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# 人力资本、要素边际生产率 与发展中大国区域经济协调发展

刘智勇 著

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# 总 序

经济学发展历史表明,经济理论的重要程度往往取决于被解释现象的重要程度。中国的崛起被称为“东亚奇迹”,“金砖国家”的崛起已成为“世界奇迹”,这说明大国经济现象的重要程度是毋庸置疑的。如果将典型的大国经济发展现实和经验的研究提升为普遍性的理论体系和知识体系,那么,中国经济学就有可能掌握国际话语权。

一般地说,掌握国际话语权应该具备三个条件:一是研究的对象具有典型意义,被解释的现象不仅对某个国家的发展具有重要意义,而且对世界的发展具有重要意义;二是取得的成果具有创新价值,在学术上有重要发现,乃至创造出新的科学理论和知识体系;三是交流的手段具有国际性,研究方法符合国际规范,可以在世界范围交流和传播。

在大国经济研究领域,第一个条件是已经给定的,因为大国经济发展具有世界意义。关键是要在第二个条件和第三个条件上下功夫。要通过创造性的思维和研究,深刻把握大国经济的特征和发展规律,构建大国经济的理论体系和知识体系,追求深层次的学术创新和理论突破;要使用国际化的交流手段,运用规范的研究方法和逻辑思维开展研究,从中国与世界关系的角度来看待大国经济问题,并向世界传播大国经济理论和知识体系,从而使大国经济理论具有世界意义和国际影响力。

我们将联合全国的专家学者,致力于探索超大规模国家经济发展的特征和规律,进而构建大国经济理论体系和知识体系。格致出版社以深邃的目光发现了这个团队的未来前景,组织出版这套《大国经济丛书》,国家新闻出版总署将其列入

“十二五”国家重点图书出版规划,为大国经济研究提供了展示成果的平台。

我们拥有这样的梦想,并且在集聚追求梦想的力量。我们期望这个梦想成为现实,并用行动构建中国风格的经济学话语体系,为中国经济学走向世界做出积极的贡献。

歐陽曉

# 前 言

中国作为经济转型时期的发展中大国,取得了举世瞩目的发展成就,然而其区域经济发展失衡问题也相当突出,形成了“东部隆起,中西部塌陷”的发展格局。为此,中国政府长期致力于缩小地区差异,然而在经济增长方式仍属资本驱动型,且技术进步的作用日益凸显的背景下,由政府主导实施的旨在缩小地区差异的财政转移支付等政策并未使中西部地区获得更快的发展,那么个中原因何在?另外,虽然人力资本作为技术进步的源泉,一直被视为解释国家、地区间经济增长差异的重要因素,但已有文献侧重于研究它对地区差异的直接影响,而缺乏对它作用于地区差异的机制的深入探讨。有鉴于此,本书研究借助增长理论、人力资本理论等主流经济学理论和现代计量经济学分析方法,从理论和实证两个层面对人力资本与地区经济增长差异的关系进行了研究,并据此来提出缩小地区差异,实现区域经济协调发展的政策建议。

本书研究首先立足于中国这一发展中大国经济发展的阶段性与特殊性:虽然全要素生产率的作用不断增强,但经济增长方式仍属要素驱动型尤其是资本驱动型,而且二者均是解释中国地区差异的重要直接因素,选取要素的投入与其使用效率作为研究的切入点,根据技术进步对要素边际生产率、要素积累及经济增长的重要影响,结合人力资本对技术进步的重要作用及其主要通过技术进步促进经济增长的作用机制,提出了一个研究中国地区差异的综合分析框架:人力资本—技术进步—要素边际生产率—要素积累—经济增长。与已有研究相比,该分析框架既从一定程度上有效弥补了片面强调技术进步或要素积累尤其是资本积累的作用的缺陷,又突出了技术进步在改进投资质量和积累有效性方面的重要作用,

而投资质量和积累有效性的改进对中国经济增长同样起到至关重要的作用。更为重要的是,该分析框架强调了以市场为导向的手段在缩小地区差异中的重要作用,即通过提高人力资本等手段来提高落后地区的全要素生产率,从而提高落后地区的要素边际生产率,这样各要素在利润动机的引导下会逐渐回流到落后地区,从而加快落后地区的经济发展。毋庸置疑,随着中国市场化进程的不断推进,这种以市场为导向的手段对地区差异的缩小将起到至关重要的作用。

本书研究进一步对所提出的研究中国地区差异的综合分析框架进行了经验研究,结果表明,人力资本主要通过卢卡斯式作用机制(技术创新)促进经济增长,它对全要素生产率具有重要的促进作用,而全要素生产率则是延缓资本边际生产率下降并使其维持在较高水平的关键因素(尽管资本劳动比在不断攀升),同时它的上升也提高了劳动边际生产率,资本和劳动边际生产率的提高促进了资本、劳动的积累,从而推动了经济的快速增长。人力资本对全要素生产率(TFP)增长的年均贡献率在中西部地区要远高于外商直接投资(FDI)、基础设施、市场化进程和城市化程度,在东部地区虽然低于市场化进程和城市化程度,但仍然非常重要。因此,政府进一步加大人力资本投资尤其是中西部地区的人力资本投资力度,是提高中西部地区的全要素生产率,从而其要素边际生产率,吸引更多生产要素流向中西部地区,进而缩小其与东部地区差异的战略选择。

鉴于人力资本对全要素生产率,从而要素边际生产率,要素积累,进而经济增长的重要影响,本研究对中国人力资本投资的现状进行了分析。结果显示,中国教育投资一直在较低水平徘徊,教育投资的地区差异也呈扩大趋势。但中国高等教育,高中、初中教育和小学教育的社会内部收益率均较高,且呈现高中、初中教育最高,小学教育次之,高等教育最低的分布格局;中西部地区各级教育投资的社会内部收益率也并不低于东部地区。因此,政府进一步加大教育投入,增强对落后地区教育扶持的决策是合乎理性的。就教育投资结构而言,则应继续普及和巩固九年制义务教育,大力发展高中阶段教育,不断提高高等教育质量。

最后,基于本研究的理论分析和实证结论,我们提出了缩小中国地区差异的相关政策建议:(1)坚持以人力资本积累为先导的战略选择,培育多元化的人力资

本投资主体,优化教育投资结构,加大财政对中西部教育的支持力度,以提高中西部地区的人力资本存量。(2)加大制度创新力度,不断提高人力资本的使用效率,以缓解中西部地区人力资本供给短缺与需求旺盛的矛盾。惟有如此,中西部才能获得更快的经济增长,从而实现对东部地区的赶超。



# Abstract

As a large developing country which is in the transition period, China has obtained the great achievement in economic development. However, the unbalance of regional economy development is becoming more and more prominent in China and the development pattern which east region develops more quickly than central and west regions is formed. Therefore, the Chinese government has been trying to reduce regional inequality for a long time. However, against the background of economic growth driven primarily by capital and technological progress is also playing an increasingly important role in economic growth, those policies under the guidance of the government such as financial transfer cannot accelerate the development of central and west regions. What are the reasons? In addition, while human capital, which is the source of technological progress, is always regarded as the crucial factor which explains the divergence in growth rates across countries and regions, many existing studies have focused on its direct effect on regional inequality. Therefore there are few researches have shed some light on the problem of the channel through which human capital influences regional inequality. Under such circumstance, based on those existing researches and by means of the theory of economic growth, human capital and modern econometrics, this book aims at making a general analysis on the relation between human capital and the divergence in growth rates across regions both theoretically and empirically, and therefore to provide certain policy suggestions on narrowing regional inequality and achieving the coordinated development of regional economies.

Based on the characteristic of economic development in China: although total factor productivity is playing an increasing important role in economic growth, the economic growth is still driven mainly by factor accumulation especially capital accumulation, and both of them are direct factors which can explain most part of the regional inequality, choosing factors and their efficiency as the breakthrough point of research, this book firstly puts forward an analytic framework that researches on regional inequality: human capital—total factor productivity—marginal productivity of factors—factors accumulation—economic growth according to the significant effect of technological progress on factor marginal productivity, factor accumulation and economic growth, as well as the indirect effect of human capital on technological progress. Compared with those existing studies, our analytic framework not only can effectively remedy defects in excessive emphasis on the function of technological progress or factor accumulation especially capital accumulation to a certain extent, but also emphasize the key role of technological progress in improving the quality of investment and the validity of accumulation, while improvement in the quality of investment and the validity of accumulation also play very important roles in promoting economic growth. Even more important, this analytic framework emphasizes the significant role of market-oriented means in reducing regional income disparity, which means that less developed areas can accelerate their economic growth by raising total factor productivity, thereby factor marginal productivity through raising the level of human capital, because the higher factor marginal productivity in less developed areas will make them attract relatively more factors. Undoubtedly, with the development of marketization, the market-oriented means will play the key role in reducing regional inequality.

This book further makes an empirical study on the analytic framework which researches on regional inequality. The results show that human capital influences economic growth through Lucas approach(technological innovation), and it accelerates total factor productivity significantly, while total factor productivity is the crucial factor

which sustains the higher marginal productivity of capital (despite capital-labor ratio is improved gradually). It can raise the marginal productivity of labor too, the improvement in the marginal productivity of capital and labor will enhance the accumulation of capital and labor, then accelerate the rapid development of economy. By comparison, human capital's average annual contribution to total factor productivity is much higher than that of any other factors such as foreign direct investment, infrastructure investment, the degree of marketization and urbanization level in the central and west regions, while in the east region, the average annual contribution of human capital to total factor productivity is only less than that of urbanization level and the development of marketization. Therefore, that the government further enhances human capital investment especially for central and west regions is the strategic choice for central and west regions to improve their total factor productivity, thereby their marginal productivity of factors, and to attract more requisites of production so as to narrow the gap in development between them and the east region.

Owing to the important effect of human capital on total factor productivity, marginal productivity of factors, factors accumulation, thereby economic growth, this dissertation analyzes the current status of China's human capital investment. The results indicate that China's educational investment is still fairly low, and its regional inequality shows a trend of expansion. However, the social internal rates of return to higher education, senior and junior secondary education, and primary education are relatively higher in China, furthermore, the social internal rates of return to senior and junior secondary education are the highest, while the social internal rate of return to higher education is the lowest; the social internal rates of return to all levels of education of central and west regions are not lower than that of east region. So government's decision to further augment investment on education and assist the less developed areas to develop education is rational. As far as the structure of educational investment, the government should continue to make nine-year compulsory education universal across

the country, and make great efforts to develop senior secondary education, and should continue to improve the quality of higher education.

Finally, based on this book's theoretical analysis and empirical results, we put forward relative policy suggestions on reducing regional inequality: First, insisting on the strategic choice that human capital accumulation is the fore-runner of economic development, aggrandizing social diversified investment, optimizing the structure of educational investment, and enhancing educational investment in central and west regions can raise the human capital stocks in central and west regions. Second, Enhancing system innovation and making use of human capital more efficiently will relieve the contradiction between the short supply of human capital and its strong demand in central and west regions. Only in this way can the central and west regions accelerate their economic growth and catch up the east region.

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# 第 1 章

## 导言

### 1.1 研究背景

选择“人力资本,要素边际生产率与发展中大国区域经济协调发展”作为研究的主题,主要是基于对发展中大国经济发展的现实问题以及有关人力资本与经济增长差异的理论研究背景的综合考虑。

首先,发展中大国经济增速快,但其区域发展不平衡问题也相当突出。作为转型时期的发展中大国,中国的经济虽然持续快速增长,但地区差异不断扩大的问题也已变得相当严重。不可否认,自 1978 年改革开放以来,中国经济获得了飞速发展。1978—2005 年实际国内生产总值年均增长率为 9.69%,其中有不少年份的增长率高达 13% 以上,远远高于所有发达资本主义国家,可谓“一枝独秀”。按可比价(1990 年不变价)计算,2000 年中国人均国内生产总值是 1978 年的 5.7 倍。至 2005 年,实际人均国内生产总值达到 6 103.24 元,为 1978 年的 8.8 倍。经济的快速增长在总体上极大地改善了人民的生活水平,增进了社会福利。但与之相伴随的一个令人担忧的问题是:地区间的经济发展极不平衡。据我们的计算,1978—2005 年,增长最快的省份浙江,其实际人均 GDP 增长率达 12.01%,而增长最慢的青海省的增长率仅为 6.55%。2005 年,实际人均 GDP 最高的十个省级行政单位均属东部地区<sup>①</sup>。最

<sup>①</sup> 东部地区包括:北京、天津、河北、辽宁、上海、江苏、浙江、福建、山东、广东(含海南)。中部地区包括:山西、吉林、黑龙江、安徽、江西、河南、湖北、湖南。西部地区包括:内蒙古、广西、四川(含重庆)、贵州、云南、陕西、甘肃、青海、宁夏、新疆。