属性；组织结构；劳资关系

# Abstract

After two hundred years' development, the capitalist production mode evolves into a new shape——network economy. The traditional mode of production features the vertical control of final product producers, while the new global production network allocates resource effectively around product standards on a global scale, forming modular production and composition under the control of standards. The rise of ICT provides the conditions for transnational production. If the second industrial revolution, by introducing science into production process, enabled capital to stand, for the first time, on the material bases belonging to capitalism's own nature, then today's technology network comprised of autonomous computer terminals, fiber optic cables and digital technology, once again constitutes the technical basis in line with the nature of contemporary market economy agents. Modular production network not only incorporate enterprises into organizational structure with fuzzy borders, but also integrates national and local economy, resulting in complex geography – economy. The network effects inherent in network structure subvert the negative feedback mechanism of market competition, leading to multi equilibrium, path dependence and lock – in



effect, which hastens economic change and increases uncertainty.

Modularity, as a way to handle complexity, composes matter into hierarchies and makes the components interchangeable. Under the complex and uncertain network economy background, the advantage of modularity is becoming more and more obvious. A hierarchical industrial structure——modularity production network comes into shape. Modularity production network is a combination of technological design rules and institutional exchange and distribution rules. It's technological essence is a hierarchical enterprise topology technologically carried by design rules, with the non - stake control legally supported by intellectual property rights, capable of reducing the complexity to establish network connection through the configuration of module operator and promoting the evolution of complex product system, so as to balance between the flexibility of network nodes and the network's overall order. It's economic essence is contemporary centre - periphery system of international division of labor dominated by standard - setter ( multinational companies ), conducive for transnational monopoly capital to reap profit in the midst of the complex economic environment.

Modular production network contains duality prevailing the objective world, for specific aspects: 1. the duality of division of labor, i. e. the coexistence of division of labor among organizations and division of labor within organization; 2. the duality of evolving, including the duality of product architecture's evolving trends, i. e. the coexistence of integration at the level of key components and modularity at the level of product system; product architecture cycles between integration and modularity; the duality of knowledge's evolving direction, i. e. module suppliers try to tap tacit knowledge

within modules, while standard – setter derives tacit knowledge from within the borders of different organizations and to codified it into explicit knowledge; the duality of enterprise organization's evolving trends, i. e. the coexistence of vertical disintegration and horizontal integration. Since modularity is a kind of hierarchical system, the production network formed based on modularity also has a hierarchical organizational structure. The centre of modular production network is the multinational corporation setting design rules, who is also known as final assemblers, platform leadership and network flagship. The stratum surrounding the center is first – tier suppliers comprised of specific module manufactures and interchangeable module contractors. At the bottom of the pyramid locates small to medium sized periphery suppliers. The relationship between network flagship and other network members is both of market equal exchange and organization hierarchical control. The former justifies claim from all network members to network surplus, while the latter leads to asymmetric distribution of residual claim and residual control. And, even in the modular era, the first – tier suppliers engaged in manufacturing still conform to the logic of economies of scale, making them involve in large – scale integration. With intellectual property rights of design rules, network flagships can control the first – tier suppliers without holding the latter's equity. The first – tier suppliers control periphery suppliers with ownership of physical assets and the monopoly status at the middle layer.

As suppliers stratify, labor forces are increasingly differentiated into core labor force and periphery labor force. Employers induce core labor force's effort through combination of stimulation and control. The two sides appear as partnership on the surface. With re-

gard to periphery labor force, employers push their labor productivity to the limit in production seasons. In slack times, employers cease to hire those workers. The numerical flexibility of periphery labor force is used to withstand market fluctuations. With divide – and – conquer strategy by capital and weakening of labor protection from state, capital regain the overwhelming dominance over the labor force. The differentiation of labor force deprives collective identity of workers and dilute workers' class consciousness. As a result, the development of Labor party stalls,

And the income gap between core labor force and periphery labor force widens. Left – wing theorists and practitioners need to review the working class and labor movement in order to cope with the changes brought about by the globalization of production.

The implication of international division of labor's evolution on industrial structure is that services sector, particularly productive services industry has become the dominating sector in developed countries, while the national economy of developing countries is dominated by high energy consumption, high pollution and low – margin manufacturing. Developed countries don't leave much space for China's producer service industry as they do for China's manufacturing industry. In modular era, the only way to create the demand source for China's producer service industry, is to construct the independent modular production network, i. e. to establish China's own brand and own products platform. What Chinese enterprises have to do is to reverse the standardized process by transferring the open modular production structure into integrated structure, then to create new integrated architecture through setting up its own design rules, so as to take advantage of the manufacture capabilities of

global suppliers. The above mentioned goal can only be achieved if the Chinese government will strengthen the division of labor among China provincial regions and create business environment promoting the supply chain integration among Chinese enterprises.

The book is organized as follows: Chapter 1 Introduction, shows the causes, values, methods and frameworks of the study; Chapter II Literature Review, cards the literature of modular production network theory and related enterprises network theory, global production network theory and global value chain theory, providing a panorama of network organization research. The unique perspective of this book is offered based on review of the existing archives. Chapter III The environment for the emergence and development of modularity production network, outlines the environment where modular production network generates and develops through the study on large – scale evolution of economic patterns and metamorphosis process within the economic pattern of capitalist economy. Triggered by the study on the evolution of economic patterns, this chapter then introduces the paradigm shift of economics thought, emphasizing the scientific world outlook and development concept guiding the research of modularity production network. The category of modularity and modularity production network is given at the height of scientific world outlook and development concept. Chapter IV The duality of modularity production network, summarizes many mutual contradictory, interdependent dualities of modularity production network based on its technological and economic essence. The implications of these dualities on China's participation in modularity production network are analyzed and advices on how to raise Chinese enterprises' international competitiveness by taking advantage of the mutual

conversion of contradictory duality are then offered. Chapter V The governance structure of modularity production network, first states the hierarchy of modularity production network's organization, then explains how the governance structure corresponds to the function of different units within network flagship and the function of each organizations at all levels in the network. Finally, financing governance structure is analyzed, illustrating different finance pattern at different developmental stage and level of the network. Chapter VI The pricing mechanism of modular production network, studies on how network flagship manage bilateral market through bilateral pricing mechanism. Chapter VII The effect of the development of modularity production network on labor – capital relations, outlines the new labor force landscape where labor forces are increasingly differentiated into core labor force and periphery labor force. This chapter goes on studying the social economic implications of the differentiation and its impact on contemporary labor movement. Chapter VIII The enlightenment of modularity on developing China's producer service industry offers policy recommendations based on the above theoretical analysis of modularity production network.

# 目录

## MULU

### 第一章 导论 / 1

- 1.1 模块化:顺应资本灵活积累诉求的产业组织新趋向 / 3
- 1.2 模块化生产网络:一个哈佛大学商学院院长历经十年  
仍未完成的课题 / 8
- 1.3 创建自主的模块化生产网络是中国转变经济增长方式的  
必由之路 / 11
- 1.4 本书的研究方法和研究内容 / 14
- 1.5 本书的创新及不足之处 / 18

### 第二章 国内外研究现状 / 23

- 2.1 模块化生产网络理论 / 26
- 2.2 企业网络理论 / 35
- 2.3 全球价值链理论 / 39
- 2.4 全球生产网络理论 / 40
- 2.5 一个简要评论 / 42

---

### 第三章 资本主义经济形态的演变与模块化生产网络的兴起 / 47

---

#### 3.1 网络经济——资本主义经济的新形态 / 50

##### 3.1.1 划分经济形态的依据及网络经济的诞生 / 50

##### 3.1.2 网络经济的主要特征 / 54

#### 3.2 经济学思维范式的转换 / 59

##### 3.2.1 传统经济学的“机械论”世界观 / 59

##### 3.2.2 现代科学的“系统论”世界观 / 62

#### 3.3 模块化生产网络——网络经济时代的生产组织方式 / 65

##### 3.3.1 模块化生产网络的技术本质:处理复杂系统的方法 / 66

##### 3.3.2 模块化生产网络的经济本质:中心-外围国际分工体系的当代版本 / 70

---

### 第四章 模块化生产网络的二重属性 / 73

---

#### 4.1 模块化生产网络中分工的二重性 / 76

##### 4.1.1 模块化生产网络中组织间分工的基础和源泉 / 77

##### 4.1.2 模块化生产网络中组织内分工的意义和作用 / 80

#### 4.2 模块化生产网络演进的二重路径 / 83

##### 4.2.1 产品建构变化趋势的二重性 / 83

##### 4.2.2 知识转化方向的二重性 / 85

##### 4.2.3 企业组织演进趋势的二重性 / 87

#### 4.3 模块化对中国企业的影响及其应对 / 90

##### 4.3.1 模块化生产网络的二重性对中国企业的影响 / 90

##### 4.3.2 中国企业的出路和对策 / 93

---

## 第五章 模块化生产网络的治理结构 / 97

---

- 5.1 模块化生产网络组织的层级性 / 100
  - 5.1.1 模块化生产网络的中心和层级 / 100
  - 5.1.2 供应商分层的趋势加剧 / 101
  - 5.1.3 组织层级性在空间布局和治理结构上的反映 / 103
- 5.2 模块化生产网络组织内部的治理结构 / 104
  - 5.2.1 网络旗舰必须遵循的网络合作的逻辑 / 104
  - 5.2.2 网络旗舰内两类目标相互冲突的任务单元 / 105
  - 5.2.3 组织内部任务单元信息关联的类型 / 107
  - 5.2.4 各个层级组织内部的治理结构 / 109
- 5.3 模块化生产网络组织之间的治理结构 / 110
  - 5.3.1 模块化生产网络分工的二重性决定了网络成员之间的混合治理结构 / 110
  - 5.3.2 网络旗舰对一级供应商的非股权控制 / 113
  - 5.3.3 一级供应商与底层供应商以及底层供应商之间的治理结构 / 116
- 5.4 模块化生产网络的融资治理结构 / 118
  - 5.4.1 模块创新和风险投资 / 119
  - 5.4.2 网络成熟期的融资治理结构 / 121

---

## 第六章 模块化生产网络的定价机制 / 125

---

- 6.1 双边市场的界定与特征 / 128
  - 6.1.1 双边市场的界定 / 128
  - 6.1.2 双边市场的特征 / 130



## 6.2 模块化生产网络中双边市场的形成 / 132

### 6.2.1 计算产业的案例 / 133

### 6.2.2 通信产业的案例 / 134

## 6.3 双边市场的定价理论与竞争动态 / 136

### 6.3.1 双边市场的定价模型 / 136

### 6.3.2 双边市场的竞争动态 / 138

---

# 第七章 模块化生产网络的发展对劳资关系的影响 / 147

---

## 7.1 模块化生产网络背景下劳动力的新景观 / 150

### 7.1.1 劳动力分化为核心群体与边缘群体 / 150

### 7.1.2 资方对核心劳动力与边缘劳动力的管理方式 / 160

## 7.2 劳动力分化的社会经济影响 / 167

### 7.2.1 资本权力的集中 / 168

### 7.2.2 工会力量的衰退 / 169

### 7.2.3 收入差距的扩大 / 175

## 7.3 劳资关系嬗变对当代工人运动的含义 / 179

### 7.3.1 工人阶级意识形态的淡化 / 179

### 7.3.2 劳工政党发展的困境 / 181

### 7.3.3 重新检视工人阶级和工人运动 / 185

---

# 第八章 模块化对中国发展生产性服务业的启示 / 189

---

## 8.1 整合供应链,延长产业链 / 193

### 8.1.1 生产流程模块化引发服务业与制造业的分离与再融合 / 193

### 8.1.2 模块化分工割裂中国的产业关联,缩短中国的