

AN ECONOMIC ANALYSIS OF INDUSTRY CONVERGENCE

An Economic Analysis of Industry Convergence

产业融合 的经济学分析



胡永佳◎著



中国经济出版社
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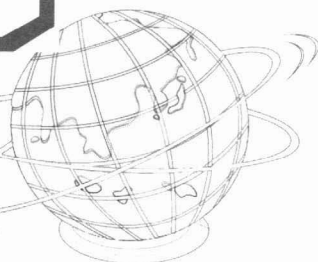
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序

胡永佳博士研究产业融合,是个好题目,有挑战性。纵观产业发展史,从工业革命迄今,总的看,是合少分多,只是近30年,产业融合才忽然风生水起,很多泾渭分明的产业,逐步走向了融合,反映到微观层面,是不同产业的企业结成战略联盟;而在宏观层面,则表现为不同产业趋同化,并衍生出新的产业。

困难也在这里,以往学界关注的是“分”,故而研究“分”的文献,从斯密开始,历经数百年累积,浩繁庞杂。可以说,今天对于分工的研究,已相当精密。而相比之下,对“合”的深层思考,却少之又少。永佳的可贵之处,是迎难而上。在没有足够资料可供参考的情况下,毅然决然,选产业融合合作论题,乃后生可畏、勇气可嘉。

研究产业融合,有两个重点:一是如何看待产业的“分”与“合”。斯密说,分工能提高效率。若果如此,“合”的效率不及“分”,那么怎会发生产业融合呢?另一个重点,是如何界定“分”与“合”的边界,即在什么条件下“分”,在什么条件下“合”。站在企业的角度说,在同样的资源条件下,是从事一种产业好,还是混业经营好?这个问题,与范围经济有关,但又远不是范围经济所能囊括的。

胡永佳原学的是政治学,搞经济学算半路出家,要对一个新的领域展开研究,难度可想而知。好在他思维活跃,视野开阔,

又肯下功夫。攻读博士三年,他结合选题研读经典,观察新现象和新事物,从经济学的基本原理入手分析,走出了一条新路,较好地回答了上述两个问题。

综观本书,观点明确,行文规范,创新颇多。诸如产业融合是产业间分工转化为产业内分工的立论;诸如对马克思、马歇尔融合思想源流的梳理;诸如产业融合的条件推论和融合度推论;诸如产业融合效应三个层面的考量,皆有理有据,令人耳目一新。在研究方法上,作者坚持以成本—收益分析作主线,努力实现规范分析与实证分析相结合、逻辑分析与历史分析相统一、微观分析与宏观分析相衔接,也是值得肯定的。

当然,本书也有不足。一是产业融合的推论,应进一步考虑成本一定时如何使收益最大化,毕竟,产业融合的好处,很多时候体现在收益方面,成本节约尚在其次。另一点,正如作者自己所说,本书主要从供给角度阐述,未展开需求方面的分析,如能加以补充,将需求与供给结合起来,则对产业融合的分析将更为丰满。

胡永佳读硕士期间,就曾在《政治学研究》上发表了三篇文章,也算在那个领域做出了点名堂,小有成绩。转行到经济学,能够在较短的时间内写出这篇颇有分量的论文,实话说,我是有些惊讶的。由此,也见出他的学术悟性。在这里,我衷心希望永佳今后不论从事何职业,都不要放弃对经济学的钻研,持之以恒,必有大成。

是为序。

王东京

2007年12月25日于北京西郊大有庄

内 容 提 要

自 20 世纪七八十年代以来,“产业融合”的现象日渐增多,表现为产业之间原有的固定边界逐渐模糊化甚至消失,表现为两个或多个产业的企业之间大量的业务交叉、战略联盟和并购重组。最初引起人们关注的融合是 3C 的融合,即计算机(Computer)产业、通信(Communication)产业和消费电子产品(Consumer—Electronic)产业之间的融合。后来,融合进一步扩展到电信、广播电视、互联网以及其他传媒之间。总的看,产业融合的趋势在信息通信业表现得最为明显,而在金融、物流、能源乃至制造业等领域也初步展现。

产业融合作为一种客观的经济现象,正在全球范围内呈现出蓬勃发展的态势。但是,国内外学术界对产业融合的研究却较为薄弱,尤其是从经济学的基本原理上来深入分析产业融合的实质和条件的成果尚不多见。特别是,既有的研究大都回避了融合与分工的关系,即便有所涉及,也点到即止,未能深入阐述。但是,一方面,如果不明确提出融合比分工更有效率或更有成本优势的理论,那就无法证明融合的必要性;另一方面,如果为解释和“拥抱”融合而明确地否定分工,那么就要陷入与古典经济学乃至当今整个主流经济学对抗的境地,因为从亚当·斯密开始,分工创造财富、分工带来报酬递增已经成为大家的共识。在这种情形下,产业融合的“理论地位”十分尴尬,公司战略研究等管理学课题或许可以避开分工,但经济理论分析却必

须直面并解决这一两难问题。

本书的目的,就是要通过破解产业融合与产业分工的关系,尝试建立一个能够解释和预测各个领域、各种类型的产业融合现象的一般性分析框架。它既能容纳金融混业经营,也能容纳电信、电视和计算机的三网融合,还能容纳其他各种高新技术产业与传统产业之间的融合。这个理论框架,需要对“产业融合到底是一种什么样的现象”、“它有什么作用和效应”、“发生产业融合需要什么条件”等问题,作出统一的、前后一致的经济解释和说明。当然,这是一个十分艰巨的任务,本书仅仅是起步而已。

本书具有几个创新之处,第一是从分工的角度来理解和分析产业融合。对产业融合的有关研究一般从技术演化和技术变革入手,但是,本书着重从融合与分工的关系入手,从经济分析入手。本书认为,分工是有层次和类型区别的(这其实也是马克思的一贯思想),比如企业内的分工、企业间的分工等。融合是和分工相反的运动,当它们处于同一层级或同一范围时,构成此消彼长的对立关系,但是在不同的层次上,融合与分工可以同时共存,甚至互相强化;而且,融合在消灭了本层次分工的同时,往往会带来其他层次更多的分工和专业化。所谓产业融合,就是产业间分工内部化,是产业间的分工转化为产业内分工的过程和结果。产业间分工内部化,意味着产业间分工缩小甚至消失,但这不仅没有消灭、反而扩大和深化了产业内的分工。在产业融合中,原有产业中的具有较大产业影响力的代表性企业,或者是产业中的多数企业,开始由原来的单一经营转为融合意义上的多元经营,也就是说,这些企业向融合的目标产业扩展了自己的经营范围,降低了专业化程度。在企业经营范围扩大的同

时,原有的社会分工或市场分工转化为企业内的分工,企业由此获取范围经济、规模经济、协同效应等收益。

本书的第二个创新,是提出了产业融合的两个推论:条件推论(推论1)和融合度推论(推论2)。首先,从资产专用性概念出发,给出资产通用性的定义,即在至少不牺牲生产价值的条件下,资产可以转为他用的程度。由于任何资产在转为其他用途时,都要付出或多或少的改造成本、交易成本、时滞成本,因此可以用这些成本的总和,即资产转换成本,来衡量资产通用的程度。

推论1描述的是产业融合的状态,即在资产转换成本为零的情况下融合或非融合的界限。其理论表述是:在生产要素完全自由流动且一产业与其他产业的资产转换成本为零的情形下,如果该产业的企业与其他产业的企业之间存在成本弱增性,则它们之间必定有产业融合发生。

推论2表现的是产业融合的过程,是在资产转换成本不为零的情况下融合度的变化规律。其表述是:假定生产要素完全自由流动且存在成本弱增性,则:一产业与其他产业的融合程度与它们之间的资产转换成本成反方向变动,即随着资产转换成本降低,产业融合程度提高,随着资产转换成本提高,融合程度降低。

在对两个推论进行数理逻辑证明的基础上,也从产业融合的发展历史进行了检验。结论是:通用技术、通用设施、通用人力资源等通用资产在各产业中的扩散和普遍应用,导致了近30年来产业融合发生较多较广的现象;而资产通用性的普遍提高,主要来源于资产的柔性化和模块化。

本书的第三个创新,是以层层递进的方式,较为系统地阐述

了产业融合的效应。首先,侧重从微观层面上阐述成本节约效应;其次,侧重从中观层面上阐述竞争合作效应;最后,侧重从宏观层面上阐述产业升级和经济增长效应。无论哪个层面的效应分析,都贯穿着对分工和融合关系及其各自利弊的思考。结论是:产业融合有利于共用资产的充分利用和节约交易成本,有利于形成有效竞争和竞争性合作的新型市场结构,有利于产品和产业创新并能积极促进产业结构的升级和经济的可持续增长。

此外,本书对产业融合的思想源流进行了梳理。这虽然只是一项文献工作,但颇具开创意义,而且能为后续研究提供丰富的思想资源——迄今为止,没有人注意到:早在 100 多年前,马克思就提出了分工基础上的结合生产问题,马歇尔则指出了不同的分工层次应有不同的专业化要求。融合作为分工的反向运动,不论是在实践上还是在观念形态上都早已存在,虽然早期的产业融合很不明显。

本书在研究中坚持以马克思主义经济理论和唯物辩证法为指导,牢牢抓住成本——收益分析这一主线,注意围绕最大化分析这个关键点来进行逻辑推导和模型论证。全文将文献分析、制度分析、数理分析、历史分析、案例分析有机结合起来,努力实现规范与实证的统一、逻辑与历史的统一、微观与宏观的统一,克服了现有一些研究中方法单一、顾此失彼的弊端,有利于从多个角度把握产业融合的全貌,也有利于深入考察产业融合的核心问题。

本书的理论意义在于:第一,初步回答了产业融合与分工之间的关系。本书的有关论述,一方面既符合分工带来报酬递增的“古典——新古典——新兴古典”共识,体现了与主流经济学观点的相容性;另一方面,也指出了分工在特定层次、特定条件

下的局限性,而这正是产业融合出现、发展的根由所在。第二,集中论述了产业融合的原因和条件且首次给出了条件模型。条件模型其实是给出了一条产业分合的界线,尽管该模型还比较简单,模型的形式化和数理证明还需要进一步完善,相关推论在以后的研究中也可能会被证伪,但它毕竟代表了一定阶段对产业融合条件的认识,而寻找“通解”正是理论创新的重要使命。

本书的实践价值在于:在产业融合的基本理论框架下,无论是政府还是企业,都会对“促进产业融合还是拒绝产业融合”、“如果选择融合,那么应该准备什么条件、在什么领域去推进融合”、“如何使融合效益最大化”等问题有更科学的认识 and 更清醒的判断,从而有助于政府推动产业管制改革和产业优化升级,有助于企业调整经营方向、竞争策略、组织结构和管理行为。尽管由于篇幅和时间有限,本书没有专章论述政府政策和公司战略问题,但相关的政策和战略含义已经体现在理论分析之中。

关键词:产业融合 分工 产业经济 资产通用 成本弱
增性 经济学分析

Abstract

Since from 1970s and 1980s, industry convergence has been growing, and the industry original boundary becomes dim and disappearing, i. e. the business overlapping, strategic alignment, merging and acquisition between two and more industries have occurred ever since. The primary convergence is happening in 3C, i. e. Computer industry, Communication industry, and Consumer-electronic industry. As time goes by, the convergence expands to telecommunication, TV and broadcasting, Internet and other approaches of media. Generally, industry convergence dominates the IT and telecommunication industry, and becomes a trend in finance, cargo service, energy, and manufactory.

As an economic phenomenon, industry convergence is prospering in global area, but the strength of research of academia is fragile, in particular, the literature from economic theory perspective deeply on this phenomenon is few. All the more, the current literature avoids mentioning the relationship between convergence and division of labor, only a few mentions of that, but lacks profound exploration. Hence, on one hand, if we cannot demonstrate convergence is more effective and cost-cutting than the division of labor, we cannot see the necessity of convergence; on the other hand, if we are against the division of labor for the reason of embracing and

illuminating convergence, we will be facing the risk of clashing with classical and mainstream economics, because that the division of labor creates wealth and growing income has been a common sense since Adam Smith. In this case, the theoretical status of industry convergence is embarrassing, although management could avoid the division of labor, still, economic analysis must face this dilemma.

This book is about to establish a general analytical framework, capable of interpreting and forecasting the different convergence phenomenon through decoding the relationship between industry convergence and industry division. It involves the financial mixed operation and convergence of three networks (i. e. telecommunication, CATV, and computer), and includes convergence between Hi-tech industry and traditional industry as well. Hopefully, this framework could throw light on such issues as, What is industry convergence? What is its potential impact? What is the precondition of industry convergence? Of course, to research these questions is a tough task, but the book hopes to be harbinger.

The first innovation of this book is to analyze the industry convergence from the perspective of division of labor. While some research is based on technology evolution and technology innovation, this book is to stress the relations between convergence and the division of labor, an economic perspective. As regarding the division of labor, it is classified and stratified into in-and-between enterprise, a common sense from Marxism. But convergence is an opposite of division of labor, when they both lie in the same sphere and same stratum, they are contradictory; while they are positioned in differ-

ent stratum, they may be coexisted and mutual strengthening. Furthermore, convergence will destroy the division of labor from the same stratum, but brings about more division of labor and specialization on other stratum. A so-called industry convergence is a process of changing division of industry-between into that of industry-inside, which implies that the division of labor deteriorates and disappears between different industry, but develops in the opposite way inside the industry. In the process of industry convergence, the most influential enterprise or the majority of enterprises start from a single operation into multiple-operations, which is to say that these enterprises step forward the convergence process and decreases their specialization level. When the enterprises enlarge their business scope, the original social division or market division changes into that inside enterprises, in return, these enterprises gain scope economy, scale economy and mutual strengthening effect.

The second innovation lies in two deduction, condition deduction (D One) and converging deduction (D two). First, the book starts from the concept of asset specificity and defines asset universality, i. e. the extent of asset changing into other function, not in the price of sacrificing its productive value. When any asset changes into other function, it will pay the restructuring cost, transaction cost, and time-lag cost, all these costs could be summed up as switching cost, which is used to judge the extent of asset universality.

D One describes the state of industry convergence, the boundary of convergence or non-convergence when the switching cost is

zero. Theoretically speaking, when production element is at free mobility and the switching cost between a certain industry and other industry is zero, if Subadditivity exist in the enterprises from different industry, there ought to be some industry convergence.

D Two describes the law that lies when switching cost is not zero. It is theoretically expressed as when productive elements are in free mobility and Subadditivity exists, the industry convergence moves in the opposite way of asset switching cost, that is to say that when asset switching cost decreases, industry convergence increases; when asset switching cost increases, industry convergence decreases.

These two mathematically deducted conclusions are tested by the development history of industry convergence, for instance, the universal asset like, universal technology, universal facility, universal human resources disseminate in various industries, leading to the industry convergence during the past 30 years. Generally speaking, the asset universality increasing mainly originates from asset softening and asset modulization.

The third innovation focuses on the comprehensive illuminating industry convergence effect in a step-by-step way, which comprises of cost cutting effect from a micro perspective, competitive and cooperative effect from a between-macro-and-micro perspective, industry and economic growing effect from a macro perspective. The conclusion is that industry convergence helps to completely use the co-sharing asset and cut the transaction cost, helps to form the market structure of effective competition and competitive cooperation,

and helps to innovate products, to improve industry structure and push the sustainable development as well.

Additionally, the book summarizes the theoretic origins of industry convergence. Although this is a literature screening work, it has a trail-blazer impact for the future study. Because 100 years ago, Marx raised the issue of combined production based on the division of labor. Marshall raised that division of labor on different stratum should have different speciality. Hence, convergence either in practical form or in conceptual form existed many years ago, though it was not predominating.

This book sticks to Marxist economics and Material Dialectics, based on cost-benefit analysis, and centers on maximization to implement conception founding, logic reasoning and model testing. The book, combining literature analysis, institutional analysis, mathematical analysis, historical analysis, and case study, tends to coordinate normal and positive analysis, logic and history, macro and micro, in order to have a full and deep picture of industry convergence from multiple angles.

The book's theoretical implication lies in 1), preliminarily interpreting the relationship between industry convergence and the division of labor. Argument in this book is not only compatible with the argument of division of labor bringing about income growing, a "classic, neo-classic, new classic consensus" or mainstream economics points of view, but also points out the limitation of the division of labor in specific stratum and condition, which is the source of occurrence and development of industry convergence; 2), focu-

sing on analyzing the cause and premise of industry convergence, and raising the premise model for the first time. The premise model is a demarcation of industry division and convergence, even though it is simple, its formation and mathematical testing still needs to be further improved, and some conclusion is likely to be proved false. However, it represents the exploration of industry convergence at certain stage, and its attempting to seek for the universal answer is the great mission of theoretic innovation.

Its Practical implication lies in: under this framework of industry convergence, either government or enterprise will have a clear and scientific judgment of the following question, for instance, to welcome industry convergence or refuse it, if accepted, by what means or what way industry convergence should be pushed forward, how to make the effect of industry convergence maximizing. Replying to these questions helps the government to push the industry regulation reform and industry innovation, and helps the enterprise adjust its running orientation, competition tactics, organizational structure and management behavior as well. Because the book is limited in terms of its focus and length, it doesn't allocate a chapter to throw light on the government policy and corporation strategy, but the issue is always involved in the theoretical analysis.

Key Words: Industry Convergence, The division of labor, Industry Economy, Asset Universality, Subadditivity, Economic Analysis.

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