THE PRINCIPLE OF ECONOMICS

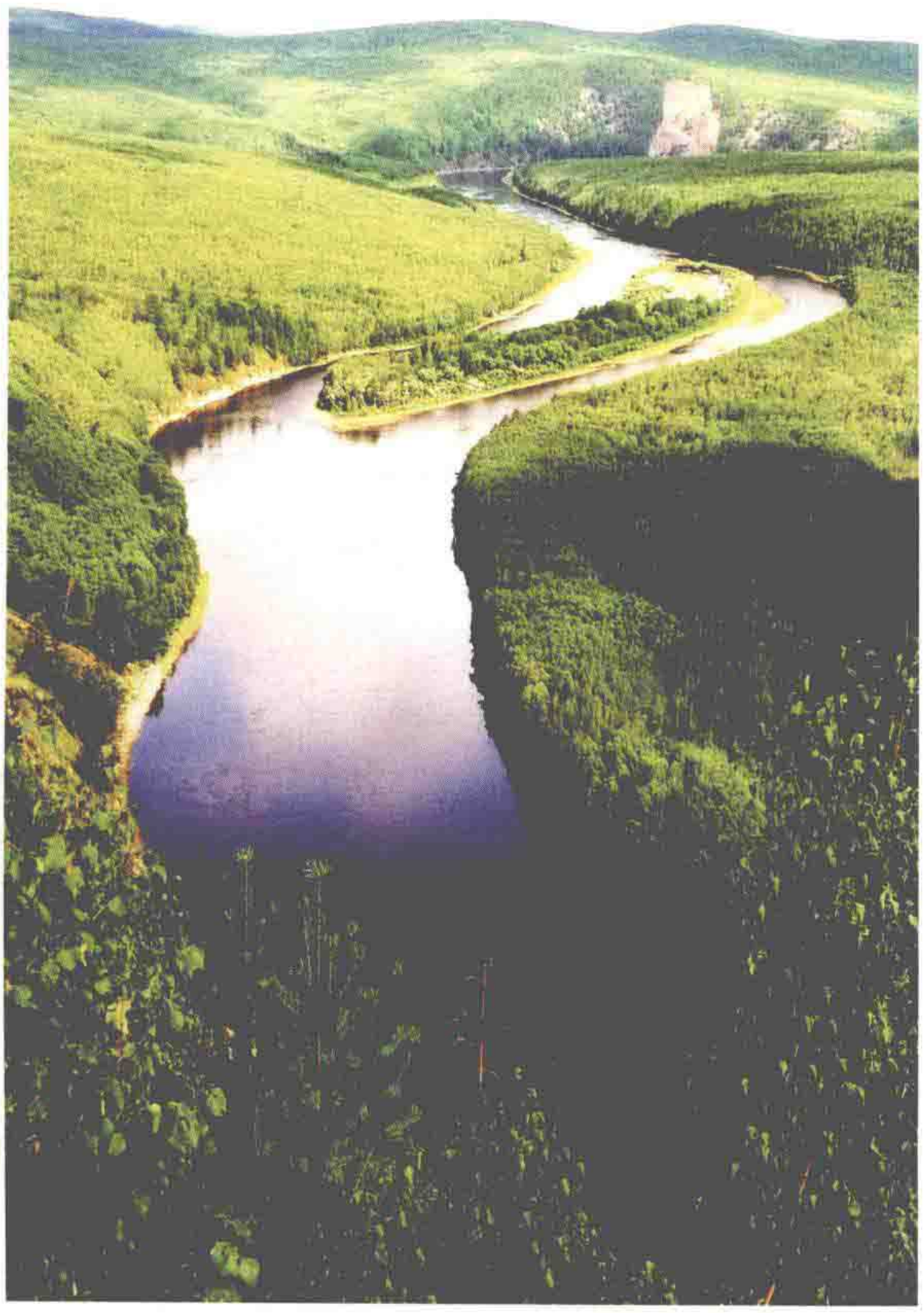
经济学原理

像物理学一样
没有例外

No exception as
the same as physics

茅 琦
MAO, QI
著

Chinese
and
English Edition



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THE PRINCIPLE OF ECONOMICS

经济学原理

内容简介

《经济学原理——像物理学一样没有例外》一书发现了一个公式，解决了索洛模型（the Solow model）遇到的问题。索洛模型是索洛在1956年提出的（他于1980年获得诺贝尔经济学奖）。索洛模型预示着后发展国家可以赶上先发展的国家，但是世界各国的经济并没有证明这一点，反而各国人均GDP的差距扩大了。本书中的数学公式解释了这一问题。

The book, *The Principle of Economics-No Exception as the Same as Physics*, finds a formula to solve the problem encountered by the Solow model. The Solow model was proposed by Solow in 1956 (he won the Nobel Prize in economics in 1980). His model indicates that the less developed countries can catch up with the developed countries. However, the economies of all countries in the world have not proved this, but the gap in per capita GDP has widened. The mathematical formula in this book explains that problem.

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前 言

为了探求市场经济的规律,作者写了这本书。

对于西方经济学,西方学者的批评和质疑有很多。总体性的批判有:

国际货币基金组织(IMF)2000 年的一项研究评估了《共识预测》20 世纪 90 年代对国民经济增长的预测。在发生的 60 次不同国家的衰退中,只有两个(3%)国家的经济危机在一年前得到了准确的预测。①

相对于物理学,根据万有引力定律,地球绕太阳的轨道是完全可预测的,但是目前的经济学对实际的数据不具有预测的能力,也没有这样的定理。先前有很多人认为经济学不是一门科学,本书经过研究发现,经济学也像物理学一样是一门科学。

对于经济学假设的批判则有:

经济学一直受到批评,认为它依赖于不切实际、不可验证或高度简化的假设,在某些情况下,因为这些假设简化了期望结论的证明。这些例子包括完美的信息、利润最大化和理性的

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① Loungani, Prakash, "How Accurate Are Private Sector Forecasts? Cross-Country Evidence from Consensus Forecasts of Output Growth", IMF Working Paper, 2000.

选择。①

凯恩斯和乔斯科等著名的主流经济学家已经观察到，经济学中的许多假设是概念性的，而不是定量的，并且难以定量地建模和形式化。②

在几十年间出版的一系列同行评议的期刊和会议论文及书籍中，约翰·麦克默特里（John McMurtry）对他所说的“未经检验的‘经济学’假设和含义，以及由此造成的对人民生活的损失”提出了广泛的批评。③

除了这些担忧，主流研究生课程已经变得越来越技术化和数学化。④

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① Rappaport, Steven, "Abstraction and Unrealistic Assumptions in Economics", *Journal of Economic Methodology*, 1996, 3(2): 215 - 236; Rappaport, Steven, "Chapter 6: Economic Models", *Models and Reality in Economics*, 1998; Friedman, 1953: 14-31; Boland, Lawrence A., "Assumptions controversy", In Durlauf, Steven N., Blume, Lawrence E., *The New Palgrave Dictionary of Economics*, 2008:267-270.

② Keynes, J. M., "Alfred Marshall 1842-1924", *The Economic Journal*, 1924, 34(135): 311-372; Joskow, Paul, "Firm Decision-making Policy and Oligopoly Theory", *The American Economic Review*, 1975, 65(2): 270-279.

③ McMurtry, John, *The Cancer Stage of Capitalism*, Pluto Press, 1999. Please see partial list of publications, including peer-reviewed papers and books, on John McMurtry's wikipedia page, as well as links to the texts of several of his peer-reviewed papers and peer-reviewed secondary references analyzing and discussing his work.

④ Johansson, D., "Economics without Entrepreneurship or Institutions: A Vocabulary Analysis of Graduate Textbooks", *Econ Journal Watch*, 2004, 1(3): 515-538; Sutter, Daniel, Pjesky, Rex, "Where Would Adam Smith Publish Today? The Near Absence of Math-free Research in Top Journals", *Econ Journal Watch*, 2007, 4(2): 230-240.

PREFACE

The author has written this book in order to explore the principles of market economies.

Western economists proffer many criticisms and entertain numerous doubts about Western economics. The general criticism is:

A 2000 International Monetary Fund study assessed national economic growth predictions from Consensus Forecasts in the 1990s. Of the 60 different national recessions that occurred, only 2 (3%) were predicted a year in advance.①

Compared to physics, where the Earth's orbit around the sun is entirely predictable according to the law of gravity, current economics does not have the ability to predict actual data, nor does it even have any such theorem. Previously many people would not regard economics as a science. According to this book, economics is also a science like physics.

Criticisms of assumptions:

Economics has been subject to criticism that it relies on

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① Loungani, Prakash, "How Accurate Are Private Sector Forecasts? Cross-Country Evidence from Consensus Forecasts of Output Growth", IMF Working Paper, 2000.

unrealistic, unverifiable, or highly simplified assumptions, in some cases because these assumptions simplify the proof of desired conclusions. Examples of such assumptions include perfect information, profit maximization and rational choices.①

Prominent mainstream economists such as Keynes and Joskow have observed that much of economics is conceptual rather than quantitative, and difficult to model and formalize quantitatively.②

In a series of peer-reviewed journal and conference papers and books published over a period of several decades, John McMurtry has provided extensive criticism of what he terms the "unexamined assumptions and implications of 'economics', and their consequent cost to people's lives".③

Despite these concerns, mainstream graduate programs have become increasingly technical and mathematical.④

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① Rappaport, Steven, "Abstraction and Unrealistic Assumptions in Economics", *Journal of Economic Methodology*, 1996, 3(2): 215 - 236; Rappaport, Steven, "Chapter 6: Economic Models", *Models and Reality in Economics*, 1998; Friedman, 1953: 14-31; Boland, Lawrence A., "Assumptions controversy", In Durlauf, Steven N., Blume, Lawrence E., *The New Palgrave Dictionary of Economics*, 2008:267-270.

② Keynes, J. M., "Alfred Marshall 1842-1924", *The Economic Journal*, 1924, 34(135): 311-372; Joskow, Paul, "Firm Decision-making Policy and Oligopoly Theory", *The American Economic Review*, 1975, 65(2): 270-279.

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第一章 导 论

科学必须具有可证伪性。可证伪性是指从一个理论推导出来的结论(解释、预见)在逻辑或原则上要有与一个或一组观察陈述发生冲突或抵触的可能。

比如,历史上的地心说认为太阳、月球都是绕着地球转的。这个命题具有可证伪性。证明这个命题是伪命题只要找出一个实例,即太阳不绕着地球转,就可以了。或者证明与这个命题相冲突的命题:地球绕着太阳转。事实上,我们证明了地球绕着太阳转,所以地心说是一个伪命题。

比如,牛顿的万有引力定律在水星近日点问题上和实际的观测值有每100年43.11角秒(圆=360度,1度=60分,1分=60秒)的误差,这已在观测精度不容许忽视的范围了。而爱因斯坦的广义相对论引力公式预测的值则在43.09—43.14角秒之间。由于牛顿定律在水星近日点问题上具有例外,所以爱因斯坦的广义相对论是更为科学的。

与物理学相比,经济学如果作为科学,也必须依据可证伪性——任何的经济学定理必须和实际的经济数据或实际的经济情况相吻合,如果有例外,那么根据科学的可证伪性,有例外的经济学定理就是不科学的。

找到市场经济的规律,并且这样的规律具有可证伪性,经济学就

可以成为一门科学,这也是本书的目标。

本书的结构如下:在接下来的一章即第二章中,提出了一个可证伪的市场经济规律,它适用于市场经济的所有情况,包括微观经济和宏观经济。

第二章还解决了过去没有解决的问题。索洛模型(The Solow Model)是索洛在1956年提出的(他于1980年获得诺贝尔经济学奖)。这个模型预示着后发展国家可以赶上先发展的国家,但是世界各国的经济并没有证明这一点,反而各国人均GDP的差距扩大了。与之对比,美国各个州的人均GDP在长期上实现了收敛,即趋向一致。

本书发现的公式解决了上面这些问题。同时,这个公式能够解释所有索洛模型能够解释的现象。各个国家的人均GDP没有收敛是因为各个国家的制度因素发展不同。

另外,马克思在《资本论》第三卷第十三章中猜测了利润率有下降的趋势。书中找到了利润率下降趋势的原因,并找到了一种证明利润率下降趋势的方法。

19世纪之后的经济学研究没有继续沿着李嘉图、马克思的方向的原因是因为缺少带有深度实感的实践和总结,并且缺少在哲学上的突破。1930年之后,经济学中的数学看似很难,其实要比哲学思辨简单得多。

同时,公式也解释了经济增长波动的原因来自利润率的波动。利润率是原因而不是结果。是资本与投资跟随利润率,而非利润率跟随资本。

第三章论证了第二章的规律所具有的哲学意义。第四章从哲学出发,重新定义了应该如何核算国民经济。第五章用第二章提出的市场经济规律解释了市场经济周期产生的原因,同时将第二章提出

的市场经济规律在18世纪之后的所有市场经济周期中进行了演绎，没有例外。第六章在第二章提出的市场经济规律的基础上，提出了如何正确地使用财政政策和货币政策等。

各章参考文献附在英文部分之后。

CHAPTER 1

INTRODUCTION

To be a science, something must have falsifiability. A statement, hypothesis, or theory has falsifiability (or is falsifiable) if it is contradicted by a basic statement. In an eventual successful or failed falsification that contradiction must respectively correspond to a true or hypothetical observation.

For example, the geocentric theory in history believed that the Sun and the Moon moved around the Earth. This proposition has falsifiability. To prove that this proposition is a false proposition, we only need an example, that the Sun does not revolve around the Earth. Or, alternatively, to prove a proposition that conflicts with this proposition, e.g. that the Earth moves around the Sun. In fact, we have proved that the Earth moves around the Sun, so a geocentric theory is a false proposition.

Newton's law of gravity, for example, has an error of 43.11 angular seconds per 100 years (circle = 360 degrees, 1 degree = 60 minutes, 1 minute = 60 seconds) in relation to Mercury's perihelion, which is already within an observational accuracy that cannot be ignored. Einstein's general relativity gravitational formula predicts the value to be between 43.09–43.14 angular seconds. Because Newton's